

APPENDIX I – ANALYTICAL DATA FOR SOILS

Soil description Profile no. Parent material Location	Horizon	Field texture	Sample depth cm	Particle-size distribution					1 : 5 soil : water suspension			SOILS WITH UNIFORM TEXTURE PROFILES			Org C %	Total N %	1:3C N	Free Fe <sub>2</sub> O <sub>3</sub> %	P (available) ppm	K (available) ppm	HCl extract		Exchangeable cations						
				Gravel %	Coarse sand %	Fine sand %	Silt %	Clay %	pH	EC 25°C µS/cm	Cl <sup>-</sup> %	(total) P %	(total) K %	Ca							Mg	K	Na	C.E.C.	Ca	Mg	K	Na	H
SOILS WITH UNIFORM TEXTURE PROFILES																													
2) Gravelly loam soils																													
502 Colluvium from Ordovician sedimentary rocks Ovens 8224-776517	A <sub>1</sub>	CL	0-10	1	10	27	31	27	5.6	74	0.009	2.6	0.20	17	2.4	0.042	0.61	8.3	5.8	1.0	<0.05	20.1	41	29	5	<1	25		
	A <sub>2</sub>	CL	10-22	2	5	23	27	42	5.3	44	0.006	1.3	0.12	14	2.6	0.014	0.72	6.0	2.8	0.4	0.1	18.0	33	16	2	1	48		
	B <sub>1</sub>	CL	22-30	10	16	28	25	30	5.3	45	0.005	0.6	0.075	10	2.7	0.031	0.60	3.5	2.4	0.3	0.1	12.7	28	19	2	1	50		
	B <sub>2</sub>	GrL	40-50	27	37	32	19	9	5.3	29	0.004	0.2	0.035	7	2.9	0.034	0.47	2.2	1.5	0.2	0.1	7.1	31	21	3	2	44		
	B <sub>2</sub>	GrL	65-75	29	31	38	21	9	5.3	30	0.004	...	...	...	2.7	0.029	0.37	2.2	1.3	0.2	0.1	6.4	34	20	3	2	41		
503 Alluvium-colluvium from Ordovician sedimentary rocks German Creek 8324-024350	A <sub>1</sub>	L	0-10	14	19	31	32	14	5.0	140	0.007	3.0	0.23	17	1.9	0.073	0.44	7.7	0.8	0.6	<0.05	20.8	37	4	3	<1	56		
	A <sub>2</sub>	FSL	10-24	22	19	35	31	15	5.0	70	0.007	0.9	0.077	15	2.1	0.083	0.46	2.9	0.4	0.5	<0.05	10.3	28	4	5	<1	63		
	A <sub>2</sub>	COSL	30-40	36	30	30	25	15	5.0	54	0.006	0.5	0.041	16	2.4	0.058	0.48	2.3	0.6	0.6	<0.05	8.0	29	8	8	<1	55		
	B <sub>1</sub>	SL	50-60	25	25	35	22	18	5.2	45	0.006	0.3	0.030	13	2.9	0.042	0.54	2.4	2.1	0.6	<0.05	7.6	31	28	8	<1	33		
	B <sub>2</sub>	FSL	65-75	3	19	44	19	17	5.0	56	0.007	...	...	...	2.9	0.037	0.51	2.2	0.7	0.5	<0.05	7.0	31	10	7	<1	52		
3) Coarse sand soils	B <sub>2</sub>	SL	100-120	13	29	34	22	15	4.7	64	0.009	...	...	...	2.6	0.036	0.45	1.5	0.5	0.3	<0.05	7.5	20	7	4	<1	69		
	A <sub>1</sub>	COSL	0-3	14	40	20	21	10	4.9	72	0.013	10.9	0.66	21	1.9	0.16	0.17	4.5	2.4	0.9	0.06	24.6	18	10	4	<1	68		
	A <sub>1</sub>	COSL	3-10	14	38	25	22	9	4.5	65	0.011	6.5	0.39	22	2.1	0.12	0.13	1.4	0.2	0.4	0.03	18.5	8	1	2	<1	89		
	A <sub>2</sub>	COSL	10-25	9	38	24	21	14	4.4	72	0.010	2.5	0.16	20	2.3	0.079	0.13	0.3	<0.1	0.3	0.01	11.4	3	<1	3	<1	94		
	B <sub>1</sub>	COSL	30-40	7	41	24	15	16	4.4	77	0.011	...	...	...	2.0	0.065	0.18	0.4	<0.1	0.1	0.01	4.7	9	<1	2	<1	89		
561 Carboniferous sandstone and conglomerate East of Mount Speculation 8223-683919	B <sub>1</sub>	COSL	55-65	9	14	26	31	16	4.5	110	0.015	...	...	...	2.2	0.077	0.25	0.2	<0.1	0.2	0.01	4.3	5	<1	5	<1	90		
	A <sub>1</sub>	COSL	0-10	14	54	10	9	12	4.4	74	0.006	4.9	0.25	25	1.6	0.018	0.12	0.5	0.6	0.4	0.03	15.4	3	4	3	<1	90		
	A <sub>2</sub>	COSL	10-20	16	59	12	8	16	4.6	95	0.010	2.0	0.12	22	1.8	0.014	0.15	0.3	0.2	0.3	0.02	10.4	3	2	3	<1	92		
	A <sub>2</sub>	COSL	20-30	15	59	15	7	17	4.6	105	0.013	1.5	0.097	20	2.1	0.015	0.17	0.2	0.1	0.3	0.02	7.1	3	1	4	<1	92		
	B <sub>1</sub>	COSL	40-50	11	55	15	9	17	4.6	87	0.009	...	...	...	1.7	0.014	0.20	0.1	0.2	0.2	0.01	4.6	2	4	4	<1	90		
562 Alluvium and colluvium from rhylolite Upper Middle Creek 8124-356195	A <sub>1</sub>	COSL	0-10	24	38	27	10	12	5.4	127	0.015	2.8	0.16	23	1.9	0.035	0.18	5.6	2.4	1.6	0.1	14.5	39	17	11	1	32		
	A <sub>2</sub>	COSL	10-20	20	35	28	23	10	5.3	165	0.020	1.6	0.10	21	1.8	0.035	0.17	3.1	1.9	1.2	0.1	11.2	28	17	11	1	43		
	B <sub>1</sub>	COSL	20-30	14	29	34	23	13	5.1	500	0.068	0.8	0.058	18	1.9	0.029	0.16	1.7	1.4	1.2	0.3	7.4	23	19	16	4	38		
	B <sub>2</sub>	COSL	50-60	7	28	33	21	18	5.1	75	0.010	...	...	...	2.3	0.023	0.20	1.2	0.9	1.1	0.05	6.2	19	15	18	1	47		
	B <sub>2</sub>	COSL	80-90	10	28	34	21	17	5.0	99	0.015	...	...	...	2.2	0.023	0.20	1.0	1.0	0.9	0.07	6.2	16	16	15	1	52		
5) Brown and grey loam soils	B <sub>2</sub>	COSL	120-130	13	30	35	20	15	5.0	55	0.007	...	...	...	2.3	0.024	0.20	0.8	1.3	0.7	0.01	5.5	15	24	13	<1	48		
	A <sub>1</sub>	SCL	0-9	tr.	3	46	25	18	5.2	86	0.012	4.1	0.32	17	2.3	0.068	0.26	9.2	2.5	0.7	0.03	19.7	47	13	4	<1	36		
	A <sub>2</sub>	SIL	9-25	tr.	3	42	30	17	5.1	45	0.008	2.8	0.21	17	2.5	0.064	0.23	7.6	1.5	0.2	0.05	17.4	44	9	1	<1	46		
	AB	SIL	25-40	tr.	1	37	50	13	5.0	42	0.007	2.4	0.16	20	2.6	0.052	0.23	6.1	1.6	0.2	0.05	16.3	37	10	1	<1	52		
	AB	SIL	50-70	tr.	6	30	39	23	5.0	42	0.006	...	...	...	2.6	0.049	0.26	4.0	1.2	0.2	0.04	12.3	33	10	2	<1	35		
B <sub>1</sub>	FSL	70-125	1	20	44	25	13	4.8	48	0.008	...	...	...	...	0.049	0.23	...	...	...	...	0.04	...	...	...	...	...			

Soil description Profile no. Parent material Location	Horizon	Field texture	Sample depth cm	Particle-size distribution					1 : 5 soil : water suspension			Org C %	Total N %	N 1.3C	Free Fe <sub>2</sub> O <sub>3</sub> %	P (available) ppm	K (available) ppm	HCl extract		Exchangeable cations milliequivalents per 100g							% of C.E.C.			
				Gravel %	Coarse sand %	Fine sand %	Silt %	Clay %	pH	EC 25°C µS/cm	Cl <sup>-</sup> %							(total) P %	(total) K %	Ca	Mg	K	Na	C.E.C.	Ca	Mg	K	Na	H	
																														Ca
525 Alluvium from rhyolite and rhyodacite Upper Fifteen Mile Creek 8124-355246	A <sub>1</sub>	SIL	0-10	3	23	36	22	15	5.6	78	0.012	7.3	0.45	21	1.7	...	...	0.098	0.26	24.4	2.4	1.0	0.05	36.9	61	7	3	< 1	29	
	A <sub>2</sub>	SIL	30-50	2	24	41	19	16	5.4	28	0.005	2.3	0.15	20	2.1	...	...	0.044	0.17	6.6	0.9	0.6	0.04	17.3	38	5	3	< 1	54	
	A <sub>3</sub>	SIL	60-80	4	24	37	17	20	5.2	52	0.008	1.8	0.11	21	2.4	...	...	0.041	0.20	5.3	0.2	0.6	0.03	16.3	33	1	4	< 1	62	
529 Alluvium from mixed rock types Ovens 100-115 8224-790505	A <sub>1</sub>	SL	0-15	10	17	46	17	16	5.1	60	0.006	2.2	0.20	14	1.3	...	...	0.044	0.29	4.9	2.3	0.2	0.03	13.2	37	17	2	< 1	44	
	A <sub>2</sub>	SL	20-40	5	22	49	15	13	5.4	16	0.002	0.3	0.036	11	1.4	...	...	0.041	0.31	2.8	0.7	0.1	0.04	5.6	50	13	2	< 1	34	
	B <sub>1</sub>	SIL	80-100	4	6	53	22	17	5.4	22	0.003	0.2	0.029	9	2.1	...	...	0.042	0.39	2.8	1.7	0.1	0.10	7.3	38	23	1	< 1	37	
6) Organic loam soils 369 Granite North Buffalo Plateau 8224-794376	A <sub>1</sub>	SL	0-5	38	35	16	16	19	4.6	110	0.008	12.6	0.71	23	1.0	...	320	0.024	0.29	5.6	2.9	1.1	0.1	40	14	7	3	< 1	76	
	A <sub>2</sub>	COSL	5-20	49	42	20	12	15	4.5	86	0.009	10.1	0.52	25	1.2	...	180	0.023	0.27	0.4	0.3	0.6	0.1	31	1	1	2	< 1	96	
	B <sub>1</sub>	COSL	20-40	35	42	25	17	9	4.9	110	0.015	3.0	0.14	28	2.2	...	100	0.019	0.29	0.1	0.1	0.3	0.1	20	1	< 1	2	< 1	96	
371 Granite Dingo Dell, Mount Buffalo 8224-818330	A <sub>1</sub>	COSL	0-5	28	37	23	17	14	5.2	87	0.010	6.6	0.35	25	1.5	...	240	0.030	0.20	1.0	0.8	0.8	0.2	27	4	3	3	1	89	
	A <sub>2</sub>	COSL	5-13	25	34	25	17	16	5.1	59	0.006	3.3	0.18	24	2.0	...	100	0.030	0.25	0.3	0.2	0.5	0.1	21.5	1	1	2	< 1	96	
	B <sub>1</sub>	COSL	13-45	35	38	22	12	24	4.8	61	0.010	1.0	0.064	20	1.4	...	220	0.020	0.32	0.2	0.1	0.3	0.1	11.7	2	1	3	1	93	
504 Ordovician slate and shale Diamantina Hut 8324-109073	A <sub>1</sub>	SIL	0-10	17	14	24	29	23	4.1	280	0.028	8.4	0.74	15	3.2	...	...	0.15	0.45	1.7	2.0	0.8	0.2	34.3	5	6	2	1	86	
	A <sub>2</sub>	SIL	10-15	20	12	25	34	23	4.1	180	0.017	5.9	0.52	15	3.2	...	...	0.14	0.40	0.4	0.4	0.5	0.2	30.5	1	1	2	1	95	
	A <sub>3</sub>	SIL	20-40	11	12	25	26	33	4.5	130	0.015	1.6	0.16	13	4.2	...	...	0.048	0.54	0.1	0.6	0.2	0.1	18.7	1	3	1	1	94	
505 Ordovician slate and shale Mount Blowhard 8323-078045	A <sub>1</sub>	SIL	0-3	17	15	24	23	33	3.8	240	0.018	8.7	0.52	22	2.9	...	...	0.049	0.50	0.7	0.6	0.4	0.2	31.7	2	2	1	1	94	
	A <sub>2</sub>	SIL	6-20	25	15	23	30	29	3.9	190	0.018	2.7	0.23	15	3.3	...	...	0.043	0.56	0.2	0.1	0.2	0.1	25.1	1	< 1	1	< 1	98	
	A <sub>3</sub>	SIL	20-40	11	12	25	26	33	4.5	130	0.015	1.6	0.16	13	4.2	...	...	0.048	0.54	0.1	0.6	0.2	0.1	18.7	1	3	1	1	94	
511 Basalt Burnt Hut Knob 8123-486978	A <sub>1</sub>	L	0-4	9	14	26	31	16	4.6	130	0.022	12.2	0.92	17	4.4	...	...	0.22	0.21	4.9	3.1	0.8	0.12	30.0	16	10	3	< 1	71	
	A <sub>2</sub>	L	4-15	5	12	28	31	14	4.5	180	0.030	10.3	0.80	17	5.2	...	...	0.23	0.17	2.0	1.5	0.6	0.10	27.0	7	6	2	< 1	85	
	A <sub>3</sub>	L	15-30	13	13	40	32	9	4.5	150	0.028	6.7	0.56	16	5.3	...	...	0.32	0.17	1.1	0.7	0.4	0.09	21.6	5	3	2	< 1	90	
512 Granodiorite Burnt Hut Knob 8123-488993	A <sub>1</sub>	L	30-55	12	11	40	35	10	4.6	190	0.033	4.1	0.37	14	5.6	...	...	0.18	0.18	0.6	0.5	0.4	0.06	19.2	3	3	2	< 1	92	
	A <sub>2</sub>	CL	55-70	3	10	33	31	21	4.5	83	0.014	1.7	0.17	13	5.6	...	...	0.15	0.20	0.7	0.7	0.3	0.04	16.7	4	4	2	< 1	90	
	A <sub>3</sub>	COSL	0-10	34	30	19	22	13	4.4	80	0.013	13	0.86	20	2.2	...	...	0.059	0.21	1.9	1.7	0.8	0.07	30.9	6	6	3	< 1	85	
512 Granodiorite Burnt Hut Knob 8123-488993	A <sub>1</sub>	COSL	10-40	25	26	19	28	14	4.3	99	0.017	11	0.80	18	2.2	...	...	0.046	0.18	0.6	0.6	0.6	0.05	28.0	2	2	2	< 1	94	



Soil description	Horizon	Field texture	Sample depth cm	Particle-size distribution					1 : 5 soil : water suspension			Org C %	Total N %	N <sub>13C</sub>	Free Fe <sub>2</sub> O <sub>3</sub> %	P (available) ppm	K (available) ppm	HCl extract		Exchangeable cations									
				Gravel %	Coarse sand %	Fine sand %	Silt %	Clay %	pH	EC 25°C µS/cm	Cl <sup>-</sup> %							(total) P %	(total) K %	milliequivalents per 100g					% of C.E.C.				
																				Ca	Mg	K	Na	C.E.C.	Ca	Mg	K	Na	H
368 Granite Mount Buffalo Road 8224-810367	A <sub>1</sub> AB B <sub>1</sub> B <sub>2</sub> B <sub>3</sub>	GrL GrCL GrCL GrCL GrCL	0-13 13-25 25-38 38-62 62-85	34 28 32 31 40	36 30 28 28 33	28 24 23 23 23	16 19 17 17 15	11 22 29 29 26	4.8 4.9 4.8 5.1 4.8	160 100 160 170 120	0.018 0.010 0.022 0.008 0.018	0.32 0.13 0.055 0.051 0.051	30 28 22 18 21	1.2 1.7 2.1 2.1 2.1	260 200 220 240 240	0.018 0.017 0.019 0.018 0.015	0.33 0.35 0.45 0.45 0.43	6.8 5.5 0.049 0.027 0.047	1.6 0.4 0.7 0.8 0.8	2.2 0.7 0.6 0.8 0.7	0.8 0.1 0.6 0.7 0.7	5 2 4 6 6	32.8 19.4 10.9 12.7 12.7	5 2 4 7 6	7 2 3 6 6	2 1 3 6 6	1 1 3 4 4	86 90 80 82 82	
506 Ordovician mudstone and shale South of Harnettville 8324-053152	A <sub>1</sub> AB B <sub>1</sub> B <sub>2</sub> B <sub>3</sub> B <sub>4</sub>	L CL CL GrCL GrCL	0-3 3-10 10-30 20-30 32-60 70-90	22 12 16 17 43 21	14 16 13 18 18 33	30 24 22 22 20 24	24 31 27 35 35 17	21 30 37 44 44 23	4.7 4.3 4.4 4.4 4.4 4.5	200 120 150 99 64 64	0.024 0.012 0.015 0.012 0.008 0.008	0.45 0.14 0.089 0.064 0.041 0.041	27 24 19 14 3 3	2.8 4.0 4.2 3.9 3.9 3.9	260 200 220 240 240	0.018 0.017 0.019 0.018 0.015	0.33 0.35 0.45 0.45 0.43	6.8 5.5 0.049 0.027 0.047	1.6 0.4 0.7 0.8 0.8	2.2 0.7 0.6 0.8 0.7	0.8 0.1 0.6 0.7 0.7	5 2 4 6 6	32.8 19.4 10.9 12.7 12.7	5 2 4 7 6	7 2 3 6 6	2 1 3 4 4	1 1 3 4 4	86 90 80 82 82	
509 Carboniferous mudstone and sandstone Upper King River 8223-65920	A <sub>1</sub> A <sub>2</sub> B <sub>1</sub> B <sub>2</sub> B <sub>3</sub> B <sub>4</sub>	SiL SiL CL LC CL	0-10 10-30 30-60 70-90 120-140	15 20 12 12 12	20 30 16 13 13	32 32 26 23 24	16 32 22 26 23	16 13 4.4 4.3 4.2	63 150 140 100 86	0.010 0.022 0.022 0.014 0.012	0.39 0.40 0.25 0.13 0.041	24 20 18 18 4	3.6 4.5 4.7 4.6 4.0	260 200 220 240 240	0.018 0.017 0.019 0.018 0.015	0.33 0.35 0.45 0.45 0.43	6.8 5.5 0.049 0.027 0.047	1.6 0.4 0.7 0.8 0.8	2.2 0.7 0.6 0.8 0.7	0.8 0.1 0.6 0.7 0.7	5 2 4 6 6	32.8 19.4 10.9 12.7 12.7	5 2 4 7 6	7 2 3 6 6	2 1 3 4 4	1 1 3 4 4	86 90 80 82 82		
514 Carboniferous sandstone North of Mahaakah 8124-390180	A <sub>1</sub> B <sub>1</sub> B <sub>2</sub>	SL SCL SCL	0-8 8-20 30-50	1 2 2	41 20 47	19 17 12	15 16 18	4.4 4.4 4.3	48 65 57	0.008 0.009 0.008	0.23 0.11 0.095	31 24 24	2.4 2.5 1.9	260 200 220 240 240	0.018 0.017 0.019 0.018 0.015	0.33 0.35 0.45 0.45 0.43	6.8 5.5 0.049 0.027 0.047	1.6 0.4 0.7 0.8 0.8	2.2 0.7 0.6 0.8 0.7	0.8 0.1 0.6 0.7 0.7	5 2 4 6 6	32.8 19.4 10.9 12.7 12.7	5 2 4 7 6	7 2 3 6 6	2 1 3 4 4	1 1 3 4 4	86 90 80 82 82		
526 Ordovician shale and mudstone Alpine Road south of Harnettville 8324-052104	A <sub>1</sub> A <sub>2</sub> B <sub>1</sub> B <sub>2</sub> B <sub>3</sub>	GrCL GrCL GrCL GrCL GrCL	0-14 14-30 30-45 45-60 60-120	29 25 33 45 49	14 13 15 16 14	22 21 17 18 26	33 35 33 27 21	25 27 30 38 34	4.4 4.6 4.5 4.6 4.6	73 39 26 17 12	0.005 0.005 0.004 0.002 0.002	0.39 0.22 0.16 0.081 0.081	28 27 25 4 4	3.9 4.4 4.2 4.7 4.7	260 200 220 240 240	0.018 0.017 0.019 0.018 0.015	0.33 0.35 0.45 0.45 0.43	6.8 5.5 0.049 0.027 0.047	1.6 0.4 0.7 0.8 0.8	2.2 0.7 0.6 0.8 0.7	0.8 0.1 0.6 0.7 0.7	5 2 4 6 6	32.8 19.4 10.9 12.7 12.7	5 2 4 7 6	7 2 3 6 6	2 1 3 4 4	1 1 3 4 4	86 90 80 82 82	
553 Carboniferous sandstone and conglomerate Whitlands 8124-423263	A <sub>1</sub> A <sub>2</sub> B <sub>1</sub> B <sub>2</sub>	SL SL SCL SCL	0-10 10-20 20-30 50-60	4 3 3 9	39 26 27 37	25 26 17 27	18 17 20 11	4.8 4.7 4.7 4.7	37 34 38 34	0.004 0.004 0.004 0.004	0.15 0.095 0.081 0.081	31 27 25 2	2.3 2.5 2.5 2.0	260 200 220 240 240	0.018 0.017 0.019 0.018 0.015	0.33 0.35 0.45 0.45 0.43	6.8 5.5 0.049 0.027 0.047	1.6 0.4 0.7 0.8 0.8	2.2 0.7 0.6 0.8 0.7	0.8 0.1 0.6 0.7 0.7	5 2 4 6 6	32.8 19.4 10.9 12.7 12.7	5 2 4 7 6	7 2 3 6 6	2 1 3 4 4	1 1 3 4 4	86 90 80 82 82		
556 Carboniferous sandstone and conglomerate Paradise Falls 8124-506176	A <sub>1</sub> A <sub>2</sub> B <sub>1</sub> B <sub>2</sub>	FSL FSL FSL FSL	0-10 10-20 20-30 50-60	5 6 6 4	4 3 3 1	45 44 41 34	21 18 17 21	24 30 34 42	4.6 4.7 4.7 4.8	31 27 19 19	0.003 0.002 0.002 0.002	0.14 0.081 0.081 0.081	32 26 27 2.8	2.4 2.6 2.7 2.8	260 200 220 240 240	0.018 0.017 0.019 0.018 0.015	0.33 0.35 0.45 0.45 0.43	6.8 5.5 0.049 0.027 0.047	1.6 0.4 0.7 0.8 0.8	2.2 0.7 0.6 0.8 0.7	0.8 0.1 0.6 0.7 0.7	5 2 4 6 6	32.8 19.4 10.9 12.7 12.7	5 2 4 7 6	7 2 3 6 6	2 1 3 4 4	1 1 3 4 4	86 90 80 82 82	

Soil description Profile no. Parent material Location	Horizon	Field texture	Sample depth cm	Particle-size distribution					1 : 5 soil - water suspension			Org C %	Total N %	N C	Free Fe <sub>2</sub> O <sub>3</sub> %	P (available) ppm	K (available) ppm	HCl extract		Exchangeable cations									
				Gravel %	Coarse sand %	Fine sand %	Silt %	Clay %	pH	EC 25°C µS/cm	Cl <sup>-</sup> %							(total) P %	(total) K %	milliequivalents per 100g					% of C.E.C.				
																				Ca %	Mg %	K %	Na %	C.E.C. %	Ca %	Mg %	K %	Na %	H %
13) Reddish brown gradational soils with rough peed fabric																													
515 Rhollite North of Mahaakah 8124-391188	A <sub>1</sub>	SL	0-15	13	11	26	37	18	4.9	65	0.009	5.1	0.33	29	3.0	0.031	0.24	3.6	3.0	1.6	0.05	25.0	14	12	6	<1	68		
	A <sub>2</sub>	CL	15-30	6	7	27	32	25	4.3	61	0.009	2.7	0.13	27	3.0	0.025	0.25	0.2	1.5	1.3	0.04	22.0	2	7	6	<1	85		
	B <sub>2</sub>	CL	40-55	8	9	28	37	4.4	4.0	0.006	...	...	...	...	3.4	0.022	0.27	0.2	0.9	1.2	0.05	18.1	5	7	5	<1	87		
516 Colluvium from Ordovician sedimentary rocks North of Harrietville 8324-067208	A <sub>1</sub>	L	0-13	33	19	31	27	16	4.9	94	0.014	7.7	0.45	22	2.8	0.085	0.32	12.4	4.0	0.9	0.06	29.7	42	13	3	<1	42		
	AB	CL	13-26	21	19	25	32	22	4.8	44	0.006	4.2	0.18	30	3.4	0.14	0.34	3.2	1.1	0.6	0.04	19.1	17	6	3	<1	74		
	B <sub>2</sub>	GrCL	26-50	24	16	26	30	26	4.9	65	0.009	1.1	0.093	15	3.8	0.061	0.40	2.7	0.8	0.5	0.05	15.3	18	5	3	<1	74		
522 Ordovician mudstone and shale Stanley 8225-758697	A <sub>1</sub>	L	0-4	13	12	26	29	25	5.0	72	0.009	3.6	0.20	23	3.2	0.032	0.31	6.2	3.5	1.3	0.05	20.8	30	17	6	<1	47		
	AB	CL	4-10	5	7	24	29	33	4.8	61	0.007	2.6	0.15	23	3.5	0.022	0.30	3.7	2.7	1.0	0.06	19.5	19	14	5	<1	52		
	B <sub>2</sub>	LC	10-30	4	5	20	24	45	4.7	43	0.005	1.7	0.11	20	4.2	0.022	0.33	1.8	2.1	1.0	0.10	20.8	9	10	5	<1	76		
527 Rhollite Upper Fifteen Mile Creek 8124-353226	A <sub>1</sub>	SL	0-15	5	18	31	28	14	5.8	128	0.015	5.7	0.32	23	2.4	0.049	0.20	13.1	2.6	1.0	0.3	28.9	45	9	3	1	42		
	A <sub>2</sub>	SCL	15-25	3	15	31	25	23	5.9	115	0.015	2.0	0.15	17	2.7	0.056	0.22	7.4	2.4	1.4	0.08	15.9	47	15	9	1	28		
	AB	CL	25-40	5	15	20	25	32	5.5	38	0.005	1.5	0.12	16	3.0	0.026	0.23	5.1	2.0	1.4	0.03	17.2	30	12	8	<1	50		
528 Rhollite Upper Middle Creek 8124-322327	A <sub>1</sub>	SL	0-8	10	14	34	29	16	5.0	69	0.012	6.1	0.23	34	2.6	0.022	0.23	6.0	3.1	1.8	0.10	25.7	23	12	7	<1	48		
	A <sub>2</sub>	SCL	8-22	11	10	34	32	18	5.0	65	0.012	2.4	0.11	28	3.4	0.018	0.24	2.8	3.4	1.5	0.13	19.0	15	18	8	<1	58		
	B <sub>2</sub>	LC	25-35	5	7	26	26	36	5.1	30	0.005	1.3	0.083	20	3.8	0.016	0.26	1.5	4.6	1.4	0.09	19.8	8	23	7	<1	62		
531 Colluvium from Ordovician sedimentary rocks Haylah Gap 8224-894470	A <sub>1</sub>	FSL	0-7	9	12	50	17	14	5.5	77	0.009	2.8	0.16	23	1.3	0.017	0.28	10.0	1.5	0.5	0.04	16.6	60	9	3	<1	28		
	A <sub>2</sub>	FSL	7-16	2	12	52	17	16	5.3	38	0.004	1.2	0.080	20	1.3	0.013	0.26	3.4	1.2	0.3	0.03	9.6	35	13	3	<1	49		
	AB	FSQL	16-25	1	11	47	17	24	5.1	26	0.003	0.7	0.051	18	2.1	0.012	0.28	2.1	1.2	0.5	0.02	9.7	22	12	5	<1	61		
534 Ordovician sandstone and mudstone Eurobin Creek 8224-808311	B <sub>2</sub>	C	40-60	8	7	29	9	55	4.8	32	0.004	...	...	...	5.5	0.019	0.46	2.2	2.5	1.0	0.05	13.8	16	18	7	<1	59		
	B <sub>1</sub>	C	130-150	15	13	33	10	41	4.8	38	0.005	...	...	...	6.0	0.019	0.43	0.4	2.9	0.7	0.11	11.7	3	25	6	1	65		
	A <sub>1</sub>	L	0-2	6	11	28	29	25	4.8	150	0.009	9.0	0.50	23	...	...	...	8.2	4.8	0.9	0.1	31.2	26	15	3	<1	56		
554 Rhynocrite Whitlands 8124-422252	A <sub>1</sub>	SL	0-10	6	16	34	23	21	5.0	71	0.006	4.5	0.20	29	2.2	0.022	0.23	4.0	2.4	0.4	0.02	19.6	20	12	2	<1	66		
	A <sub>2</sub>	SL	10-20	4	15	34	24	24	5.1	53	0.005	2.3	0.14	21	2.5	0.020	0.25	3.0	1.8	0.4	0.03	17.7	17	10	2	<1	71		
	AB	SCL	20-30	4	12	32	24	29	5.2	37	0.004	2.0	0.093	28	2.7	0.017	0.29	1.9	1.5	0.5	0.03	14.5	13	10	3	<1	74		
8124-422252	B <sub>2</sub>	SC	50-60	6	12	29	23	34	5.2	23	0.003	...	...	...	3.2	0.017	0.30	0.8	1.1	0.4	0.03	12.7	6	9	3	<1	82		
	B <sub>1</sub>	SC	80-90	6	11	28	21	35	5.0	22	0.003	...	...	...	3.3	0.018	0.34	0.6	1.2	0.3	0.03	11.3	5	11	3	<1	81		
	B <sub>1</sub>	SC	100-120	5	13	29	24	30	4.9	25	0.003	...	...	...	...	0.017	0.29	...	...	...	...	...	...	...	...	...	...	...	

Soil description Profile no. Parent material Location	Horizon	Field texture	Sample depth cm	Particle-size distribution						1 : 5 soil : water suspension				Org C %	Total N %	N 1.3C	Free Fe <sub>2</sub> O <sub>3</sub> %	P (available) ppm	K (available) ppm	HCl extract		Exchangeable cations						
				Gravel %	Coarse sand %	Fine sand %	Silt %	Clay %	pH	EC 25°C µS/cm	Cl <sup>-</sup> %	(total) P %	(total) K %							milliequivalents per 100g			% of C.E.C.					
																				Ca	Mg	K	Ca	Mg	K	Na	C.E.C.	Ca
555 Carboniferous mudstone Mahaakah 8124-359129	A <sub>1</sub>	SIL	0-10	1	6	46	25	20	4.7	0.003	2.9	0.14	27	1.8	9	140	0.024	0.38	0.6	2.8	0.3	0.04	11.4	5	25	3	<1	67
	A <sub>2</sub>	SIL	10-20	0	3	44	27	23	4.7	0.002	1.3	0.091	19	1.9	5	90	0.021	0.42	0.2	1.1	0.3	0.04	9.1	2	12	3	<1	83
	B <sub>1</sub>	CL	20-30	tr.	3	42	25	27	4.9	0.002	1.0	0.072	18	2.1	5	100	0.020	0.46	0.7	0.1	0.3	0.04	8	<	7	3	<1	89
	B <sub>2</sub>	CL	50-60	5	4	36	25	31	4.9	0.002	...	...	...	2.4	5	50	0.020	0.57	0.2	0.5	0.2	0.04	7.4	3	7	3	<1	87
	B <sub>3</sub>	CL	80-90	17	3	39	27	28	4.9	0.002	...	...	...	2.6	5	50	0.023	0.70	0.1	0.4	0.2	0.03	9.4	1	4	2	<1	93
	B <sub>4</sub>	CL	110-120	20	3	37	30	27	4.8	0.001	...	...	...	...	6	50	0.023	0.70	0.1	0.8	0.2	0.04	8.6	1	9	2	<1	88
563 Ordovician shale and mudstone Buckland River headwaters 8223-986999	A <sub>1</sub>	SIL	0-10	24	23	18	30	22	4.8	0.023	5.6	0.30	24	4.2	14	300	0.048	0.35	0.8	1.0	1.5	0.1	18.4	1	2	3	<1	94
	A <sub>2</sub>	SIL	10-20	20	20	18	30	25	4.9	0.012	3.8	0.21	24	4.4	7	240	0.043	0.38	0.2	0.6	1.2	0.07	17.2	1	3	7	<1	89
	B <sub>1</sub>	CL	20-30	18	25	19	25	27	4.8	0.020	1.9	0.13	19	4.3	6	160	0.042	0.41	0.2	0.3	0.8	0.07	12.2	2	2	7	<1	88
	B <sub>2</sub>	CL	50-60	22	31	22	19	24	4.8	0.006	...	...	...	3.8	5	80	0.037	0.46	0.2	0.1	0.3	0.02	6.5	3	2	5	<1	90
	B <sub>3</sub>	CL	60-70	19	26	29	19	24	4.8	0.006	...	...	...	3.7	5	60	0.037	0.46	0.2	0.2	0.3	<0.01	4.7	4	4	6	<1	86
	B <sub>4</sub>	CL	80-90	19	26	29	19	24	4.8	0.006	...	...	...	3.7	5	60	0.037	0.46	0.2	0.2	0.3	<0.01	4.7	4	4	6	<1	86
14) Reddish brown gradational soils with smooth ped fabric																												
557 Carboniferous mudstone and sandstone Mount View 8124-537139	A <sub>1</sub>	L	0-10	6	4	39	24	24	4.9	0.006	5.4	0.22	32	2.1	9	300	0.019	0.24	4.8	4.0	0.8	0.06	21.3	23	19	4	<1	54
	A <sub>2</sub>	L	10-20	9	3	41	27	28	5.0	0.003	2.3	0.10	30	2.4	5	220	0.014	0.27	1.3	1.1	0.2	0.08	14.0	9	8	1	<1	82
	B <sub>1</sub>	LC	20-30	10	3	33	24	24	4.9	0.003	1.2	0.072	22	2.9	4	200	0.013	0.28	0.6	0.7	0.2	0.04	10.6	6	7	2	<1	85
	B <sub>2</sub>	LC	50-60	6	2	34	24	36	5.0	0.002	-0.4	0.044	12	4.3	4	140	0.014	0.31	0.4	0.7	0.3	0.03	9.2	4	8	3	<1	85
	B <sub>3</sub>	CL	80-90	2	2	49	24	23	4.9	0.002	...	...	...	3.1	3	70	0.010	0.14	0.4	0.4	0.1	0.03	5.0	8	8	2	<1	81
	B <sub>4</sub>	CL	110-120	8	4	58	19	18	4.8	0.002	...	...	...	...	4	50	...	...	...	...	...	...	...	...	...	...	...	...
559 Rhizodactile Archerton 8124-399220	A <sub>1</sub>	SIL	0-10	7	12	26	32	23	5.3	0.007	5.2	0.24	28	3.2	8	320	0.027	0.24	7.7	3.7	0.7	0.1	22.9	34	16	3	<1	47
	AB	CL	10-20	6	11	26	27	31	5.2	0.005	2.6	0.14	24	3.7	5	240	0.023	0.25	3.7	2.2	0.6	0.08	17.6	21	13	3	<1	63
	B <sub>1</sub>	LC	20-30	4	10	23	23	42	5.1	0.003	1.5	0.094	21	4.3	4	260	0.021	0.29	2.8	2.0	0.6	0.08	16.7	17	12	4	<1	67
	B <sub>2</sub>	LC	50-60	5	9	19	18	54	5.2	0.003	0.6	0.052	15	5.5	4	240	0.023	0.37	2.0	2.2	0.6	0.09	13.9	14	16	4	<1	65
	B <sub>3</sub>	LC	80-90	5	9	21	19	50	5.0	0.003	...	...	...	5.5	5	180	0.020	0.29	1.0	2.2	0.5	0.2	12.0	8	18	4	2	68
	B <sub>4</sub>	LC	120-130	8	9	21	19	49	5.0	0.002	...	...	...	5.2	4	120	...	...	...	...	...	...	...	...	...	...	...	...
15) Red gradational soils on basalt																												
508 Basalt Banksdale Road 8124-374448	A <sub>1</sub>	CL	0-7	tr.	10	29	30	28	4.8	0.010	4.9	0.45	14	5.8	...	...	0.14	0.25	13.2	5.2	2.5	0.09	31.4	42	17	8	<1	33
	B <sub>1</sub>	C	7-20	1	6	23	28	39	4.9	0.008	1.8	0.21	11	5.9	...	...	0.12	0.21	12.4	5.6	2.1	0.09	29.3	42	19	7	<1	32
	B <sub>2</sub>	C	30-40	0	3	11	13	70	4.8	0.018	1.1	0.10	14	4.9	...	...	0.14	0.19	14.1	9.4	1.3	0.14	33.5	42	28	4	<1	26
	B <sub>3</sub>	C	60-65	4	5	17	17	59	4.8	0.018	...	...	...	6.7	...	...	0.15	0.13	14.6	10.0	0.8	0.17	32.0	46	31	3	1	19
	A <sub>1</sub>	SIL	0-12	1	10	26	35	22	5.3	0.018	4.2	0.29	19	5.4	...	...	0.17	0.24	13.5	4.2	0.3	0.05	32.6	41	13	1	<1	45
	B <sub>1</sub>	C	12-30	3	7	22	25	42	5.0	0.009	1.6	0.14	15	6.0	...	...	0.14	0.20	6.5	3.5	1.8	0.04	23.3	28	15	8	<1	49
513 Whirlands 8124-399202	B <sub>2</sub>	C	35-60	1	7	22	22	45	4.5	0.008	...	...	...	6.0	...	...	0.15	0.18	2.4	2.5	1.1	0.06	21.3	11	12	5	<1	72
	B <sub>3</sub>	C	80-100	1	6	23	19	49	4.4	0.008	...	...	...	5.5	...	...	0.14	0.16	2.3	2.4	0.7	0.07	21.6	11	11	3	<1	75
	B <sub>4</sub>	C	120-140	6	11	25	14	48	4.4	0.018	...	...	...	6.1	...	...	0.14	0.09	4.4	2.5	0.5	0.06	17.6	25	14	3	<1	58
	A <sub>1</sub>	SIL	0-10	0	5	26	41	20	5.6	0.015	6.7	0.41	21	6.3	...	...	0.094	0.34	14.3	5.0	2.1	0.2	37.2	38	13	6	1	42
	A <sub>2</sub>	SIL	10-20	0	5	27	39	20	5.5	0.015	6.0	0.36	22	6.4	...	...	0.099	0.32	9.6	3.3	1.9	0.2	35.6	27	9	5	1	58
	B <sub>1</sub>	C	20-30	2	7	27	39	23	5.3	0.011	4.2	0.27	20	6.9	...	...	0.096	0.30	5.8	1.8	1.3	0.2	29.4	20	6	4	1	69
8124-318231	B <sub>2</sub>	C	50-60	1	3	22	31	43	5.0	0.006	...	...	...	7.6	...	...	0.069	0.28	1.9	1.2	0.6	0.2	22.6	8	5	3	1	83
	B <sub>3</sub>	C	80-90	0	2	19	24	53	5.2	0.006	...	...	...	8.5	...	...	0.082	0.28	3.4	1.9	0.4	0.3	21.2	16	9	2	1	72

Soil description	Horizon	Field texture	Sample depth cm	Particle-size distribution					1:5 soil-water suspension		Org C %	Total N %	1.3C/N %	Free Fe <sub>2</sub> O <sub>3</sub> %	P (available) ppm	K (available) ppm	HCl extract		Exchangeable cations								
				Gravel %	Coarse sand %	Fine sand %	Silt %	Clay %	pH	EC 25°C #/S/cm							Cl <sup>-</sup> %	Ca %	Mg %	K %	Na %	C.E.C. %	Ca %	Mg %	K %	Na %	H %
SOILS WITH DUPLEX TEXTURE PROFILES																											
16) Red duplex soils with smooth peed fabric																											
507 Colluvium from Carboniferous sedimentary rocks Hansonville 8124-385506	A <sub>1</sub>	FSL	0-9	2	11	63	13	10	5.4	180	0.011	3.9	0.28	18	1.5	0.025	0.19	8.3	3.6	0.8	0.05	17.1	49	21	5	<1	25
	A <sub>2</sub>	FSL	9-25	6	6	64	16	14	5.0	75	0.006	0.3	0.034	11	5.8	0.010	0.16	2.5	4.6	0.3	0.03	4.7	53	9	6	1	31
	B <sub>1</sub>	C	25-50	2	2	26	10	59	5.2	54	0.008	0.008	0.015	4.7	6.1	0.015	0.49	5.4	9.3	0.2	0.6	15.3	30	4	1	3	34
	B <sub>2</sub>	C	100-130 130-140	0	0	29	10	0	4.9	63	0.010	0.010	0.012	5.8	4.7	0.012	0.47	3.5	8.5	0.2	0.5	17.6	20	48	1	3	28
520 Ordovician sandstone and mudstone Bowman 8225-660616	A <sub>1</sub>	FSL	0-3	9	38	16	27	5.2	240	0.020	13	0.68	25	2.0	0.042	0.36	20.4	8.1	2.0	0.07	40.7	50	20	5	<1	25	
	A <sub>2</sub>	FSL	3-12	35	20	47	21	11	4.5	58	0.005	0.7	0.035	26	2.9	0.053	0.36	0.5	0.5	0.04	5.5	9	9	9	1	72	
	A <sub>3</sub>	FSL	12-25	14	17	46	21	16	4.5	29	0.003	0.003	0.019	2.7	4.1	0.019	0.38	0.2	0.6	0.3	0.02	5.2	4	12	6	<1	78
	B <sub>1</sub>	C	25-35 35-70	3	8	28	16	45	4.3	110	0.016	0.016	0.022	4.1	4.1	0.022	0.43	0.1	2.2	0.4	0.09	9.4	1	23	4	1	71
521 Alluvium from Ordovician sedimentary rocks Burgoyne Creek 8225-635635	A <sub>1</sub>	FSL	0-9	5	53	31	11	5.7	160	0.016	4.4	0.30	19	0.7	0.016	0.16	13.0	2.3	0.4	0.04	19.9	65	12	2	<1	21	
	A <sub>2</sub>	FSL	9-25	tr.	3	60	32	5	5.1	27	0.002	0.3	0.033	12	0.4	0.005	0.12	1.0	0.3	0.2	0.03	2.0	50	10	2	23	
	AB	FSL	30-38	0	2	49	27	22	5.0	43	0.002	0.2	0.028	9	1.2	0.007	0.37	1.7	2.6	0.6	0.09	7.5	23	35	8	1	33
	B <sub>1</sub>	C	40-60 80-100	0	<1	32	21	45	5.2	64	0.008	0.008	0.011	3.1	7.1	0.011	0.65	5.1	7.2	0.9	0.3	17.4	29	41	5	2	23
530 Alluvium-colluvium from Ordovician sedimentary rocks Rosewhite 8224-884490	A <sub>1</sub>	FSL	0-4	3	14	47	19	18	5.0	69	0.009	5.1	0.26	26	1.9	0.023	0.30	7.8	2.9	1.0	0.06	21.6	36	13	5	<1	46
	A <sub>2</sub>	FSL	6-14	5	14	43	19	15	5.0	47	0.005	1.1	0.065	22	2.1	0.010	0.30	1.9	1.3	0.6	0.03	9.4	20	14	6	<1	60
	AB	FSL	15-22	7	12	38	11	38	5.1	34	0.003	1.1	0.065	22	3.4	0.012	0.33	2.1	2.2	0.7	0.07	12.6	17	17	6	1	59
	B <sub>1</sub>	C	40-60 100-120	5	6	20	6	68	4.9	78	0.013	0.5	0.052	13	7.1	0.026	0.42	0.6	3.6	1.1	0.22	14.9	4	24	7	2	63
17) Red duplex soils with rough peed fabric	A <sub>1</sub>	L	0-10	5	12	30	30	23	5.5	65	0.006	3.9	0.20	25	2.6	0.027	0.25	6.3	3.1	0.5	0.1	18.6	34	17	3	1	45
	A <sub>2</sub>	L	10-20	9	12	30	27	26	5.3	38	0.003	1.6	0.10	21	3.0	0.023	0.27	2.5	1.7	0.4	0.08	12.1	20	14	3	1	62
	AB	CL	20-30	5	11	26	23	36	5.0	32	0.003	0.003	0.010	11	3.7	0.021	0.30	1.5	1.6	0.4	0.08	11.5	13	14	3	1	69
	B <sub>1</sub>	C	50-60 80-90 120-130	11	8	19	17	54	5.0	24	0.003	0.003	0.010	11	5.1	0.028	0.40	1.7	2.3	0.5	0.1	13.1	13	18	4	1	64
18) Yellowish brown duplex soils	A <sub>1</sub>	L	0-9	tr.	1	43	33	24	4.4	100	0.008	2.4	0.17	18	1.3	0.020	0.24	1.5	1.1	0.6	0.1	11.2	13	10	5	1	71
	A <sub>2</sub>	FSL	10-25	tr.	3	54	29	9	4.4	48	0.004	0.4	0.026	20	1.5	0.008	0.11	0.6	<0.1	0.1	0.03	12.0	5	<1	1	<1	94
	B <sub>1</sub>	C	30-45	1	3	33	21	39	5.1	29	0.004	0.004	0.014	3.7	3.7	0.014	0.28	1.0	5.0	0.2	0.4	12.3	8	41	2	3	46
	B <sub>2</sub>	C	50-75 100-130	0	2	27	22	47	5.0	68	0.011	0.011	0.011	3.1	2.9	0.011	0.42	1.7	8.2	0.2	2.1	17.2	10	48	1	12	29
523 Granite North of Mudgeegonga 8225-882669	A <sub>1</sub>	FSL	0-10	14	16	61	9	7	4.7	56	0.004	2.6	0.15	23	0.6	0.011	0.10	1.9	0.6	0.3	0.03	8.4	23	7	4	<1	66
	A <sub>2</sub>	FSL	10-20	18	21	47	21	7	4.9	50	0.005	0.5	0.035	19	0.6	0.004	0.07	1.1	0.3	0.2	0.04	3.8	29	8	5	1	57
	A <sub>3</sub>	FSL	30-40	11	19	43	22	17	4.8	30	0.003	0.3	0.022	18	1.1	0.005	0.10	0.7	0.2	0.2	0.02	4.4	16	5	<1	74	
	B <sub>1</sub>	C	40-50 60-80	10	16	28	18	38	4.8	26	0.002	0.002	0.009	2.4	2.4	0.009	0.22	1.2	1.1	0.6	0.05	11.5	10	10	5	<1	75

