Acid Sulfate Soils of Halifax, North Queensland

Volume 2

Appendix 1: Summarised Analytical Data

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Analytical Data Method Codes

Field Morphology Stummary	
Site ID	Borehole or site number
Hor No	Horizon number
Upp Depth	Upper depth of horizon
Low Depth	Lower depth of horizon
Soil Texture	Soil texture (codes according to McDonald et al. 1990)
Jar.	Indicates presence of Jarosite (J) in profile
Shell	Indicates presence of Shell (SS) in profile
Field pH	
Depth (m)	Depth at which pH_F and pH_{FOX} tests were conducted
pH_F (23Af)	pH measured in the field on saturated soil sample using pH electrode
pH_{FOX} (23Bf)	pH measured in the field – 30% peroxide reaction, pH electrode
Lab Sample	
No.	Sample number of sample taken for analysis
Upp Depth	Upper depth of sample taken for analysis
Low Depth	Lower depth of sample taken for analysis
Action Criteria	
Depth 1st Action Level	The depth category of the upper depth of the first horizon where the texture-based ASS action criteria is exceeded. 'S' denotes potential acidity for the respective depth categories.
Action Level Select %S	Pc, Pl or Ps indicates samples that have exceeded 0.1, 0.06 or 0.03 %S (ie. exceeded the ASS action criteria), for clays, loams and sands respectively. Note: These figures apply to disturbances up to 1000 m3; for disturbances greater than 1000 m3, the action criteria is 0.03 %S, regardless of texture

Suspension Peroxide Oxidation Combined Acidity and Sulfur (SPOCAS) Acid Base Accounting	
$s\text{-}ANC_E$	S_{POS} - ((S_{POS} + $s\text{-}ANC_E$) / 1.5) WHERE pH_{KCl} >= 6.5 AND TPA = 0
s-Ca+s-Mg	S_{POS} - (($s\text{-}Ca_A$+ $s\text{-}Mg_A$)/ 1.5) WHERE pH_{KCl} >= 6.5 AND TPA = 0

Laboratory results				
	SPOCAS ALHS	**ALHS**	**Unit**	**Description**
Potential Acidity				
S_{CR} (Sulfur, chromium reducible)		22B	%S	(from Chromium Reducible Sulfur method)
S_{POS} (Peroxide oxidisable sulfur)	23Ee		%S	= S_P – S_{KCl}
TSA (Titratable sulfidic acidity)	23H		mol H^+/t	= TPA – TAA
TPA (Titratable peroxide acidity)	23G		mol H^+/t	= Titratable Peroxide Acidity (measured after peroxide digestion)
Retained Acidity				
$a\text{-}S_{RAS}$ (Residual acid-soluble)	a-23Re		mol H^+/t	(S_{RAS} x 0.75 x 623.7) (S_{RAS} expressed in equivalent acidity units)
$a\text{-}S_{NAS}$ (Net acid-soluble sulfur)		a-20J	mol H^+/t	((S_{HCl} – S_{KCl}) x 467.8) (calculated in equivalent acidity units)
Actual Acidity				
TAA (Titratable actual acidity)	23F		mol H^+/t	= Titratable actual acidity (measured before peroxide digestion)
SPOCAS				
pH_{KCl}				pH of soil in potassium chloride (KCl) extract
pH_{OX}				pH of soil after peroxide digestion
S_{KCl}	23Ce		%S	KCl extracted sulfur
$s\text{-}Ca_A$+$s\text{-}Mg_A$	s-23Xh+s-23Um		%S	Addition of Reacted Calcium and Magnesium (in equivalent % pyrite S it will neutralise)
Neutralising Capacity				
$s\text{-}ANC_E$	s-23Q		%S	(ANC_E / 3.121) (ANC_E in equivalent % pyrite S it will neutralise)

Samples were analysed by Method 23 (SPOCAS). The SPOCAS method provides data on pyritic sulfur, pH, existing acidity, as well as a measure of Ca and Mg neutralising reactions. The SPOCAS is an improved and updated version of the POCASm method.

The SPOCAS Method is as per Acid Sulfate Soils Laboratory Methods Guidelines Version 2.1 June 2004 Ahern CA, McElnea AE, Sullivan LA (2004)

Sample selection and handling is as per the Guidelines for Sampling and Analysis of Lowland Acid Sulfate Soils (ASS) in Queensland 1998, CR Ahern, MR Ahern and B Powell (1998).

ALHS Codes are standard analytical method codes according to the Australian Laboratory Handbook of Soil and Water Chemical Methods, GE Rayment and FR Higginson (1992), and Acid Sulfate Soils Laboratory Methods Guidelines Version 2.1 June 2004 Ahern CA, McElnea AE, Sullivan LA (2004)

Field Morphology Summary										Lab Sample			Action Criteria		SPOCAS Acid Base Accounting		Lab Results											
																	Potential Acidity				Existing Acidity		SPOCAS					Neut Cap
Site ID	Hor No	Upp Depth	Low Depth	Soil Texture	Jar.	Shell	Field pH Depth	pH_F	pH_{FOX}	No	Upp Depth	Low Depth	Depth 1st Action Level	Action Level Select %S	pH KCl =>6.5 TPA =0 %S		S_{CR}	S_{POS}	TSA	TPA	a-S_{NAS}	TAA	pH_{KCl}	pH_{OX}	S_{KCl}	s-Ca_A+s-Mg_A	s-ANC_E
		(m)					(m)				(m)				%S		%S		mol H+/t		mol H+/t				%S		%S
								23Af	23Bf						s-ANC_E	s-Ca+s-Mg	22B	23Ee	23H	23G	a-20J	23F	23A	23B	23Ce	s-23Xh+s-23Um	s-23Q
79	1	0.00	0.40	SCL			0.10	5.4	3.8																		
							0.30	5.8	4.8																		
	2	0.40	1.30	S			0.60	5.6	5.3																		
							0.80	5.5	5.0																		
							1.00	5.1	3.3																		
							1.25	5.8	4.8																		
	3	1.30	4.80	KS			1.50	5.7	6.3																		
							1.75	5.9	7.0																		
							2.00	6.3	8.6																		
							2.25	6.5	6.9																		
							2.50	6.1	8.1																		
							2.75	6.3	7.5																		
							3.00	6.3	7.2																		
							3.25	6.2	6.1	8	3.10	3.40					< 0.02										
							3.50	6.3	7.9																		
							3.75	6.2	6.8																		
							4.00	6.2	6.8																		
							4.25	6.3	6.7																		
							4.50	6.3	6.8																		
							4.75	6.2	6.6																		
	4	4.80	6.60	KS			5.00	6.1	6.5																		
							5.25	6.4																			
							5.50	6.5																			
							5.75	6.3		12	5.50	5.80					< 0.02										
							6.00	6.4	6.5																		
							6.25	6.3	6.5																		
							6.50	6.2	6.4																		
	5	6.60	9.45	KS			6.75	6.3	6.5																		
							7.00	6.3	6.5																		
							7.50	5.9	6.3																		
							8.00	6.2	6.3																		
							8.50	6.8	6.2																		
										17	8.50	8.80					< 0.02										
							9.00	7.0	5.9																		
										18	9.10	9.40					< 0.02										
	6	9.45	9.95	ZLC			9.50	8.3	5.3																		
										19	9.60	9.80	S9	Pc	-0.025	0.147		0.520	0	0		0	8.7	7.0	0.05	0.559	0.30
	7	9.95	10.30	CL		SS	10.00	8.2	6.1																		
										20	10.10	10.30		Pl	-0.742	-0.412		0.370	0	0		0	9.0	7.1	0.04	1.172	1.30
	8	10.30	10.75	SLC		SS	10.50	8.5	5.8																		
										21	10.50	10.70		Pc	-0.014	0.159		0.560	0	0		0	9.0	7.7	0.04	0.602	0.30
	9	10.75	10.80	LC			10.80	7.9	0.9																		
80	1	0.00	0.23	CL			0.10	4.6	2.9																		
	2	0.23	0.75	LC			0.30	4.7	3.0																		
										2	0.30	0.50					< 0.02										
							0.60	5.3	3.5																		
	3	0.75	1.20	LS			0.80	5.7	3.9																		
							1.00	5.8	3.5	3	0.80	1.00					< 0.02										
	4	1.20	1.50	S			1.25	6.1	3.8																		
							1.50	5.9	5.2	4	1.30	1.50					< 0.02										
	5	1.50	1.80	S			1.75	5.9	2.7	5	1.60	1.80					< 0.02										
	6	1.80	6.40	KS			2.00	5.9	4.5																		
							2.25	5.9	5.9	6	2.10	2.40					< 0.02										
							2.50	5.9	5.6																		
							2.75	5.8	5.5																		
							3.00	5.7	5.8																		
							3.25	6.1	6.0																		
							3.50	6.0	6.0	8	3.40	3.70					< 0.02										
							3.75	5.8	5.7																		
							4.00	6.4	6.1																		
							4.25	5.9	6.2																		
							4.50	6.0	5.8																		
							4.75	6.2	6.1																		
							5.00	6.4	6.2																		
							5.50	6.3	6.4																		
							6.00	6.5	6.5																		
	7	6.40	6.95	KS			6.50	7.2	6.0	13	6.40	6.70					< 0.02										
	8	6.95	7.20	SLC			7.00	7.1	1.1																		
										14	7.00	7.20	S7	Pc			0.24										
	9	7.20	8.40	S			7.50	6.6	5.7																		
										15	7.50	7.80					< 0.02										
							8.00	6.8	5.7																		
							8.40	6.9	1.2																		
81	1	0.00	0.15	FSCL			0.10	5.6	3.7	1	0.00	0.10					< 0.02										
	2	0.15	0.70	FSL			0.30	6.7	5.7																		
							0.60	6.7	5.9																		
	3	0.70	1.10	ZLC			0.80	6.9	6.0																		
							1.00	6.7	5.8	3	0.80	1.00					< 0.02										
	4	1.10	1.40	ZLC			1.25	6.5	5.0	4	1.20	1.40	S2	Pc			0.66										
	5	1.40	1.80	ZLC			1.50	6.7	1.2																		
										5	1.50	1.70		Pc			1.65										
							1.75	6.7	1.0																		
	6	1.80	2.10	S			2.00	6.9	1.3	6	1.90	2.10		Ps			0.27										
	7	2.10	4.80	KS			2.25	6.8	5.0																		
							2.50	6.5	4.9	7	2.40	2.70					< 0.02										
							2.75	6.5	5.4																		
							3.00	6.4	5.4																		
							3.25	6.4	5.2																		
							3.50	6.5	5.3																		
							3.75	6.4	5.6																		
							4.00	6.3	5.8																		
							4.25	6.3	5.2																		
							4.50	6.3	5.1																		
							4.75	6.3	4.5																		
82	1	0.00	0.15	CLFS			0.10	6.4	5.1	1	0.00	0.10	S0	Pl			0.08										
	2	0.15	0.30	CLFS			0.30	6.5	5.4	2	0.20	0.30					< 0.02										
	3	0.30	0.65	ZCL			0.60	6.6	4.7	3	0.40	0.60		Pl			0.07										
	4	0.65	0.90	ZCL			0.80	6.8	3.3																		
							0.90	6.9	3.9	4	0.70	0.90		Pl			0.41										

Field Morphology Summary										Lab Sample			Action Criteria		SPOCAS Acid Base Accounting		Lab Results											
																	Potential Acidity				Existing Acidity		SPOCAS					Neut Cap
Site ID	Hor No	Upp Depth	Low Depth	Soil Texture	Jar.	Shell	Field pH Depth	pH_F	pH_{FOX}	No	Upp Depth	Low Depth	Depth 1st Action Level	Action Level Select %S	pH KCl =>6.5 TPA =0 %S		S_{CR}	S_{POS}	TSA	TPA	a-S_{NAS}	TAA	pH_{KCl}	pH_{OX}	S_{KCl}	s-Ca_A+s-Mg_A	s-ANC_E
		(m)					(m)				(m)						%S		mol H+/t		mol H+/t				%S		%S
								23Af	23Bf						s-ANC_E	s-Ca+s-Mg	22B	23Ee	23H	23G	a-20J	23F	23A	23B	23Ce	s-23Xh+s-23Um	s-23Q
83	1	0.00	0.30	CL			0.10	5.0	4.5																		
							0.30	4.9	3.7																		
	2	0.30	0.65	CL			0.60	4.7	3.9																		
	3	0.65	1.15	LC			0.80	4.8	3.9																		
							1.00	4.9	3.7																		
	4	1.15	1.60	CS			1.25	5.1	4.2																		
							1.50	5.1	4.1	4	1.30	1.50					< 0.02										
	5	1.60	2.50	S			1.75	5.2	3.3																		
							2.00	5.5	2.1	5	1.80	2.00					< 0.02										
							2.25	5.6	2.3																		
							2.50	5.4	1.8	6	2.30	2.50	S2	Ps			0.04										
	6	2.50	2.80	LS			2.75	5.5	1.7	7	2.60	2.80		Ps			0.34										
	7	2.80	3.10	CS			3.00	5.6	1.6	8	2.80	3.00		Ps			0.47										
	8	3.10	3.80	LS			3.25	5.7	1.6																		
							3.50	6.2	1.6	9	3.30	3.50		Ps			0.1										
							3.75	6.8	1.8																		
	9	3.80	4.20	FSCL			4.00	7.0	3.8																		
	10	4.20	5.30	CL		SS	4.25	7.6	5.8																		
							4.50	7.9	6.1	11	4.30	4.50		Pl	-0.315	-0.090		0.400	0	0		0	8.6	7.3	0.06	0.735	0.67
							4.75	8.1	6.1																		
							5.00	7.8	5.8																		
	11	5.30	5.90	FSCL		SS	5.50	7.7	6.1																		
	12	5.90	6.00	FS			6.00	8.0	6.4																		
84	1	0.00	0.30	CL			0.10	4.8	2.7																		
							0.30	4.9	2.5																		
	2	0.30	0.65	LMC						2	0.30	0.50					< 0.02										
							0.60	5.4	3.9																		
	3	0.65	0.95	FSLC			0.80	5.3	4.0																		
	4	0.95	1.70	SLC			1.00	5.3	4.0																		
							1.25	5.4	3.8																		
							1.50	5.4	3.0																		
	5	1.70	2.10	CS			1.75	5.1	3.0	5	1.70	1.90					< 0.02										
							2.00	5.1	2.6																		
	6	2.10	2.40	KS			2.25	5.9	3.2	6	2.20	2.40					< 0.02										
	7	2.40	3.30	LKS			2.50	6.4	2.0																		
							2.75	6.4	1.4	7	2.60	2.80	S3	Ps			0.47										
							3.00	6.5	1.4																		
										8	3.00	3.20		Ps			0.21										
							3.25	6.7	1.4																		
	8	3.30	3.85	LKS			3.50	7.1	1.8																		
							3.75	7.4	1.1	9	3.60	3.80		Ps			0.19										
	9	3.85	4.30	FSL			4.00	6.8	1.3																		
							4.25	6.9	1.3	10	4.10	4.30		Pl			0.42										
	10	4.30	4.50	CS			4.50	6.9	1.4	11	4.30	4.50		Ps			0.28										
	11	4.50	5.70	KS			4.75	6.9	1.4																		
							5.00	6.8	1.3																		
							5.50	7.1	1.5																		
	12	5.70	6.00	LFS		SS	6.00	7.9	6.3																		
85	1	0.00	0.10	CLS			0.10	4.7	4.3																		
	2	0.10	1.05	SLC			0.30	4.6	3.6																		
							0.60	4.8	2.8																		
							0.80	4.8	3.6																		
							1.00	5.0	4.0																		
	3	1.05	1.65	S			1.25	5.2	4.6																		
							1.50	5.4	5.4																		
	4	1.65	3.60	KS			1.75	5.3	4.7																		
							2.00	5.7	5.9																		
							2.25	5.3	6.1																		
							2.50	6.3	5.9																		
							2.75	6.3	6.1																		
	5	3.60	7.70	KS			3.75	5.9	6.1																		
							4.00	6.2	6.3																		
							4.25	6.2	6.4																		
							4.50	6.3	6.6																		
							4.75	6.3	6.4																		
							5.00	6.5	6.3																		
							5.50	6.9	6.3																		
							6.00	6.5	6.3																		
							6.50	6.4	6.5	11	6.20	6.50					< 0.02										
							7.00	6.2	6.4																		
							7.50	6.9	6.5																		
	6	7.70	8.40	KS			8.00	6.9	6.2																		
										14	8.00	8.30					< 0.02										
	7	8.40	9.50	ZCL		SS	8.50	8.1	4.7																		
										15	8.50	8.70	S9	Pl	0.019	0.166		0.480	0	0		0	8.8	6.9	0.04	0.471	0.21
							8.75	8.7	5.9																		
							9.00	8.6	6.4																		
							9.25	8.5	5.9																		
							9.50	8.6	6.8																		
	8	9.50	9.60	SLC		SS																					
86	1	0.00	0.10	SCL			0.10	4.8	4.2																		
	2	0.10	0.50	SL			0.30	4.9	4.4																		
	3	0.50	0.90	S			0.60	5.2	5.5																		
							0.80	5.0	4.8																		
	4	0.90	1.65	S			1.00	5.5	6.0																		
							1.25	5.6	5.9																		
							1.50	5.9	6.4																		
	5	1.65	2.30	S			1.75	6.1	6.4																		
							2.00	6.4	6.4	6	1.80	2.00					< 0.02										
							2.25	6.3	6.5																		
	6	2.30	2.40	CS			2.35	6.1	5.8	7	2.30	2.40					< 0.02										
	7	2.40	4.50	S			2.50	6.1	6.4																		
							2.75	6.3	6.4																		
							3.00	6.2	5.9	8	2.80	3.00					< 0.02										
							3.25	6.1	5.9																		
							3.50	6.6	6.3																		
							3.75	6.2	6.2																		
							4.00	6.3	6.4	10	3.80	4.00					< 0.02										
							4.25	6.3	6.3																		
							4.50	6.3	6.3																		
	8	4.50	7.00	KS			4.75	6.2	6.2																		
							5.00	6.2	6.3																		
							5.25	6.3	6.4																		
							5.50	6.5	6.4																		
							5.75	6.6	0.8																		
							6.00	6.7	6.5																		
										15	6.70	7.00					< 0.02										
	9	7.00	8.40	ZLC		SS	7.25	8.9	6.2																		
							7.50	8.8	6.5	16	7.30	7.50	S7	Pc	-0.332	-0.112		0.440	0	0		0	8.8	6.9	0.04	0.828	0.72
							7.75	9.0	7.7																		
							8.00	8.6	6.0																		
							8.25	9.3	6.5																		

Field Morphology Summary										Lab Sample			Action Criteria		SPOCAS Acid Base Accounting		Lab Results											
																	Potential Acidity				Existing Acidity		SPOCAS					Neut Cap
Site ID	Hor No	Upp Depth	Low Depth	Soil Texture	Jar.	Shell	Field pH Depth	pH_F	pH_{FOX}	No	Upp Depth	Low Depth	Depth 1st Action Level	Action Level Select %S	pH KCl =>6.5 TPA =0 %S		S_{CR}	S_{POS}	TSA	TPA	a-S_{NAS}	TAA	pH_{KCl}	pH_{OX}	S_{KCl}	s-Ca_A+s-Mg_A	s-ANC_E
		(m)					(m)				(m)						%S		mol H+/t		mol H+/t				%S		%S
								23Af	23Bf						s-ANC_E	s-Ca+s-Mg	22B	23Ee	23H	23G	a-20J	23F	23A	23B	23Ce	s-23Xh+s-23Um	s-23Q
87	1	0.00	0.15	LC			0.10	5.1	3.2	1	0.00	0.10					< 0.02										
	2	0.15	1.05	LC			0.30	6.0	4.0																		
										2	0.30	0.50					< 0.02										
							0.60	6.3	5.1																		
							0.80	6.7	5.8																		
							1.00	7.0	5.8	3	0.80	1.00					< 0.02										
	3	1.05	1.40	SL			1.25	6.8	2.7	4	1.20	1.40					0.04										
	4	1.40	1.90	S			1.50	6.7	3.0																		
							1.75	6.8	2.0	5	1.60	1.80	S2	Ps			0.03										
	5	1.90	5.90	S			2.00	6.8	5.9																		
										6	2.00	2.20					< 0.02										
							2.25	6.3	5.3																		
							2.50	6.1	5.5																		
							2.75	6.0	5.6																		
							3.00	6.0	5.5																		
							3.25	6.2	5.8																		
							4.00	6.7	6.0																		
							4.25	6.8	6.0																		
							4.50	6.7	6.1																		
							4.75	6.8	5.8																		
							5.00	7.0	6.2																		
							5.50	7.1	6.1																		
										13	5.50	5.70					< 0.02										
	6	5.90	6.60	S			6.00	7.1	6.2																		
										14	6.10	6.30		Ps			0.05										
							6.50	7.5	1.1																		
	7	6.60	7.20	ZLC		SS	6.75	8.1	5.3	15	6.60	6.80		Pc	-0.239	-0.078		0.430	0	0		0	8.9	7.2	0.06	0.762	0.57
							7.00	8.3	5.8																		
							7.20	8.1	6.2																		
88	1	0.00	0.20	CL			0.10	4.5	3.4																		
	2	0.20	0.90	CLFS			0.30	5.0	3.2																		
										2	0.30	0.50					< 0.02										
							0.60	5.3	4.0																		
							0.80	5.2	4.3																		
	3	0.90	1.90	KS			1.00	5.1	3.4																		
							1.25	5.1	4.4																		
							1.50	5.4	5.6	4	1.30	1.60					< 0.02										
							1.75	5.6	4.8																		
	4	1.90	2.20	KS			2.00	5.7	3.5																		
							2.10	5.8	3.6	5	1.90	2.20					< 0.02										
	5	2.20	5.98	KS			2.25	5.7	4.4																		
							2.50	5.9	6.1																		
							2.75	5.7	6.1	6	2.60	2.90					< 0.02										
							3.00	5.7	6.1																		
							3.25	5.5	5.5																		
							3.50	6.0	6.0																		
							3.75	5.7	5.7																		
							4.00	5.8	5.8																		
							4.25	5.6	5.8																		
							4.50	5.9	5.8																		
							4.75	5.7	5.7																		
							5.00	6.9	5.8																		
							5.25	6.9	6.0																		
							5.50	6.7	6.1																		
							5.75	6.5	6.0	11	5.60	5.90					< 0.02										
	6	5.98	7.15	KS			6.00	6.9	6.2																		
										12	6.10	6.40	S6	Ps			0.06										
							6.50	7.1	5.7																		
							7.00	7.1	6.2	13	6.70	7.00					< 0.02										
	7	7.15	8.40	ZCL		SS	7.25	7.8	5.7																		
							7.50	7.9	6.1	14	7.30	7.50		Pl	-0.180	-0.007		0.460	0	0		0	8.9	7.4	0.06	0.700	0.50
							7.75	7.9	5.6																		
							8.00	8.1	5.7																		
							8.25	8.3	5.7																		
							8.40	8.4	5.6																		
89	1	0.00	0.15	SLC			0.10	4.5	2.1	1	0.00	0.10					< 0.02										
	2	0.15	0.50	SCL			0.30	5.8	3.1																		
										2	0.30	0.50					< 0.02										
	3	0.50	0.75	LC			0.60	6.3	4.2	3	0.50	0.70					< 0.02										
	4	0.75	1.15	CS			0.80	6.5	2.7																		
							1.00	6.6	1.1	4	0.90	1.10	S1	Ps			0.62										
	5	1.15	1.60	S			1.25	6.6	5.6																		
							1.50	6.6	1.6	5	1.30	1.50		Ps			0.15										
	6	1.60	2.30	S			1.75	7.0	1.7																		
							2.00	6.6	1.2	6	1.80	2.00					< 0.02										
							2.25	6.7	5.4																		
	7	2.30	3.30	S			2.50	6.1	6.0	7	2.30	2.50					< 0.02										
							2.75	6.3	5.6																		
							3.00	6.4	5.8																		
							3.25	6.4	5.8																		
	8	3.30	6.00	KS			3.50	6.6	6.0																		
							3.75	6.1	5.5																		
							4.00	6.2	5.9	10	3.90	4.10					< 0.02										
							4.25	6.1	5.9																		
							4.50	6.4	5.9																		
							4.75	6.4	6.0																		
							5.00	6.2	5.9																		
							5.50	6.4	5.9																		
										13	5.60	5.90					< 0.02										
							6.00	6.5	6.2																		
	9	6.00	6.60	KS			6.25	6.7	0.6																		
							6.50	6.9	0.7	14	6.30	6.60		Ps			0.65										
	10	6.60	7.20	ZCL		SS	6.75	7.0	5.6																		
							7.00	7.7	5.7	15	6.80	7.00		Pl	-0.142	0.021		0.380	0	0		0	8.9	7.1	0.07	0.538	0.40
							7.20	8.1	5.8																		

Field Morphology Summary										Lab Sample			Action Criteria		SPOCAS Acid Base Accounting		Lab Results											
																	Potential Acidity				Existing Acidity		SPOCAS					Neut Cap
Site ID	Hor No	Upp Depth	Low Depth	Soil Texture	Jar.	Shell	Field pH Depth	pH_F	pH_{FOX}	No	Upp Depth	Low Depth	Depth 1st Action Level	Action Level Select %S	pH KCl =>6.5 TPA =0 %S		S_{CR}	S_{POS}	TSA	TPA	a-S_{NAS}	TAA	pH_{KCl}	pH_{OX}	S_{KCl}	s-Ca_A+s-Mg_A	s-ANC_E
		(m)					(m)				(m)						%S		mol H+/t		mol H+/t				%S		%S
								23Af	23Bf						s-ANC_E	s-Ca+s-Mg	22B	23Ee	23H	23G	a-20J	23F	23A	23B	23Ce	s-23Xh+s-23Um	s-23Q
90	1	0.00	0.25	CLFS			0.10	5.1	3.9																		
	2	0.25	0.60	FSLC			0.30	6.3	4.4																		
										2	0.30	0.50					< 0.02										
							0.60	7.0	7.2																		
	3	0.60	0.95	LFS			0.80	6.9	7.7	3	0.70	0.90			-0.027	0.005		0.010	0	0		0	6.5	6.9	0.00	0.008	0.04
	4	0.95	1.40	FSCL			1.00	7.1	3.7																		
							1.25	6.8	1.4	4	1.20	1.40	S1	Pl			0.81										
	5	1.40	2.00	SLC			1.50	6.9	1.1																		
							1.75	6.9	1.2	5	1.70	1.90		Pc			0.41										
							2.00	6.7	1.4																		
	6	2.00	5.50	KS			2.25	6.6	5.5																		
							2.50	6.4	5.7																		
							2.75	6.5	5.1																		
							3.00	6.6	5.6																		
							3.25	6.6	2.3																		
							3.50	6.5	5.0	8	3.30	3.60		Ps			0.03										
							3.75	6.5	6.0																		
							4.00	6.5	5.8																		
							4.25	6.4	5.2																		
							4.50	6.6	6.1																		
							4.75	6.4	5.1																		
							5.00	7.1	6.0																		
							5.25	7.6	5.5	11	5.10	5.40		Ps			0.04										
							5.50	7.7	1.7																		
	7	5.50	6.00	FSL		SS	5.75	8.2	6.2	12	5.70	5.90		Pl	-0.171	-0.030		0.270	0	0		0	9.0	6.9	0.07	0.450	0.39
							6.00	8.0	5.8																		
91	1	0.00	0.20	SCL			0.10	5.2	3.8	1	0.00	0.10					< 0.02										
	2	0.20	0.60	LMC			0.30	5.6	4.0																		
										2	0.30	0.50					< 0.02										
							0.60	7.1	5.5																		
	3	0.60	0.85	CLFS			0.80	6.7	5.3	3	0.60	0.80					< 0.02										
	4	0.85	1.20	LC			1.00	7.1	4.9																		
										4	1.00	1.20	S1	Pc			0.73	0.780	460	471		11	5.3	2.2	0.05	0.037	
	5	1.20	1.50	CS			1.25	7.2	1.5																		
							1.50	7.0	1.8	5	1.30	1.50		Ps			0.27										
	6	1.50	2.00	KS			1.75	6.8	1.4																		
							2.00	7.0	2.1	6	1.80	2.00		Ps			0.04										
	7	2.00	3.60	KS			2.25	7.2	3.3																		
							2.50	6.8	5.8	7	2.30	2.60					< 0.02										
							2.75	6.9	5.8																		
							3.00	7.1	5.8																		
							3.25	7.0	6.0																		
							3.50	6.9	5.8																		
92	1	0.00	0.35	FSLC			0.10	5.9	2.6	1	0.00	0.10					< 0.02										
							0.30	6.6	2.2	2	0.20	0.30					0.04										
	2	0.35	0.80	LMC			0.60	5.9	2.6																		
							0.80	6.2	1.9	3	0.60	0.80					< 0.02										
	3	0.80	1.60	LC			1.00	6.4	1.5																		
							1.25	6.7	1.3	4	1.10	1.30	S1	Pc			2.28										
							1.50	7.0	1.4																		
	4	1.60	2.20	KS			1.75	6.9	1.7																		
							2.00	6.8	1.5																		
	5	2.20	2.40	KS			2.25	6.8	1.4																		
93	1	0.00	0.15	LMC			0.10	4.7	3.7																		
	2	0.15	0.90	LC			0.30	4.9	4.1																		
							0.60	5.2	3.4	2	0.40	0.60					0.03										
							0.80	5.2	3.2																		
	3	0.90	1.70	LC			1.00	5.7	2.4	3	0.90	1.10					< 0.02										
							1.25	5.6	2.7																		
							1.50	6.1	1.3																		
										4	1.50	1.70	S1	Pc			2.88										
	4	1.70	2.30	ZLC			1.75	6.5	1.3																		
							2.00	6.7	1.4																		
										5	2.00	2.20		Pc			1.27										
							2.25	6.7	1.3																		
	5	2.30	3.60	KS			2.50	6.6	3.3																		
							2.75	6.6	1.5	6	2.50	2.80					< 0.02										
							3.00	6.6	5.9																		
							3.25	6.5	5.9																		
							3.50	6.2	6.1																		
94	1	0.00	0.20	SCL			0.10	4.5	2.5	1	0.00	0.10					< 0.02										
	2	0.20	0.70	S			0.30	4.9	4.0																		
							0.60	5.3	4.6																		
	3	0.70	7.30	S			0.80	5.4	5.0																		
							1.00	6.1	5.9																		
							1.25	6.3	5.6																		
							1.50	6.4	5.8	4	1.30	1.50					< 0.02										
							1.75	5.9	5.7																		
							2.00	5.9	5.7																		
							2.25	6.0	5.5																		
							2.50	6.6	5.8																		
							2.75	6.6	5.8																		
							3.00	6.3	5.6	7	2.80	3.00					< 0.02										
							3.25	6.4	5.8																		
							3.50	6.3	5.6																		
							3.75	6.2	5.7																		
							4.00	6.2	5.7																		
							4.25	6.1	5.6																		
							4.50	6.1	5.6																		
							4.75	6.2	5.4																		
							5.00	6.5	5.7	11	4.80	5.00					< 0.02										
							5.25	6.8	5.7																		
							5.50	6.6	5.7																		
							5.75	6.5	6.0																		
							6.00	6.3	5.7																		
							6.50	6.9	5.6																		
							7.00	6.5	5.8	15	6.80	7.00					< 0.02										
							7.25	8.7	5.9																		
	4	7.30	8.15	ZCL		SS	7.50	8.5	6.2	16	7.30	7.50	S8	Pl	-0.085	0.083		0.450	0	0		0	8.8	7.2	0.05	0.551	0.35
							7.75	8.8	5.9																		
							8.00	8.8	5.9																		
	5	8.15	8.40	CS			8.25	8.1	6.5																		
							8.40	7.9	6.4	18	8.20	8.40				0.001		0.010	0	0		0	7.3	6.1	0.01	0.013	

Field Morphology Summary										Lab Sample			Action Criteria		SPOCAS Acid Base Accounting	Lab Results											
																Potential Acidity				Existing Acidity		SPOCAS					Neut Cap
Site ID	Hor No	Upp Depth	Low Depth	Soil Texture	Jar.	Shell	Field pH Depth	pH_F	pH_{FOX}	No	Upp Depth	Low Depth	Depth 1st Action Level	Action Level Select %S	pH KCl =>6.5 TPA =0 %S	S_{CR}	S_{POS}	TSA	TPA	a-S_{NAS}	TAA	pH_{KCl}	pH_{OX}	S_{KCl}	s-Ca_A+s-Mg_A	s-ANC_E
		(m)					(m)				(m)					%S		mol H+/t		mol H+/t				%S		%S
								23Af	23Bf						s-ANC_E s-Ca+s-Mg	22B	23Ee	23H	23G	a-20J	23F	23A	23B	23Ce	s-23Xh+s-23Um	s-23Q
95	1	0.00	0.15	CL			0.10	5.1	3.3																	
	2	0.15	0.60	LMC			0.30	6.7	6.9																	
										2	0.30	0.50				< 0.02										
							0.60	6.5	5.1																	
	3	0.60	0.85	LS			0.80	6.3	5.4	3	0.60	0.80				< 0.02										
	4	0.85	1.10	S			1.00	6.3	4.9	4	0.90	1.10				< 0.02										
	5	1.10	2.40	S			1.25	6.2	3.1																	
							1.50	6.4	3.1	5	1.40	1.60				< 0.02										
							1.75	6.4	3.4																	
							2.00	6.4	3.7	6	1.90	2.10				< 0.02										
							2.25	6.4	4.1																	
	6	2.40	4.80	S			2.50	6.2	4.5																	
							2.75	6.1	4.8																	
							3.00	5.8	4.7																	
							3.25	5.8	4.9																	
							3.50	6.1	5.1	9	3.30	3.50				< 0.02										
							3.75	6.3	5.2																	
							4.00	6.4	5.2																	
							4.25	6.4	5.3																	
							4.50	6.4	5.4																	
							4.75	5.9	5.4																	
96	1	0.00	0.15	SCL			0.10	5.9	1.9	1	0.00	0.10				< 0.02										
	2	0.15	0.30	CLS			0.30	6.5	3.9	2	0.15	0.30				< 0.02										
	3	0.30	0.60	FSL			0.60	6.7	2.8	3	0.40	0.60				< 0.02										
	4	0.60	1.00	LC			0.80	6.6	2.3																	
							1.00	6.6	1.7	4	0.80	1.00	S1	Pc		0.36										
	5	1.00	2.40	S			1.25	6.6	3.6																	
							1.50	6.6	3.5	5	1.30	1.50				< 0.02										
							1.75	6.5	3.5																	
							2.00	6.5	3.3																	
							2.25	6.5	4.7																	
	6	2.40	4.80	KS			2.50	6.4	1.5	7	2.40	2.60		Ps		0.05										
							2.75	6.4	2.4																	
							3.00	6.4	2.2																	
							3.25	6.5	1.5																	
							3.50	6.3	1.2	9	3.40	3.60		Ps		0.06										
							3.75	6.3	2.8																	
							4.00	6.4	3.2																	
							4.25	6.2	2.7																	
							4.50	6.3	2.8	11	4.40	4.60				< 0.02										
							4.75	6.2	4.6																	
97	1	0.00	0.40	CL			0.10	5.2	4.1																	
							0.30	5.4	3.9																	
	2	0.40	0.75	S			0.60	6.0	5.2																	
	3	0.75	1.10	S			0.80	6.2	5.4																	
							1.00	6.3	5.3	4	0.90	1.10				< 0.02										
	4	1.10	1.50	FS			1.25	6.1	5.5																	
							1.50	6.3	5.2																	
	5	1.50	4.80	KS			1.75	6.6	5.5																	
							2.00	6.4	5.6																	
							2.25	6.5	5.6																	
							2.50	6.6	5.6	7	2.40	2.70				< 0.02										
							2.75	6.6	5.7																	
							3.00	6.6	5.8																	
							3.25	6.6	5.8																	
							3.50	6.6	5.8																	
							3.75	6.7	5.7																	
							4.00	6.6	5.7																	
							4.25	6.6	5.7																	
							4.50	6.4	5.7	10	4.20	4.50				< 0.02										
							4.75	6.4	5.6																	
	6	4.80	5.15	S			5.00	6.8	1.3	11	4.80	5.00	S5	Ps		0.28										
98	1	0.00	0.10	CL			0.10	5.3	4.0	1	0.00	0.10				< 0.02										
	2	0.10	0.30	FSCL			0.30	6.6	5.2	2	0.20	0.30				< 0.02										
	3	0.30	1.20	S			0.60	6.3	5.0	3	0.50	0.60				< 0.02										
							0.80	6.4	5.5																	
							1.00	6.9	5.5	4	0.80	1.00				< 0.02										
	4	1.20	6.00	S			1.25	6.6	5.1																	
							1.50	6.4	4.6																	
							1.75	6.4	4.9																	
							2.00	6.3	4.7	6	1.80	2.00				< 0.02										
							2.25	6.2	4.3																	
							2.50	6.2	2.8	7	2.30	2.50				< 0.02										
							2.75	6.2	3.1																	
							3.00	6.2	2.7	8	2.80	3.00				< 0.02										
							3.25	6.4	2.8																	
							3.50	6.4	2.7																	
							3.75	6.5	4.2																	
							4.00	6.5	4.8																	
							4.25	6.7	4.9																	
							4.50	6.6	5.2																	
							4.75	6.7	5.2																	
							5.00	6.5	3.5																	
							5.50	6.5	5.6																	
							6.00	6.6	5.6	14	5.80	6.00				< 0.02										
99	1	0.00	0.40	ZCL			0.10	4.6	2.5																	
							0.30	5.0	2.4	2	0.20	0.40				< 0.02										
	2	0.40	0.90	FSCL			0.60	5.4	4.3																	
							0.80	5.7	4.2	3	0.70	0.90				< 0.02										
	3	0.90	1.45	MC			1.00	5.4	3.1																	
							1.25	5.3	3.3	4	1.20	1.40				< 0.02										
	4	1.45	1.65	MC			1.50	4.6	4.6																	
										5	1.50	1.65					0.040	0	46		86	3.8	4.3	0.01	0.008	
	5	1.65	2.10	LC			1.75	5.3	1.4																	
							2.00	5.7	1.3	6	1.90	2.10	S2	Pc		1.62										
	6	2.10	2.70	S			2.25	6.0	1.1																	
							2.50	5.9	1.2	7	2.30	2.50		Ps		0.37										
	7	2.70	3.60	S			2.75	5.9	1.2																	
							3.00	5.9	1.1																	
							3.25	5.9	1.1																	
							3.50	6.0	1.7	9	3.30	3.50		Ps		0.07										
	8	3.60	4.80	KS			3.75	6.0	5.0																	
							4.00	6.1	5.2	10	3.80	4.10				< 0.02										
							4.25	6.0	5.3																	
							4.50	6.3	5.5																	
							4.75	6.3	5.3																	

Field Morphology Summary										Lab Sample			Action Criteria		SPOCAS Acid Base Accounting		Lab Results											
																	Potential Acidity				Existing Acidity		SPOCAS					Neut Cap
Site ID	Hor No	Upp Depth	Low Depth	Soil Texture	Jar.	Shell	Field pH Depth	pH_F	pH_{FOX}	No	Upp Depth	Low Depth	Depth 1st Action Level	Action Level Select %S	pH KCl =>6.5 TPA =0 %S		S_{CR}	S_{POS}	TSA	TPA	a-S_{NAS}	TAA	pH_{KCl}	pH_{OX}	S_{KCl}	s-Ca_A+s-Mg_A	s-ANC_E
		(m)					(m)				(m)						%S		mol H+/t		mol H+/t				%S		%S
								23Af	23Bf						s-ANC_E	s-Ca+s-Mg	22B	23Ee	23H	23G	a-20J	23F	23A	23B	23Ce	s-23Xh+s-23Um	s-23Q
100	1	0.00	0.20	CL			0.10	4.9	4.1																		
	2	0.20	0.50	FSCL			0.30	5.6	4.2																		
	3	0.50	0.95	S			0.60	5.9	5.2																		
							0.80	6.2	5.6	3	0.70	0.90															
	4	0.95	1.70	S			1.00	6.3	5.7																		
							1.25	6.4	6.6	4	1.10	1.30					< 0.02										
							1.50	6.3	5.5																		
	5	1.70	1.90	S			1.75	6.6	5.4																		
							1.85	6.4	4.6	5	1.70	1.90					< 0.02										
	6	1.90	2.25	S			2.00	6.4	5.1																		
										6	2.00	2.20					< 0.02										
							2.25	6.4	5.2																		
	7	2.25	3.60	KS			2.50	6.3	5.6																		
							2.75	6.4	5.7																		
							3.00	6.4	5.7																		
							3.25	6.6	5.6	8	3.10	3.40					< 0.02										
							3.50	6.5	5.7																		
	8	3.60	5.20	KS		SS	3.75	7.1	6.1																		
							4.00	7.4	5.9	9	3.70	4.00					< 0.02										
							4.25	7.4	5.9																		
							4.50	7.5	6.0	10	4.30	4.60					0.02										
							4.75	7.5	3.9																		
							5.00	7.2	5.9	11	4.90	5.20					< 0.02										
	9	5.20	6.00	FSCL		SS	5.25	7.4	6.3																		
							5.50	8.2	6.4	12	5.30	5.50	S6	Pl	0.010	0.122		0.260	0	0		0	8.9	7.1	0.06	0.208	0.12
							5.75	8.1	5.9																		
							6.00	8.1	6.5																		
101	1	0.00	0.10	CL			0.10	6.7	6.0																		
	2	0.10	0.55	CLFS			0.30	6.9	5.2																		
										2	0.30	0.50					< 0.02										
	3	0.55	1.70	S			0.60	6.9	5.2																		
							0.80	7.0	5.7																		
							1.00	6.6	5.4	3	0.80	1.00					< 0.02										
							1.25	6.5	5.4																		
							1.50	6.0	5.4																		
	4	1.70	4.90	KS			1.75	6.3	5.3																		
							2.00	6.1	5.3	5	1.80	2.10					< 0.02										
							2.25	6.6	5.0																		
							2.50	6.6	5.2																		
							2.75	6.4	5.0																		
							3.00	6.4	5.2																		
							3.25	6.3	5.1	7	3.00	3.30					< 0.02										
							3.50	6.4	5.2																		
							3.75	6.4	5.3																		
							4.00	6.5	5.3																		
							4.25	6.6	5.5																		
							4.50	6.7	5.4																		
							4.75	6.6	5.3	10	4.70	4.90	S2	Ps			0.06										
	5	4.90	6.00	FS			5.00	6.8	1.1																		
							5.25	6.8	2.5																		
							5.50	6.8	1.2	11	5.30	5.50		Ps				0.350	162	169		7	4.7	2.6	0.07	0.008	
							5.75	7.1	3.4																		
							6.00	7.3	1.5																		
102	1	0.00	0.10	CLS			0.10	5.6	3.5	1	0.00	0.10					< 0.02										
	2	0.10	0.30	SLMC			0.30	6.2	4.9	2	0.20	0.30					< 0.02										
	3	0.30	0.60	SLMC			0.60	6.8	5.8	3	0.40	0.60					< 0.02										
	4	0.60	0.90	SLC			0.80	6.8	1.6	4	0.70	0.90	S1	Pc			0.26										
	5	0.90	1.35	LS			1.00	6.5	1.3																		
							1.25	6.6	1.4	5	1.10	1.30		Ps			0.26										
	6	1.35	1.75	FSL			1.50	6.2	1.4																		
										6	1.50	1.70		Pl			0.24										
							1.75	6.4	1.0																		
	7	1.75	2.40	S			2.00	6.9	2.0																		
										7	2.00	2.20		Ps			0.04										
							2.25	6.8	3.4																		
	8	2.40	3.60	S			2.50	6.9	4.4																		
							2.75	6.9	4.0																		
							3.00	7.0	5.1																		
							3.25	6.9	4.8	9	3.00	3.30					0.02										
							3.50	6.7	5.0																		
103	1	0.00	0.40	LMC			0.10	5.2	3.6	1	0.00	0.10					< 0.02										
							0.30	5.0	3.4	2	0.20	0.40					< 0.02										
	2	0.40	0.80	CL			0.60	4.5	3.4																		
							0.80	4.4	3.0	3	0.60	0.80						0.020	0	38		53	3.8	4.2	0.04	0.013	
	3	0.80	1.15	ZLC	J		1.00	4.3	2.4	4	0.90	1.10						0.020	0	37	126	56	3.8	4.1	0.03	0.000	
	4	1.15	2.00	LC			1.25	4.1	2.7																		
							1.50	4.7	1.4	5	1.30	1.50	S2	Pc				0.230	106	185		79	3.7	2.8	0.03	0.000	
							1.75	5.1	1.5																		
							2.00	6.0	1.6	6	1.80	2.00		Pc			1.3										
	5	2.00	4.30	S			2.25	6.2	1.5	7	2.20	2.40		Ps			0.28										
							2.50	6.1	3.5																		
							2.75	6.3	3.8																		
							3.00	6.3	2.1	8	2.70	3.00		Ps			0.13										
							3.25	6.2	4.2																		
							3.50	6.2	4.6																		
							3.75	6.6	5.3																		
							4.00	6.5	5.2																		
							4.25	6.6	5.3																		
	6	4.30	4.80	KS		SS	4.50	6.5	5.4	11	4.40	4.70		Ps			0.05										
							4.75	6.9	4.5																		
	7	4.80	5.10	CKS		SS	5.00	6.9	5.6																		
	8	5.10	6.00	FSCL		SS	5.25	7.2	5.8																		
							5.50	7.8	5.8																		
							5.75	8.0	5.9																		
							6.00	7.5	6.3	14	5.80	6.00		Pl	-0.145	0.031		0.430	0	0		0	8.8	6.9	0.06	0.599	0.43

Field Morphology Summary										Lab Sample			Action Criteria		SPOCAS Acid Base Accounting		Lab Results											
																	Potential Acidity				Existing Acidity		SPOCAS					Neut Cap
Site ID	Hor No	Upp Depth	Low Depth	Soil Texture	Jar.	Shell	Field pH Depth	pH_F	pH_{FOX}	No	Upp Depth	Low Depth	Depth 1st Action Level	Action Level Select %S	pH KCl =>6.5 TPA =0 %S		S_{CR}	S_{POS}	TSA	TPA	a-S_{NAS}	TAA	pH_{KCl}	pH_{OX}	S_{KCl}	s-Ca_A+s-Mg_A	s-ANC_E
		(m)					(m)				(m)						%S		mol H+/t		mol H+/t				%S		%S
								23Af	23Bf						s-ANC_E	s-Ca+s-Mg	22B	23Ee	23H	23G	a-20J	23F	23A	23B	23Ce	s-23Xh+s-23Um	s-23Q
104	1	0.00	0.10	CL			0.10	5.0	2.2	1	0.00	0.10					< 0.02										
	2	0.10	0.30	LC			0.30	5.8	3.7																		
	3	0.30	0.85	MC			0.60	6.0	4.0																		
							0.80	6.2	4.3	3	0.60	0.80					< 0.02										
	4	0.85	1.15	MC			1.00	6.1	4.5	4	0.90	1.10					< 0.02										
	5	1.15	1.90	S			1.25	6.1	3.4																		
							1.50	6.4	1.5	5	1.40	1.60	S2	Ps			0.07										
							1.75	6.5	1.3																		
	6	1.90	2.70	CS			2.00	6.6	1.5	6	1.90	2.10		Ps			0.43										
							2.25	6.3	1.6																		
							2.50	6.5	1.3																		
	7	2.70	4.10	LS			2.75	6.4	1.3																		
							3.00	6.5	3.6	8	2.80	3.00		Ps			0.06										
							3.25	6.4	1.4																		
							3.50	6.5	1.2																		
							3.75	6.3	1.4																		
							4.00	6.5	1.3	10	3.80	4.00		Ps			0.24										
	8	4.10	6.00	FSL		SS	4.25	6.9	5.9																		
							4.50	7.2	3.0	11	4.30	4.50		Pl	0.057	0.169		0.370	0	0		0	8.9	7.0	0.06	0.301	0.10
							4.75	7.4	5.8																		
							5.00	7.4																			
							5.25	7.6	5.6																		
							5.50	7.7	5.7																		
							5.75	7.7	5.9																		
							6.00	7.9	5.6																		
105	1	0.00	0.30	FSCL			0.10	4.4	2.4																		
							0.30	4.5	2.5																		
	2	0.30	0.95	FSC			0.60	5.1	3.7																		
							0.80	5.3	3.8																		
	3	0.95	1.25	CLFS			1.00	5.4	3.8																		
							1.25	5.3	3.8																		
	4	1.25	1.60	CL			1.50	5.1	3.2	5	1.40	1.60					< 0.02										
	5	1.60	2.10	FSCL			1.75	5.1	3.4																		
							2.00	5.7	2.7	6	1.90	2.10					< 0.02										
	6	2.10	2.70	LS			2.25	5.9	2.7																		
							2.50	6.0	1.4	7	2.30	2.50	S3	Ps			0.22										
	7	2.70	4.70	LKS			2.75	6.1	1.5																		
							3.00	6.1	1.4	8	2.80	3.10		Ps			0.21										
							3.25	6.4	1.5																		
							3.50	6.4	1.4																		
							3.75	6.3	4.0																		
							4.00	6.3	4.1	10	3.90	4.10		Ps			0.05										
							4.25	6.6	3.3																		
							4.50	6.9	3.8																		
	8	4.70	5.40	SL		SS	4.75	7.2	1.8																		
							5.00	7.1	3.7																		
										12	5.00	5.20		Pl			0.33										
							5.25	7.2	5.3																		
	9	5.40	6.00	SCL		SS	5.50	7.7	5.9																		
										13	5.50	5.70		Pl	0.021	0.139		0.340	0	0		0	8.9	7.1	0.05	0.301	0.14
							5.75	8.0	5.9																		
							6.00	8.1	6.1																		
106	1	0.00	0.20	CL			0.10	5.9	3.6	1	0.00	0.10					< 0.02										
	2	0.20	0.45	LMC			0.30	6.0	4.4	2	0.20	0.40					< 0.02										
	3	0.45	1.45	LC			0.60	6.4	1.2																		
							0.80	6.8	1.2	3	0.70	0.90	S0	Pc			2.22										
							1.00	6.9	1.2																		
							1.25	6.9	1.7	4	1.20	1.40		Pc			1.45										
							1.45	7.6	1.4																		
	4	1.45	2.15	FSL			1.75	6.9	1.2	5	1.70	1.90		Pl			0.38										
							2.00	7.3	1.2																		
	5	2.15	3.30	LS			2.25	7.3	1.8																		
							2.50	6.9	1.3																		
							2.75	6.8	1.3	7	2.60	2.80		Ps			0.15										
							3.00	6.7	1.2																		
							3.25	5.9	1.6																		
	6	3.30	3.60	FSL			3.50	6.3	1.3																		
107	1	0.00	0.30	CL			0.10	5.2	2.5																		
							0.30	5.5	2.8																		
	2	0.30	0.60	LC			0.60	5.4	3.3	2	0.40	0.60					< 0.02										
	3	0.60	1.30	LC			0.80	5.2	2.8																		
							1.00	5.3	2.8	3	0.90	1.10					< 0.02										
							1.25	5.3	2.4																		
	4	1.30	1.60	LC			1.50	4.9	1.4	4	1.40	1.60					0.02										
	5	1.60	1.85	LC			1.75	5.0	1.5	5	1.60	1.80	S2	Pc			0.41										
	6	1.85	3.10	SLC			2.00	4.7	1.1																		
							2.25	5.5	1.2	6	2.10	2.30		Pc			1.61										
							2.50	5.7	1.4																		
							2.75	5.8	1.6	7	2.60	2.80		Pc			0.81										
							3.00	5.9	1.5																		
	7	3.10	3.35	FSLC			3.25	6.0	1.6																		
	8	3.35	3.75	SLC			3.50	6.3	1.7																		
							3.75	6.3	1.8																		
	9	3.75	4.40	ZLC			4.00	6.6	1.7																		
							4.25	7.0	1.6																		
	10	4.40	4.75	ZLC			4.50	6.8	2.1																		
										11	4.50	4.70		Pc			0.87										
	11	4.75	4.80	SCL		SS	4.80	7.3	4.5																		

Field Morphology Summary										Lab Sample			Action Criteria		SPOCAS Acid Base Accounting		Lab Results											
																	Potential Acidity				Existing Acidity		SPOCAS					Neut Cap
Site ID	Hor No	Upp Depth	Low Depth	Soil Texture	Jar.	Shell	Field pH Depth	pH_F	pH_{FOX}	No	Upp Depth	Low Depth	Depth 1st Action Level	Action Level Select %S	pH KCl =>6.5 TPA =0		S_{CR}	S_{POS}	TSA	TPA	a-S_{NAS}	TAA	pH_{KCl}	pH_{OX}	S_{KCl}	s-Ca_A+s-Mg_A	s-ANC_E
		(m)					(m)				(m)				%S		%S		mol H+/t		mol H+/t				%S		%S
								23Af	23Bf						s-ANC_E	s-Ca+s-Mg	22B	23Ee	23H	23G	a-20J	23F	23A	23B	23Ce	s-23Xh+s-23Um	s-23Q
108	1	0.00	0.35	CL			0.10	5.0	2.7																		
							0.30	5.1	3.0																		
	2	0.35	1.05	CL			0.60	5.6	3.5																		
							0.80	5.5	3.4	3	0.60	0.80					< 0.02										
							1.00	5.3	3.4																		
	3	1.05	1.50	CLFS			1.25	4.9	3.3	4	1.10	1.30					< 0.02										
							1.50	5.0	3.4																		
	4	1.50	1.85	FSLC			1.75	5.3	2.9	5	1.60	1.80					< 0.02										
	5	1.85	2.20	FSCL			2.00	5.5	1.6																		
										6	2.00	2.20	S2	Pl			1.841										
	6	2.20	6.00	KS			2.25	5.6	1.4																		
							2.50	5.6	1.7																		
							2.75	5.6	1.8	7	2.50	2.80		Ps			0.212										
							3.00	5.7	2.0																		
							3.25	5.7	2.1	8	3.10	3.40		Ps			0.08										
							3.50	5.6	2.0																		
							3.75	5.7	2.1																		
							4.00	5.6	2.1	9	3.70	4.00		Ps			0.1										
							4.25	5.6	2.2																		
							4.50	5.6	2.2																		
							4.75	5.8	2.2																		
							5.00	6.1	1.7																		
							5.25	5.9	2.0																		
							5.50	6.3	2.0	12	5.40	5.70		Ps			0.03										
							5.75	6.1	1.9																		
							6.00	6.3	1.7																		
109	1	0.00	0.30	CL			0.10	5.1	3.0																		
							0.30	5.5	3.1																		
	2	0.30	0.50	CLS			0.40	5.6	4.0																		
	3	0.50	0.70	CS			0.60	5.7	4.3	3	0.50	0.70					< 0.02										
	4	0.70	1.00	LS			0.80	4.3	3.1																		
							1.00	3.4	2.1	4	0.80	1.00					< 0.02					22	4.3		0.01		
	5	1.00	1.35	CS			1.25	4.0	1.9	5	1.10	1.30					0.027					25	4.3		0.02		
	6	1.35	2.10	LS			1.50	4.2	1.4																		
										6	1.50	1.70	S2	Ps			0.64					33	4.2		0.06		
							1.75	4.2	1.6																		
							2.00	4.7	1.7	7	1.90	2.10		Ps			0.583										
	7	2.10	2.70	S			2.25	5.3	1.5																		
							2.50	6.2	2.2	8	2.30	2.50		Ps			0.342										
	8	2.70	3.10	S			2.75	6.3	1.9																		
							3.00	6.6	1.8																		
	9	3.10	3.80	LS			3.25	6.5	1.5																		
							3.50	7.0	2.1																		
							3.75	6.9	2.3																		
	10	3.80	4.10	LFS			4.00	7.3	2.2	11	3.80	4.00		Ps			0.143										
	11	4.10	5.20	FSL		SS	4.25	7.5	1.7																		
							4.50	7.6	5.9																		
							4.75	7.9	6.4																		
							5.00	7.8	5.3																		
	12	5.20	6.00	FSCL		SS	5.25	7.7	5.3																		
							5.50	7.8	6.0	14	5.30	5.50		Pl	0.031	0.172		0.490	0	0		0	8.8	7.3	0.05	0.476	0.20
							5.75	8.4	6.1																		
							6.00	8.1	6.1																		
110	1	0.00	0.20	CL			0.10	5.2	2.5																		
	2	0.20	0.80	CL			0.30	5.7	2.8																		
										2	0.30	0.50					< 0.02										
							0.60	6.2	4.3																		
							0.80	6.3	4.7																		
	3	0.80	1.40	LMC			1.00	6.2	4.7																		
							1.25	4.9	2.7	4	1.20	1.40					< 0.02										
	4	1.40	2.30	ZLC			1.50	5.5	1.9																		
							1.75	5.3	1.7	5	1.70	1.90	S2	Pc			2.018										
							2.00	5.8	1.8																		
							2.25	5.9	1.8	6	2.10	2.30		Pc			1.31										
	5	2.30	3.60	KS			2.50	5.7	1.5																		
							2.75	5.9	1.8																		
							3.00	6.1	1.6	8	2.80	3.00		Ps			0.23										
							3.25	5.9	1.4																		
							3.50	5.9	1.6																		
111	1	0.00	0.35	CL			0.10	5.1	2.8																		
							0.30	5.8	3.7																		
	2	0.35	0.75	SLC			0.60	7.4	7.0	2	0.40	0.60					< 0.02										
	3	0.75	1.00	CKS			0.80	7.1	6.6																		
							1.00	6.7	3.1	3	0.80	1.00					< 0.02										
	4	1.00	1.50	LS			1.25	7.0	2.8																		
							1.50	7.1	2.1	4	1.30	1.50					0.02										
	5	1.50	2.30	S			1.75	7.0	1.9																		
							2.00	6.3	1.7	5	1.80	2.00	S2	Ps			1.57										
							2.25	6.0	1.4																		
	6	2.30	3.90	KS			2.50	6.4	1.5	6	2.30	2.60		Ps			0.73										
							2.75	6.2	1.5																		
							3.00	6.3	1.6																		
							3.25	6.2	1.8																		
							3.50	6.2	2.0																		
							3.75	6.8	2.1																		
	7	3.90	4.70	KS			4.00	7.3	2.1																		
							4.25	7.5	2.1																		
							4.50	7.7	2.4	9	4.20	4.50					< 0.02										
	8	4.70	6.00	FSL		SS	4.75	7.6	2.1																		
							5.00	8.5	6.3																		
							5.25	8.6	5.7																		
							5.50	7.8	6.1																		
							5.75	8.6	6.7																		
							6.00	8.4	6.4																		

Field Morphology Summary										Lab Sample			Action Criteria		SPOCAS Acid Base Accounting		Lab Results											
																	Potential Acidity				Existing Acidity		SPOCAS					Neut Cap
Site ID	Hor No	Upp Depth	Low Depth	Soil Texture	Jar.	Shell	Field pH Depth	pH_F	pH_{FOX}	No	Upp Depth	Low Depth	Depth 1st Action Level	Action Level Select %S	pH KCl =>6.5 TPA =0 %S		S_{CR}	S_{POS}	TSA	TPA	a-S_{NAS}	TAA	pH_{KCl}	pH_{OX}	S_{KCl}	s-Ca_A+s-Mg_A	s-ANC_E
		(m)					(m)				(m)						%S		mol H+/t		mol H+/t				%S		%S
								23Af	23Bf						s-ANC_E	s-Ca+s-Mg	22B	23Ee	23H	23G	a-20J	23F	23A	23B	23Ce	s-23Xh+s-23Um	s-23Q
112	1	0.00	0.20	MC			0.10	4.4	2.7	1	0.00	0.10					< 0.02										
	2	0.20	0.45	LC			0.30	5.5	3.0	2	0.20	0.40					0.03										
	3	0.45	1.05	LC			0.60	5.2	1.5																		
							0.80	5.1	2.2																		
							1.00	6.0	1.8	3	0.80	1.00	S0	Pc			1.943										
	4	1.05	1.80	SCL			1.25	6.0	1.5																		
							1.50	6.5	1.7	4	1.30	1.50		Pl			1.528										
							1.75	6.6	1.7																		
	5	1.80	3.10	LKS			2.00	7.2	1.4	5	1.80	2.00		Ps			0.799										
							2.25	7.1	1.8																		
							2.50	6.8	1.6																		
							2.75	6.9	1.5																		
							3.00	7.1	1.4																		
	6	3.10	3.75	ZCL			3.25	7.1	1.8																		
							3.50	7.2	1.6	8	3.30	3.50		Pl			0.61										
							3.75	7.1	3.1																		
	7	3.75	4.80	FSL		SS	4.00	8.4	5.5																		
							4.25	8.1	5.2																		
							4.50	8.0	5.2																		
							4.75	8.6	6.2																		
113	1	0.00	0.10	CLS			0.10	4.5	2.6																		
	2	0.10	0.40	SLC			0.30	5.4	3.8																		
	3	0.40	0.70	SCL			0.60	6.5	3.8																		
	4	0.70	1.00	S			0.80	6.6	3.5																		
							1.00	6.5	1.7	4	0.80	1.00	S1	Ps			0.038										
	5	1.00	2.20	KS			1.25	6.2	1.8																		
							1.50	6.3	1.8	5	1.30	1.50		Ps			0.042										
							1.75	6.5	2.0																		
							2.00	6.5	2.7	6	1.80	2.00					0.026										
	6	2.20	3.00	KS			2.25	6.6	3.7																		
							2.50	6.6	3.0	7	2.30	2.50					< 0.02										
							2.75	6.9	3.2																		
							3.00	6.8	1.8	8	2.80	3.00		Ps			0.19										
	7	3.00	3.30	LFS			3.25	7.3	4.6	9	3.10	3.30		Ps			0.442										
	8	3.30	4.80	LFS		SS	3.50	7.3	6.5																		
							3.75	7.2	5.1	10	3.60	3.80		Ps			0.288										
							4.00	7.6	4.5																		
							4.25	7.1	5.5	11	4.10	4.30		Ps	-0.042	0.048		0.227	0	0		0	8.9	7.1	0.07	0.269	0.18
							4.50	7.1	6.4																		
							4.75	7.5	6.1																		
114	1	0.00	0.25	CL			0.10	4.6	2.6																		
	2	0.25	0.60	CLS			0.30	4.8	3.0																		
							0.60	5.6	4.0																		
	3	0.60	0.90	LS			0.80	6.1	4.8																		
	4	0.90	1.20	KS			1.00	6.5	5.5																		
										4	1.00	1.20					< 0.02										
	5	1.20	2.80	LKS			1.25	6.8	1.7																		
							1.50	7.2	2.0	5	1.30	1.50	S2	Ps			0.132										
							1.75	7.3	1.7																		
							2.00	7.0	2.0	6	1.80	2.00		Ps			0.319										
							2.25	6.9	1.8																		
							2.50	6.6	1.7	7	2.30	2.50		Ps			0.426										
							2.75	7.0	1.8																		
	6	2.80	3.40	S			3.00	7.2	1.8	8	2.80	3.00		Ps			0.166										
							3.25	6.7	1.6																		
	7	3.40	3.70	FS			3.50	7.3	1.9	9	3.40	3.60		Ps			0.211										
	8	3.70	4.35	FS			3.75	6.8	2.0																		
							4.00	7.2	1.7	10	3.90	4.10		Ps			0.603										
							4.25	7.2	1.9																		
	9	4.35	4.55	CS			4.50	7.6	3.9																		
	10	4.55	4.80	LFS		SS	4.75	7.1	4.9																		
115	1	0.00	0.25	CL			0.10	4.2	2.5																		
	2	0.25	0.75	SCL			0.30	4.4	3.2																		
							0.60	6.4	4.8																		
	3	0.75	1.10	S			0.80	7.0	4.9																		
							1.00	7.1	5.2	3	0.80	1.00					< 0.02										
	4	1.10	2.85	S			1.25	6.9	2.0																		
							1.50	7.0	1.9	4	1.30	1.50	S2	Ps			0.142										
							1.75	7.1	2.2																		
							2.00	7.0	2.5	5	1.80	2.00					0.023										
							2.25	6.9	4.1																		
							2.50	6.9	3.0	6	2.30	2.50		Ps			0.039										
							2.75	7.0	2.6																		
	5	2.85	3.50	LFS		SS	3.00	7.0	3.1	7	2.85	3.00		Ps	0.054	0.156		0.270	0	0		0	8.8	6.7	0.07	0.170	0.05
							3.25	7.2	6.0																		
							3.50	7.7	3.9																		
	6	3.50	3.75	S		SS				9	3.50	3.70		Ps			0.083										
							3.75	7.4	3.8																		
	7	3.75	6.00	LFS		SS	4.00	7.0	5.9																		
							4.25	7.2	6.1																		
							4.50	7.2	2.0																		
							4.75	7.5	6.2																		
							5.00	7.5	5.6																		
							5.25	8.0	6.1																		
							5.50	7.6	5.9																		
							5.75	8.1	6.1																		
							6.00	7.6	6.1																		
116	1	0.00	0.25	CL			0.10	4.1	2.4	1	0.00	0.10					0.022										
	2	0.25	0.90	LC			0.30	4.2	2.9																		
										2	0.30	0.50					< 0.02					43	4.2		0.05		
							0.60	4.3	2.6																		
							0.80	4.4	2.0	3	0.70	0.90					0.053										
	3	0.90	1.50	ZCL			1.00	4.5	2.1																		
							1.25	5.5	1.9	4	1.10	1.30	S1	Pl			2.664										
							1.50	5.7	1.7	5	1.30	1.50		Pl			1.782										
	4	1.50	3.20	S			1.75	6.3	2.0																		
							2.00	6.6	2.8	6	1.80	2.00		Ps			0.887										
							2.25	7.1	2.0																		
							2.50	7.5	1.7																		
							2.75	7.2	1.8																		
							3.00	7.4	2.8	8	2.80	3.00		Ps			0.071										
	5	3.20	3.50	SCL		SS	3.25	7.8	5.3																		
							3.50	7.8	3.6	9	3.30	3.50		Pl	0.060	0.182		0.290	0	0		0	8.8	6.5	0.05	0.162	0.05
	6	3.50	4.80	LFS		SS	3.75	8.1	5.2																		
							4.00	8.2	5.9																		
							4.25	8.0	4.7																		
							4.50	7.6	5.5																		
							4.75	7.8	5.6																		

Field Morphology Summary										Lab Sample			Action Criteria		SPOCAS Acid Base Accounting	Lab Results											
																Potential Acidity				Existing Acidity		SPOCAS					Neut Cap
Site ID	Hor No	Upp Depth	Low Depth	Soil Texture	Jar.	Shell	Field pH Depth	pH_F	pH_{FOX}	No	Upp Depth	Low Depth	Depth 1st Action Level	Action Level Select %S	pH KCl =>6.5 TPA =0 %S	S_{CR}	S_{POS}	TSA	TPA	a-S_{NAS}	TAA	pH_{KCl}	pH_{OX}	S_{KCl}	s-Ca_A+s-Mg_A	s-ANC_E
		(m)					(m)				(m)				s-ANC_E s-Ca+s-Mg	%S		mol H+/t		mol H+/t				%S		%S
								23Af	23Bf							22B	23Ee	23H	23G	a-20J	23F	23A	23B	23Ce	s-23Xh+s-23Um	s-23Q
117	1	0.00	0.20	CL			0.10	5.6	3.3																	
	2	0.20	0.55	CLS			0.30	5.8	4.3																	
	3	0.55	1.30	SLC			0.60	5.9	4.0																	
							0.80	5.8	3.9																	
							1.00	5.9	3.6																	
							1.25	5.7	3.6																	
	4	1.30	1.70	CS			1.50	5.6	3.1	4	1.30	1.50				< 0.02										
	5	1.70	3.70	S			1.75	5.9	2.9																	
							2.00	6.1	1.6	5	1.80	2.00				< 0.02										
							2.25	6.0	1.8																	
							2.50	6.0	2.1	6	2.30	2.50	S2	Ps		0.298										
							2.75	6.0	2.0																	
							3.00	6.2	1.7																	
							3.25	6.1	2.0																	
							3.50	6.0	1.9	8	3.30	3.50		Ps		0.117										
	6	3.70	4.60	KS			3.75	6.2	1.6																	
							4.00	6.5	2.1																	
							4.25	6.5	2.4																	
							4.50	6.6	2.3	10	4.30	4.50		Ps		0.048										
	7	4.60	6.00	LFS		SS	4.75	7.2	2.2																	
							5.00	8.0	5.1																	
							5.25	8.4	6.6																	
							5.50	8.1	7.1	12	5.30	5.50		Ps		0.276										
							5.75	8.9	6.4																	
							6.00	8.9	5.8																	
118	1	0.00	0.25	FSCL			0.10	6.2	4.3																	
	2	0.25	0.55	LFS			0.30	6.0	4.0																	
	3	0.55	0.90	CFS			0.60	6.0	4.0																	
							0.80	6.1	4.0																	
	4	0.90	1.40	CLFS			1.00	6.4	3.1																	
							1.25	6.5	2.8																	
	5	1.40	1.65	LMC			1.50	6.9	3.5																	
	6	1.65	2.35	LC			1.75	6.8	1.9																	
							2.00	6.8	2.0																	
							2.25	6.8	1.8																	
	7	2.35	6.00	S		SS	2.50	6.6	1.7																	
							2.75	6.9	1.6																	
							3.00	7.4	1.9																	
							3.25	7.2	1.7																	
							3.50	7.1	1.9																	
							3.75	7.3	2.0																	
							4.00	7.2	2.0																	
							4.25	7.1	2.1																	
							4.50	7.1	2.5																	
							4.75	7.0	2.5																	
							5.00	7.4	2.5																	
							5.25	7.6	2.2																	
							5.50	7.6	2.0	12	5.40	5.70	S3	Ps		0.035	0.020	4	4		0	6.6	5.3	0.02	0.000	
							5.75	7.3	2.5																	
							6.00	7.3	1.4																	
119	1	0.00	0.30	CL			0.10	4.8	2.2	1	0.00	0.10				< 0.02					66	4.1		0.02		
							0.30	3.8	2.2																	
	2	0.30	0.50	CLS			0.50	4.6	1.6	2	0.30	0.50				< 0.02	0.040	0	8		52	3.9	4.0	0.03	0.008	
	3	0.50	0.70	CL			0.70	5.3	1.4	3	0.50	0.70	S0	Pl		0.087										
	4	0.70	1.05	ZCL			1.00	5.5	2.0	4	0.80	1.00		Pl		2.283										
	5	1.05	1.60	CS			1.25	5.5	2.4																	
							1.50	5.3	1.9	5	1.30	1.50		Ps		1.014										
	6	1.60	2.80	LS			1.75	5.4	1.3																	
							2.00	5.5	1.5	6	1.80	2.00		Ps		0.373										
							2.25	5.7	1.6																	
							2.50	6.0	1.8																	
							2.75	6.4	1.9																	
	7	2.80	4.80	LFS			3.00	6.5	1.7	8	2.80	3.00		Ps		0.361										
							3.25	6.4	1.4																	
							3.50	6.5	1.4																	
							3.75	6.5	1.8																	
							4.00	6.8	1.7	10	3.80	4.00		Ps		0.554										
							4.25	6.7	1.8																	
							4.50	6.7	1.7																	
							4.75	6.9	1.9																	
120	1	0.00	0.20	CL			0.10	6.1	3.8																	
	2	0.20	1.05	SCL			0.30	6.9	4.8																	
										2	0.30	0.50				< 0.02										
							0.60	7.3	5.4																	
							0.80	6.9	5.3																	
							1.00	6.0	3.8	3	0.80	1.00				< 0.02										
	3	1.05	1.40	SL			1.25	6.2	1.7	4	1.20	1.40	S2	Pl		0.628										
	4	1.40	2.60	LS			1.50	6.6	1.7																	
							1.75	6.4	1.8	5	1.70	1.90		Ps		0.241										
							2.00	6.5	1.9																	
							2.25	6.5	1.8	6	2.20	2.40		Ps		0.288										
							2.50	6.9	1.7																	
	5	2.60	2.85	ZCL			2.75	6.8	2.0	7	2.60	2.80		Pl		1.086										
	6	2.85	3.10	LFS			3.00	6.7	1.8																	
	7	3.10	3.70	S			3.25	6.9	1.6																	
							3.50	6.8	1.9	9	3.30	3.50		Ps		0.155										
	8	3.70	4.05	FS			3.75	7.2	1.8																	
							4.00	7.5	3.4																	
	9	4.05	4.80	CFS		SS	4.25	7.4	4.8																	
							4.50	7.5	5.0																	
							4.75	7.6	5.4																	
121	1	0.00	0.30	CL			0.10	4.8	3.1																	
							0.30	4.8	2.8																	
	2	0.30	0.65	SCL						2	0.30	0.50				< 0.02										
							0.60	4.6	3.3																	
	3	0.65	1.10	SCL			0.80	4.7	3.2																	
							1.00	4.9	2.6	3	0.80	1.00				< 0.02										
	4	1.10	2.00	LS			1.25	6.0	1.6																	
							1.50	6.3	1.5	4	1.30	1.50	S2	Ps		0.477										
							1.75	6.6	2.2																	
							2.00	6.6	1.6	5	1.80	2.00		Ps		0.45										
	5	2.00	2.50	S			2.25	6.8	1.7																	
							2.50	6.7	2.0	6	2.30	2.50		Ps		0.097										
	6	2.50	3.50	KS		SS	2.75	7.0	1.6																	
							3.00	7.0	3.2	7	2.80	3.00		Ps		0.074										
							3.25	7.1	1.7																	
							3.50	7.5	5.5																	
	7	3.50	4.80	LFS		SS	3.75	7.1	6.3																	
							4.00	7.2	6.2																	
							4.25	7.8	6.1																	
							4.50	7.7	5.7																	
							4.75	7.3	6.2																	

Field Morphology Summary										Lab Sample			Action Criteria		SPOCAS Acid Base Accounting		Lab Results											
																	Potential Acidity				Existing Acidity		SPOCAS					Neut Cap
Site ID	Hor No	Upp Depth (m)	Low Depth (m)	Soil Texture	Jar.	Shell	Field pH Depth (m)	pH_F 23Af	pH_{FOX} 23Bf	No	Upp Depth (m)	Low Depth (m)	Depth 1st Action Level	Action Level Select %S	pH KCl =>6.5 TPA =0 %S s-ANC_E	s-Ca+s-Mg	S_{CR} %S 22B	S_{POS} 23Ee	TSA mol H+/t 23H	TPA 23G	a-S_{NAS} mol H+/t a-20J	TAA 23F	pH_{KCl} 23A	pH_{OX} 23B	S_{KCl} %S 23Ce	s-Ca_A+s-Mg_A %S s-23Xh+s-23Um	s-ANC_E %S s-23Q
122	1	0.00	0.35	LC			0.10	5.8	4.3	1	0.00	0.10					< 0.02										
							0.30	5.7	4.5																		
	2	0.35	0.80	LC			0.60	5.6	3.7	2	0.40	0.60					< 0.02										
							0.80	6.2	4.5																		
	3	0.80	1.10	ZLC			1.00	5.6	3.8	3	0.90	1.10					0.029										
	4	1.10	1.55	SLC			1.25	5.8	1.5																		
							1.50	5.5	1.6	4	1.30	1.50	S2	Pc			0.941										
	5	1.55	1.90	LS			1.75	5.9	1.4	5	1.70	1.90		Ps			1.672										
	6	1.90	4.15	LKS			2.00	6.0	1.8																		
							2.25	6.6	1.8																		
							2.50	6.1	1.7	6	2.20	2.50		Ps			0.15										
							2.75	6.0	1.8																		
							3.00	6.3	3.1																		
							3.25	6.2	2.2																		
							3.50	6.2	1.7	8	3.40	3.70		Ps			0.165										
							3.75	6.3	2.6																		
							4.00	6.7	1.6																		
	7	4.15	4.80	LFS		SS	4.25	7.0	5.0																		
							4.50	7.7	5.8	10	4.40	4.60		Ps	0.094	0.220		0.520	0	0		0	8.6	7.1	0.10	0.450	0.12
							4.75	7.6	6.1																		
123	1	0.00	0.25	CL			0.10	5.9	3.7																		
	2	0.25	0.65	CL			0.30	6.4	4.6																		
							0.60	7.2	5.3																		
	3	0.65	1.30	FSLC			0.80	7.2	5.8																		
							1.00	7.2	5.4	3	0.80	1.00					< 0.02										
							1.25	7.9	3.9																		
	4	1.30	3.90	LS			1.50	8.1	3.1	4	1.30	1.50					< 0.02										
							1.75	7.8	3.1																		
							2.00	7.7	1.9	5	1.80	2.00	S2	Ps			0.085										
							2.25	7.7	1.9																		
							2.50	7.4	1.8																		
							2.75	7.4	2.1																		
							3.00	7.4	2.1	7	2.90	3.20					0.023										
							3.25	7.6	3.9																		
							3.50	7.7	2.5																		
							3.75	7.7	2.5																		
	5	3.90	4.50	LS			4.00	7.6	2.4																		
							4.25	7.5	1.9	9	4.10	4.30		Ps			0.114										
							4.50	7.8	2.5																		
	6	4.50	5.10	FSCL			4.75	8.2	4.3	10	4.60	4.80		Pl			0.644										
							5.00	8.2	3.7																		
	7	5.10	6.00	FSL		SS	5.25	8.2	5.8																		
							5.50	8.1	5.7																		
							5.75	8.6	4.8																		
							6.00	8.6	5.5																		
124	1	0.00	0.50	CL			0.10	4.3	3.0	1	0.00	0.10					< 0.02										
							0.30	4.6	3.2																		
										2	0.30	0.50					< 0.02										
	2	0.50	0.80	LC			0.60	4.5	3.4																		
							0.80	4.4	3.2	3	0.60	0.80					< 0.02										
	3	0.80	1.20	CLFS			1.00	5.5	3.2																		
										4	1.00	1.20					< 0.02										
	4	1.20	1.55	CLFS			1.25	5.4	3.5																		
							1.50	5.7	4.1	5	1.30	1.50					0.027										
	5	1.55	2.80	FSCL			1.75	5.9	1.5																		
							2.00	5.9	1.6	6	1.80	2.00	S2	Pl			1.618										
							2.25	6.2	1.5																		
							2.50	6.3	1.5	7	2.30	2.50		Pl			0.988										
							2.75	6.4	1.4																		
	6	2.80	3.60	KS			3.00	6.9	1.3																		
							3.25	7.1	4.0																		
							3.50	7.0	3.1																		
125	1	0.00	0.30	LC			0.10	5.2	3.1																		
							0.30	5.3	4.0																		
	2	0.30	0.70	FSLC			0.60	5.4	4.0																		
	3	0.70	1.60	ZLC			0.80	5.2	3.3																		
							1.00	6.1	2.9	3	0.80	1.00					< 0.02										
							1.25	5.7	3.7																		
							1.50	6.8	3.4	4	1.30	1.50					< 0.02										
	4	1.60	1.90	ZLC			1.75	7.0	3.3	5	1.70	1.90					0.08										
	5	1.90	2.35	S			2.00	6.9	3.1																		
							2.25	6.9	4.4	6	2.10	2.30					0.02										
	6	2.35	4.20	LKS			2.50	6.5	4.2																		
							2.75	6.6	4.4	7	2.60	2.90					0.026										
							3.00	6.6	4.7																		
							3.25	6.6	4.5																		
							3.50	6.7	4.8																		
							3.75	6.6	4.5																		
							4.00	6.7	3.9	9	3.80	4.10					0.023										
	7	4.20	5.10	FSL		SS	4.25	7.0	4.5																		
							4.50	7.2	4.9	10	4.30	4.50	S5	Pl			0.549										
							4.75	7.7	3.8																		
							5.00	7.9	3.8	11	4.80	5.00		Pl			0.664										
	8	5.10	5.70	SL		SS	5.25	8.0	4.9																		
							5.50	8.1	3.2																		
	9	5.70	6.00	FSL		SS	5.75	8.1	4.6																		
							6.00	8.2	3.3																		
126	1	0.00	0.30	CL			0.10	5.4	2.5	1	0.00	0.10					< 0.02										
							0.30	5.0	3.7																		
	2	0.30	0.70	CS			0.60	4.7	3.8																		
	3	0.70	1.00	LS			0.80	5.3	4.2																		
							1.00	5.6	3.7	3	0.80	1.00					< 0.02										
	4	1.00	2.50	LS			1.25	5.4	1.3																		
							1.50	5.7	1.1	4	1.30	1.50	S1	Ps			0.197										
							1.75	6.1	1.4																		
							2.00	6.3	1.3	5	1.80	2.00		Ps			0.266										
							2.25	6.5	1.1																		
							2.50	6.3	1.2																		
	5	2.50	2.95	SCL			2.75	6.6	1.4	7	2.70	2.90		Pl			0.346										
	6	2.95	3.50	S			3.00	6.7	1.2																		
							3.25	7.0	5.3	8	3.20	3.40		Ps			0.199										
							3.50	7.0	1.6																		
	7	3.50	4.80	LFS		SS	3.75	6.5	3.6	9	3.70	3.90		Ps	-0.029	0.078		0.310	0	0		0	8.9	7.0	0.07	0.348	0.20
							4.00	6.7	4.0																		
							4.25	6.8	4.7																		
							4.50	6.9	4.7																		
							4.75	7.1	4.4																		

Field Morphology Summary										Lab Sample			Action Criteria		SPOCAS Acid Base Accounting		Lab Results											
																	Potential Acidity				Existing Acidity		SPOCAS					Neut Cap
Site ID	Hor No	Upp Depth	Low Depth	Soil Texture	Jar.	Shell	Field pH Depth	pH_F	pH_{FOX}	No	Upp Depth	Low Depth	Depth 1st Action Level	Action Level Select %S	pH KCl =>6.5 TPA =0 %S		S_{CR}	S_{POS}	TSA	TPA	$a\text{-}S_{NAS}$	TAA	pH_{KCl}	pH_{OX}	S_{KCl}	$s\text{-}Ca_A+s\text{-}Mg_A$	$s\text{-}ANC_E$
		(m)					(m)				(m)						%S		mol H+/t		mol H+/t				%S		%S
								23Af	23Bf						$s\text{-}ANC_E$	s-Ca+s-Mg	22B	23Ee	23H	23G	a-20J	23F	23A	23B	23Ce	s-23Xh+s-23Um	s-23Q
127	1	0.00	0.20	L			0.10	5.5	2.8																		
	2	0.20	0.70	CLS			0.30	5.8	4.1																		
							0.60	5.4	3.8	2	0.40	0.60					< 0.02										
	3	0.70	1.10	CS			0.80	5.7	3.9																		
							1.00	6.0	4.2																		
	4	1.10	1.60	S			1.25	5.6	3.7																		
							1.50	6.1	2.9	4	1.30	1.50					< 0.02										
	5	1.60	2.20	LFS			1.75	6.3	2.8																		
							2.00	6.4	1.6	5	1.80	2.00	S2	Ps			0.047										
	6	2.20	3.00	LFS			2.25	6.2	1.6																		
							2.50	5.9	1.6	6	2.30	2.50		Ps			0.169										
							2.75	6.3	1.6																		
							3.00	6.4	1.5																		
	7	3.00	3.40	CS			3.25	6.5	1.4	8	3.20	3.40		Ps			0.117										
	8	3.40	5.00	LKS			3.50	6.6	2.4																		
							3.75	6.6	1.5																		
							4.00	6.6	1.7																		
							4.25	6.8	1.5																		
							4.50	6.9	1.9	10	4.20	4.50		Ps			0.256										
							4.75	7.2	2.3																		
							5.00	8.2	3.0																		
	9	5.00	5.60	FSCL		SS	5.25	8.0	3.2																		
							5.50	7.8	2.9																		
	10	5.60	6.00	FSL		SS	5.75	8.0	3.2																		
							6.00	7.9	3.5																		
128	1	0.00	0.30	SCL			0.10	5.5	3.1																		
							0.30	5.8	4.5																		
	2	0.30	0.60	CLFS			0.60	5.8	4.1																		
	3	0.60	1.40	LC			0.80	6.1	4.4																		
							1.00	5.9	3.8																		
							1.25	5.7	3.8																		
	4	1.40	2.25	CLKS			1.50	5.6	4.8																		
										5	1.50	1.70					< 0.02										
							1.75	5.6	5.6																		
							2.00	5.7	5.0																		
							2.25	5.7	4.7																		
	5	2.25	2.60	CKS			2.50	6.3	5.0	7	2.40	2.60					< 0.02										
	6	2.60	3.30	LKS			2.75	5.9	4.0																		
							3.00	6.3	4.0	8	2.90	3.10					< 0.02										
							3.25	6.2	4.1																		
	7	3.30	7.20	LKS			3.50	6.3	4.1	9	3.40	3.70					< 0.02										
							3.75	5.9	4.4																		
							4.00	6.1	4.3																		
							4.25	6.1	4.5																		
							4.50	6.1	3.9																		
							4.75	6.3	4.5	11	4.60	4.90					< 0.02										
							5.00	6.3	4.5																		
							5.50	6.4	4.6																		
							6.00	6.3	3.9	13	5.80	6.10					< 0.02										
							6.50	6.1	1.9																		
							7.00	6.3	1.6																		
										15	7.00	7.20	S4	Ps			0.049										
	8	7.20	8.15	LS			7.50	6.4	4.8	16	7.40	7.60					< 0.02										
							8.00	6.5	4.8	17	7.90	8.10					< 0.02										
	9	8.15	8.35	ZCL		SS	8.25	7.8	3.9	18	8.15	8.35		Pl	-0.255	0.002		0.460	0	0		0	8.6	6.8	0.05	0.688	0.61
	10	8.35	8.80	FSL			8.50	8.6	7.0																		
										19	8.50	8.70				0.010		0.010	0	0		0	7.5	6.3	0.00	0.000	
							8.75	8.5	6.6																		
	11	8.80	9.30	FSCL			9.00	8.4	7.0																		
										20	9.00	9.20				0.010		0.010	0	0		0	6.5	6.5	0.00	0.000	
							9.25	7.8	6.8																		
129	1	0.00	0.35	CL			0.10	5.2	2.4																		
							0.30	6.2	3.3																		
	2	0.35	0.80	CL			0.60	6.6	4.9																		
							0.80	6.7	4.7																		
	3	0.80	1.20	CLFS			1.00	6.8	4.6	3	0.90	1.10					< 0.02										
	4	1.20	1.70	FSCL			1.25	6.9	3.5																		
							1.50	6.7	3.0	4	1.40	1.60					< 0.02										
	5	1.70	4.80	ZCL			1.75	6.8	1.3																		
							2.00	7.1	1.4	5	1.80	2.00	S2	Pl			1.103										
							2.25	6.9	1.6																		
							2.50	6.9	1.4	6	2.30	2.50		Pl			1.797										
							2.75	7.1	1.3																		
							3.00	7.0	1.6																		
							3.25	7.1	1.3																		
							3.50	7.1	1.3	8	3.30	3.50		Pl			1.115										
							3.75	6.9	2.4																		
							4.00	7.1	2.0																		
							4.25	7.4	1.7																		
							4.50	7.1	1.4																		
							4.75	7.5	1.4																		

Field Morphology Summary										Lab Sample			Action Criteria		SPOCAS Acid Base Accounting		Lab Results											
																	Potential Acidity				Existing Acidity		SPOCAS					Neut Cap
Site ID	Hor No	Upp Depth	Low Depth	Soil Texture	Jar.	Shell	Field pH Depth	pH_F	pH_{FOX}	No	Upp Depth	Low Depth	Depth 1st Action Level	Action Level Select %S	pH KCl =>6.5 TPA =0		S_{CR}	S_{POS}	TSA	TPA	a-S_{NAS}	TAA	pH_{KCl}	pH_{OX}	S_{KCl}	s-Ca_A+s-Mg_A	s-ANC_E
		(m)					(m)				(m)				%S		%S		mol H+/t		mol H+/t					%S	%S
								23Af	23Bf						s-ANC_E	s-Ca+s-Mg	22B	23Ee	23H	23G	a-20J	23F	23A	23B	23Ce	s-23Xh+s-23Um	s-23Q
130	1	0.00	0.35	CL			0.10	5.1	2.6																		
							0.30	4.9	2.6																		
	2	0.35	0.70	FSL			0.60	4.8	3.7																		
	3	0.70	2.20	S			0.80	5.4	4.2																		
							1.00	5.4	4.7																		
							1.25	5.5	4.6																		
							1.50	5.4	4.6																		
							1.75	5.7	4.6																		
							2.00	5.7	5.2																		
	4	2.20	5.00	S			2.25	5.5	4.6																		
							2.50	5.6	5.2	6	2.30	2.50					< 0.02										
							2.75	5.6	5.3																		
							3.00	5.7	5.3																		
							3.25	5.6	5.2																		
							3.50	5.6	5.1																		
							3.75	5.8	5.4																		
							4.00	6.0	5.5	9	3.80	4.00					< 0.02										
							4.25	5.9	5.4																		
							4.50	5.7	5.3																		
							4.75	5.8	5.3																		
							5.00	6.1	5.2																		
	5	5.00	6.20	KS			5.25	6.1	5.3																		
							5.50	6.0	5.6																		
							5.75	6.0	5.4																		
							6.00	6.1	5.2																		
	6	6.20	6.80	KS			6.25	6.1	5.3																		
							6.50	5.7	5.4																		
							6.75	5.6	5.4																		
	7	6.80	8.30	KS			7.00	5.8	5.3																		
							7.25	6.4	5.4																		
							7.50	6.9	5.4	16	7.40	7.60					< 0.02										
							7.75	6.8	5.5																		
							8.00	6.7	5.5																		
							8.25	6.5	5.3																		
	8	8.30	10.60	S			8.50	6.8	5.7																		
							8.75	6.9	5.6																		
							9.00	7.2	5.5																		
							9.25	7.1	5.6																		
							9.50	6.8	5.6																		
							9.75	7.4	5.7																		
							10.00	7.5	5.7																		
							10.25	7.5	5.6																		
							10.50	7.8	5.6	22	10.30	10.50					< 0.02										
	9	10.60	10.80	FSLC			10.75	8.1	7.1	23	10.60	10.80	S9	Pc				0.130	46	46		0	7.1	3.5	0.02	0.013	
	10	10.80	11.40	CLFS			11.00	7.0	5.7																		
							11.25	6.9	5.6	24	11.10	11.30					< 0.02										
	11	11.40	12.00	FSCL			11.50	7.0	5.9																		
							12.00	6.7	5.5																		
131	1	0.00	0.15	IP			0.10	5.5	2.0	1	0.00	0.10	S0	Pl			0.146										
	2	0.15	0.45	ZLC			0.30	6.1	3.1	2	0.20	0.40					< 0.02										
	3	0.45	1.10	ZLC			0.60	6.7	1.5																		
							0.80	6.7	1.5	3	0.70	0.90		Pc			0.913										
							1.00	6.5	1.4																		
	4	1.10	1.40	LS			1.25	6.3	2.4																		
	5	1.40	1.90	LS			1.50	6.0	4.7																		
							1.75	6.4	5.0																		
132	1	0.00	0.35	KSCL			0.10	5.1	2.5	1	0.00	0.10					< 0.02										
							0.30	5.5	3.4																		
	2	0.35	0.65	LS			0.60	6.3	3.0	2	0.40	0.60					< 0.02										
	3	0.65	1.20	ZLC			0.80	7.1	3.0																		
							1.00	7.2	2.2	3	0.80	1.00					0.03										
	4	1.20	1.40	LS			1.25	7.3	1.6	4	1.20	1.40	S2	Ps			0.09										
	5	1.40	3.60	S			1.50	6.4	4.9																		
							1.75	6.6	5.3	5	1.70	1.90					< 0.02										
							2.00	6.1	5.2																		
							2.25	6.0	5.1																		
										8	3.20	3.40					< 0.02										
133	1	0.00	0.15	LC			0.10	4.6	1.6	1	0.00	0.10					< 0.02										
	2	0.15	0.45	ZLC			0.30	5.7	2.2	2	0.20	0.40					< 0.02										
	3	0.45	0.65	FSCL			0.60	6.2	1.7	3	0.45	0.65	S0	Pl			0.24										
	4	0.65	1.20	S			0.80	6.2	1.6																		
							1.00	6.3	1.8	4	0.90	1.10		Ps			0.04										
	5	1.20	2.40	S			1.25	6.2	2.0	5	1.20	1.40					< 0.02										
							1.50	6.2	1.6																		
							1.75	6.1	5.2																		
							2.00	6.3	5.2																		
							2.25	6.4	5.1	7	2.20	2.40					< 0.02										
134	1	0.00	0.35	CL			0.10	5.3	2.7																		
							0.30	6.3	5.0																		
	2	0.35	0.80	SCL			0.60	6.6	5.4																		
							0.80	7.4	5.6																		
	3	0.80	1.25	CLS			1.00	7.4	5.6	3	0.80	1.00					< 0.02										
							1.25	7.3	5.7																		
	4	1.25	1.50	CS			1.50	6.8	1.6	4	1.30	1.50					< 0.02										
	5	1.50	1.90	CS			1.75	6.5	1.3	5	1.60	1.80	S2	Ps			0.88										
	6	1.90	2.40	LS			2.00	7.4	1.8																		
							2.25	6.4	2.0	6	2.10	2.30		Ps			0.03										
	7	2.40	4.30	LS			2.50	6.5	2.1																		
							2.75	6.5	1.5	7	2.60	2.80		Ps			0.09										
							3.00	6.5	2.1																		
							3.25	6.4	2.3																		
							3.50	6.4	1.9																		
							3.75	6.6	2.5	9	3.60	3.80					< 0.02										
							4.00	6.5	1.4																		
							4.25	6.6	1.3																		
	8	4.30	6.00	LKS			4.50	6.6	1.9																		
							4.75	6.6	1.8																		
							5.00	6.6	4.5																		
							5.25	6.5	4.1	12	5.10	5.30					< 0.02										
							5.50	6.7	4.8																		
							5.75	6.5	4.2																		
							6.00	6.6	4.3																		

Field Morphology Summary										Lab Sample			Action Criteria		SPOCAS Acid Base Accounting		Lab Results											
																	Potential Acidity				Existing Acidity		SPOCAS					Neut Cap
Site ID	Hor No	Upp Depth	Low Depth	Soil Texture	Jar.	Shell	Field pH Depth	pH_F	pH_{FOX}	No	Upp Depth	Low Depth	Depth 1st Action Level	Action Level Select %S	pH KCl =>6.5 TPA =0		S_{CR}	S_{POS}	TSA	TPA	a-S_{NAS}	TAA	pH_{KCl}	pH_{OX}	S_{KCl}	s-Ca_A+s-Mg_A	s-ANC_E
		(m)					(m)				(m)				%S		%S		mol H+/t		mol H+/t					%S	%S
								23Af	23Bf						s-ANC_E	s-Ca+s-Mg	22B	23Ee	23H	23G	a-20J	23F	23A	23B	23Ce	s-23Xh+s-23Um	s-23Q
135	1	0.00	0.30	CL			0.10	5.0	3.1																		
							0.30	7.1	5.2																		
	2	0.30	0.60	CLFS			0.60	7.3	5.3																		
	3	0.60	0.80	FSCL			0.80	6.6	3.1	3	0.60	0.80					< 0.02										
	4	0.80	1.00	CS			1.00	5.8	3.0																		
	5	1.00	1.50	LS			1.25	6.2	4.6																		
							1.50	5.9	4.3																		
	6	1.50	1.80	KS			1.75	6.4	3.4	6	1.60	1.80					< 0.02										
	7	1.80	2.40	S			2.00	6.5	3.5																		
							2.25	6.5	3.9	7	2.10	2.30					< 0.02										
	8	2.40	6.20	S			2.50	5.9	4.3																		
							2.75	6.0	3.9	8	2.60	2.80					< 0.02										
							3.00	6.0	4.5																		
							3.25	5.9	4.8																		
							3.50	5.8	5.2																		
							3.75	6.4	5.1																		
							4.00	6.5	5.2																		
							4.25	6.4	5.2																		
							4.50	6.3	5.3																		
							4.75	6.2	5.4																		
							5.00	7.3	5.3																		
							5.25	7.0	5.4																		
							5.50	6.8	5.3																		
							5.75	6.3	5.3																		
							6.00	6.7	5.6																		
	9	6.20	7.20	KS			6.25	6.6	5.4																		
							6.50	6.8	5.5																		
							6.75	6.9	5.4	16	6.70	6.90					< 0.02										
							7.00	6.7	5.7																		
	10	7.20	7.85	LFS		SS	7.25	7.9	6.6	17	7.20	7.40	S8	Ps	-0.346	-0.167		0.300	0	0		0	9.0	7.0	0.07	0.700	0.67
							7.50	7.8	6.5																		
							7.75	8.1	6.6																		
	11	7.85	8.40	FSCL		SS	8.00	8.2	6.3																		
							8.25	8.7	5.3	19	8.10	8.30		Pl	-0.252	-0.079		0.340	0	0		0	8.9	7.3	0.07	0.628	0.55
							8.40	8.4	6.5																		
136	1	0.00	0.02	ZL			0.02	7.7	2.5	1	0.00	0.02	S0	Pl			0.76										
	2	0.02	0.20	SLMC			0.10	7.3	5.0	2	0.03	0.20					< 0.02										
	3	0.20	0.45	SLC			0.30	7.4	2.0	3	0.20	0.40					0.08										
	4	0.45	0.70	ZLC			0.60	7.0	1.4	4	0.50	0.70		Pc			0.94										
	5	0.70	1.00	LS			0.80	7.5	1.3																		
							1.00	7.0	1.6	5	0.70	1.00		Ps			0.51										

Acid Sulfate Soils of Halifax, North Queensland

Volume 2

Appendix 2: Analytical Data

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Queensland Acid Sulfate Soils Investigation Team (QASSIT), Brisbane

Published by Department of Environment and Resource Management, Indooroopilly, Queensland, Australia.

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Analytical Data Method Codes

Field Morphology Stummary	
Site ID	Borehole or site number
Hor No	Horizon number
Horizon Name	Name of horizon (codes according to McDonald et al. 1990)
Upp Depth	Upper depth of horizon
Low Depth	Lower depth of horizon
Colour	Colour of horizon (codes according to Munsell or Japanese colour chart)
Soil Texture	Soil texture (codes according to McDonald et al. 1990)
Jar.	Indicates presence of Jarosite (J) in profile
Gyp.	Indicates presence of Gypsum (Y) in profile
Shell	Indicates presence of Shell (SS) in profile
Field pH	
Depth (m)	Depth at which pH_F and pH_{FOX} tests were conducted
pH_F (23Af)	pH measured in the field on saturated soil sample using pH electrode
pH_{FOX} (23Bf)	pH measured in the field – 30% peroxide reaction, pH electrode
Action Level pH_F	Indication of actual acidity from field test results A = $pH_F \leq 4$, a = $pH_F > 4$ to ≤ 5
Depth 1st Action Level (pH_F)	The depth category of the upper depth of the first horizon where pH_F is less than or equal to 4
	A0 $pH_F < 4$ is first exceeded 0–0.5 m below the surface
	A1 $pH_F < 4$ is first exceeded 0.5–1 m below the surface
	A2 1–2 m, A3 2–3 m, A4 3–4 m, A5 4–5 m
Lab Sample	
No.	Sample number of sample taken for analysis
Upp Depth	Upper depth of sample taken for analysis
Low Depth	Lower depth of sample taken for analysis
Action Criteria	
Depth 1st Action Level	The depth category of the upper depth of the first horizon where the texture-based ASS action criteria is exceeded. 'S' denotes potential acidity for the respective depth categories.
Action Level Select %S	Pc, Pl or Ps indicates samples that have exceeded 0.1, 0.06 or 0.03 %S (ie. exceeded the ASS action criteria), for clays, loams and sands respectively.
	Note: These figures apply to disturbances up to 1000 m^3; for disturbances greater than 1000 m^3, the action criteria is 0.03 %S, regardless of texture

Suspension Peroxide Oxidation Combined Acidity and Sulfur (SPOCAS) Acid Base Accounting	
s-ANC_E	S_{POS} - ((S_{POS} + s-ANC_E) / 1.5) WHERE pH_{KCl} >= 6.5 AND TPA = 0
s-Ca+s-Mg	S_{POS} - ((s-Ca_A+ s-Mg_A)/ 1.5) WHERE pH_{KCl} >= 6.5 AND TPA = 0
s-TSA	S_{POS} - ((S_{POS} – s-TSA) / 1.5) WHERE [pH_{KCl}] >= 6.5 AND TPA > 0
s-TAA	S_{POS} + s-TAA WHERE pH_{KCl} >= 4.5 AND pH_{KCl} < 6.5 AND TPA > 0

Chromium Suite Acid Base Accounting	
s-C_{IN}	S_{CR} - (s-C_{IN} / 1.5) WHERE pH_{KCl} >= 6.5
s-ANC_{BT}	S_{CR} - (s-ANC_{BT} / 1.5) WHERE pH_{KCl} >= 6.5
s-TAA	S_{CR} + s-TAA WHERE pH_{KCl} >= 5.5 AND pH_{KCl} <6.5 (s-TAA is not required if the result for 22B is below the action criteria)
s-TAA	S_{CR} + s-TAA WHERE pH_{KCl} >= 4.5 AND pH_{KCl} < 5.5

Laboratory results	SPOCAS ALHS	ALHS	Unit	Description
Potential Acidity				
S_{CR} (Sulfur, chromium reducible)		22B	%S	(from Chromium Reducible Sulfur method)
S_{POS} (Peroxide oxidisable sulfur)	23Ee		%S	= S_P – S_{KCl}
s-TSA (Titratable sulfidic acidity)	s-23H		%S	= (TPA – TAA) / 623.7 (TSA calculated as equivalent % pyrite S)
s-TPA (Titratable peroxide acidity)	s-23G		%S	= (TPA /623.7) (TPA calculated as equivalent % pyrite S)
a-S_{CR} (Sulfur, chromium reducible)		a-22B	mol H^+/t	(from Chromium Reducible Sulfur method) = S_{CR} x 623.7 (converted to equivalent mol H+/t)
a-S_{POS} (Peroxide oxidisable sulfur)	a-23Ee		mol H^+/t	= (S_P – S_{KCl}) x 623.7 (converted to equivalent mol H+/t)
TSA (Titratable sulfidic acidity)	23H		mol H^+/t	= TPA – TAA
TPA (Titratable peroxide acidity)	23G		mol H^+/t	= Titratable Peroxide Acidity (measured after peroxide digestion)
Retained Acidity				
s-S_{RAS} (Residual acid soluble)	s-23Re		%S	(S_{RAS} x 0.75) (S_{RAS} converted to equivalent % pyrite S)
a-S_{RAS} (Residual acid-soluble)	a-23Re		mol H^+/t	(S_{RAS} x 0.75 x 623.7) (S_{RAS} expressed in equivalent acidity units)
s-S_{NAS} (Net acid-soluble sulfur)		s-20J	%S	= (S_{HCl} – S_{KCl}) x 0.75 (S_{NAS} converted to equivalent % pyrite S)
a-S_{NAS} (Net acid-soluble sulfur)		a-20J	mol H^+/t	((S_{HCl} – S_{KCl}) x 467.8) (calculated in equivalent acidity units)
Actual Acidity				
s-TAA (Titratable actual acidity)	s-23F		%S	= (TAA / 623.7) (TAA calculated as equivalent % pyrite S)
TAA (Titratable actual acidity)	23F		mol H^+/t	= Titratable actual acidity (measured before peroxide digestion)
SPOCAS				
pH_{KCl}				pH of soil in potassium chloride (KCl) extract
pH_{OX}				pH of soil after peroxide digestion
S_{KCl}	23Ce		%S	KCl extracted sulfur
S_P	23De		%S	Peroxide sulfur
Ca_{KCl}	23Vh		%Ca	Ca extracted in 1 M KCl (after TAA titration)
Ca_P	23Wh		%Ca	Ca in peroxide digest (after TPA digestion & titration)
Ca_A	23Xh		%Ca	Ca reacted with acid generated by peroxide digest (Ca_P – Ca_{KCl})
s-Ca_A	s-23Xh		%S	(Ca_A x 0.800) (Ca_A in equivalent % pyrite S it will neutralise)
a-Ca_A	a-23Xh		mol H^+/t	(Ca_A x 499.0) (Ca_A calculated as equivalent acid neutralising units)
Mg_{KCl}	23Sm		%Mg	Mg extracted in 1 M KCl (after TAA titration)
Mg_P	23Tm		%Mg	Mg in peroxide digest (after TPA digestion & titration)
Mg_A	23Um		%Mg	Reacted Magnesium (Mg_P – Mg_{KCl})
s-Mg_A	s-23Um		%S	(Mg_A x 1.319) (Mg_A in equivalent % pyrite S it will neutralise)
a-Mg_A	a-23Um		mol H^+/t	(Mg_A x 822.6), (Mg_A calculated as equivalent acid neutralising units)
s-Ca_A+s-Mg_A	s-23Xh+s-23Um		%S	Addition of Reacted Calcium and Magnesium (in equivalent % pyrite S it will neutralise)
a-Ca_A+a-Mg_A	a-23Xh+a-23Um		mol H+/t	Addition of Reacted Calcium and Magnesium (calculated as equivalent acid neutralising units)
Neutralising Capacity				
ANC_{BT}		19A2	%$CaCO_3$	Back Titration after 0.1 M HCl treatment (expressed in equivalent %$CaCO_3$ units)
s-ANC_{BT}		s-19A2	%S	(ANC_{BT} / 3.121) (ANC_{BT} in equivalent % pyrite S it will neutralise)
a-ANC_{BT}		a-19A2	mol H^+/t	(ANC_{BT} x 199.8) (ANC_{BT} in equivalent acid neutralising units)
ANC_E	23Q		%$CaCO_3$	Excess ANC from SPOCAS (expressed in equivalent %$CaCO_3$)
s-ANC_E	s-23Q		%S	(ANC_E / 3.121) (ANC_E in equivalent % pyrite S it will neutralise)
a-ANC_E	a-23Q		mol H^+/t	(ANC_E x 199.8) (calculated in equivalent acid neutralising units)
DTPA Extractable				
Fe		12A1-Fe	mg/kg	Fe (trace) 0.005M DTPA
Mn		12A1-Mn	mg/kg	Mn (trace) 0.005M DTPA
Cu		12A1-Cu	mg/kg	Cu (trace) 0.005M DTPA
Zn		12A1-Zn	mg/kg	Zn (trace) 0.005M DTPA

Samples were analysed by Method 23 (SPOCAS). The SPOCAS method provides data on pyritic sulfur, pH, existing acidity, as well as a measure of Ca and Mg neutralising reactions. The SPOCAS is an improved and updated version of the POCASm method.

The SPOCAS Method is as per Acid Sulfate Soils Laboratory Methods Guidelines Version 2.1 June 2004 Ahern CA, McElnea AE, Sullivan LA (2004)

Sample selection and handling is as per the Guidelines for Sampling and Analysis of Lowland Acid Sulfate Soils (ASS) in Queensland 1998, CR Ahern, MR Ahern and B Powell (1998).

ALHS Codes are standard analytical method codes according to the Australian Laboratory Handbook of Soil and Water Chemical Methods, GE Rayment and FR Higginson (1992), and Acid Sulfate Soils Laboratory Methods Guidelines Version 2.1 June 2004 Ahern CA, McElnea AE, Sullivan LA (2004)

Field Morphology Summary																Lab Sample			Action Criteria		SPOCAS Acid Base Accounting				Chromium Suite Acid Base Accounting				Lab Results							
										Field pH																			Potential Acidity							
Site ID	Hor No	Horizon Name	Upp Depth	Low Depth	Colour	Soil Texture	Jar.	Gyp.	Shell	Depth	pH_F	pH_{FOX}	Action Level (pH_F)	Depth 1st Action Level (pH_F)	No	Upp Depth	Low Depth	Depth 1st Action Level	Action Level Select %S	pH KCl =>6.5 TPA =0	pH KCl =>6.5 TPA >0	<=4.5 pH KCl <6.5 TPA >0		pH KCl =>6.5	<=5.5 pH KCl <6.5	<=4.5 pH KCl <5.5		S_{CR}	S_{POS}	s-TSA	s-TPA	a-S_{CR}	a-S_{POS}	TSA	TPA
(m)										(m)	23Af	23Bf				(m)				%S				%S				%S				mol H+/t			
																				s-ANC_E	s-Ca+s-Mg	s-TSA	s-TAA	s-C_{IN}	s-ANC_{BT}	s-TAA	s-TAA	22B	23Ee	s-23H	s-23G	a-22B	a-23Ee	23H	23G
79	1	A2p	0.00	0.40	2.5Y33	SCL				0.10	5.4	3.8																								
										0.30	5.8	4.8																								
	2	B2	0.40	1.30	10YR56	S				0.60	5.6	5.3																								
										0.80	5.5	5.0																								
										1.00	5.1	3.3																								
										1.25	5.8	4.8																								
	3	C1	1.30	4.80	10YR56	KS				1.50	5.7	6.3																								
										1.75	5.9	7.0																								
										2.00	6.3	8.6																								
										2.25	6.5	6.9																								
										2.50	6.1	8.1																								
										2.75	6.3	7.5																								
										3.00	6.3	7.2																								
										3.25	6.2	6.1			8	3.10	3.40										< 0.02				0			
										3.50	6.3	7.9																								
										3.75	6.2	6.8																								
										4.00	6.2	6.8																								
										4.25	6.3	6.7																								
										4.50	6.3	6.8																								
										4.75	6.2	6.6																								
	4	C2	4.80	6.60	10YR66	KS				5.00	6.1	6.5																								
										5.25	6.4																									
										5.50	6.5																									
										5.75	6.3				12	5.50	5.80										< 0.02				0			
										6.00	6.4	6.5																								
										6.25	6.3	6.5																								
										6.50	6.2	6.4																								
	5	C3	6.60	9.45	10YR66	KS				6.75	6.3	6.5																								
										7.00	6.3	6.5																								
										7.50	5.9	6.3																								
										8.00	6.2	6.3																								
										8.50	6.8	6.2																								
															17	8.50	8.80										< 0.02				0			
										9.00	7.0	5.9																								
															18	9.10	9.40										< 0.02				0			
	6	2C4	9.45	9.95	N40	ZLC				9.50	8.3	5.3																								
															19	9.60	9.80	S9	Pc	-0.025	0.147							0.520	0.000	0.000		324	0	0
	7	2C5	9.95	10.30	N40	CL			SS	10.00	8.2	6.1																								
															20	10.10	10.30		Pl	-0.742	-0.412							0.370	0.000	0.000		231	0	0
	8	2C6	10.30	10.75	N40	SLC			SS	10.50	8.5	5.8																								
															21	10.50	10.70		Pc	-0.014	0.159							0.560	0.000	0.000		349	0	0
	9	3C7	10.75	10.80	5Y2.5/1	LC				10.80	7.9	0.9																								
80	1	A2	0.00	0.23	10YR42	CL				0.10	4.6	2.9	a																							
	2	B2	0.23	0.75	10YR43	LC				0.30	4.7	3.0	a																							
															2	0.30	0.50										< 0.02				0			
										0.60	5.3	3.5																								
	3	B3	0.75	1.20	2.5Y52	LS				0.80	5.7	3.9																								
										1.00	5.8	3.5			3	0.80	1.00										< 0.02				0			
	4	C1	1.20	1.50	2.5Y52	S				1.25	6.1	3.8																								
										1.50	5.9	5.2			4	1.30	1.50										< 0.02				0			
	5	C2	1.50	1.80	2.5Y52	S				1.75	5.9	2.7			5	1.60	1.80										< 0.02				6			
	6	C3	1.80	6.40	10YR64	KS				2.00	5.9	4.5																								
										2.25	5.9	5.9			6	2.10	2.40										< 0.02				0			
										2.50	5.9	5.6																								
										2.75	5.8	5.5																								
										3.00	5.7	5.8																								
										3.25	6.1	6.0																								
										3.50	6.0	6.0			8	3.40	3.70										< 0.02				0			
										3.75	5.8	5.7																								
										4.00	6.4	6.1																								
										4.25	5.9	6.2																								
										4.50	6.0	5.8																								
										4.75	6.2	6.1																								
										5.00	6.4	6.2																								
										5.50	6.3	6.4																								
										6.00	6.5	6.5																								
	7	C4	6.40	6.95	2.5Y63	KS				6.50	7.2	6.0			13	6.40	6.70										< 0.02				12			
	8	2C5	6.95	7.20	5Y41	SLC				7.00	7.1	1.1																								
															14	7.00	7.20	S7	Pc								0.24				150			
	9	3C6	7.20	8.40	5Y51	S				7.50	6.6	5.7																								
															15	7.50	7.80										< 0.02				12			
										8.00	6.8	5.7																								
										8.40	6.9	1.2																								

Lab Sample			Lab Results																												
			Existing Acidity				SPOCAS															Neutralising Capacity						DTPA Extractable			
No	Upp Depth	Low Depth	$s\text{-}S_{NAS}$	$a\text{-}S_{NAS}$	s-TAA	TAA	pH_{KCl}	pH_{OX}	S_{KCl}	S_P	Ca_{KCl}	Ca_P	Ca_A	$s\text{-}Ca_A$	$a\text{-}Ca_A$	Mg_{KCl}	Mg_P	Mg_A	$s\text{-}Mg_A$	$a\text{-}Mg_A$	$s\text{-}Ca_A\text{+}s\text{-}Mg_A$	$a\text{-}Ca_A\text{+}a\text{-}Mg_A$	ANC_{BT}	$s\text{-}ANC_{BT}$	$a\text{-}ANC_{BT}$	ANC_E	$s\text{-}ANC_E$	$a\text{-}ANC_E$	Fe	Mn	Cu	Zn
	(m)		%S	mol H+/t	%S	mol H+/t			%S		%Ca			%S	mol H+/t	%Mg			%S	mol H+/t	%S	mol H^+/t	$\%CaCO_3$	%S	mol H+/t	$\%CaCO_3$	%S	mol H+/t	mg/kg			
			s-20J	a-20J	s-23F	23F	23A	23B	23Ce	23De	23Vh	23Wh	23Xh	s-23Xh	a-23Xh	23Sm	23Tm	23Um	s-23Um	a-23Um	s-23Xh+s-23Um	a-23Xh+a-23Um	19A2	s-19A2	a-19A2	23Q	s-23Q	a-23Q	12A1-Fe	12A1-Mn	12A1-Cu	12A1-Zn
8	3.10	3.40																													
12	5.50	5.80																													
17	8.50	8.80																													
18	9.10	9.40																													
19	9.60	9.80			0.00	0	8.7	7.0	0.05	0.57	0.28	0.88	0.60	0.480	299	0.09	0.15	0.06	0.079	49	0.559	349	3.9	1.25	779	0.93	0.30	186				
20	10.10	10.30			0.00	0	9.0	7.1	0.04	0.41	0.27	1.62	1.35	1.080	674	0.06	0.13	0.07	0.092	58	1.172	731	8.6	2.76	1718	4.05	1.30	809				
21	10.50	10.70			0.00	0	9.0	7.7	0.04	0.60	0.22	0.89	0.67	0.536	334	0.05	0.1	0.05	0.066	41	0.602	375	6	1.92	1199	0.94	0.30	188				
2	0.30	0.50																													
3	0.80	1.00																													
4	1.30	1.50																													
5	1.60	1.80																													
6	2.10	2.40																													
8	3.40	3.70																													
13	6.40	6.70																													
14	7.00	7.20																													
15	7.50	7.80																													

Field Morphology Summary																Lab Sample			Action Criteria		SPOCAS Acid Base Accounting				Chromium Suite Acid Base Accounting				Lab Results							
										Field pH																			Potential Acidity							
Site ID	Hor No	Horizon Name	Upp Depth	Low Depth	Colour	Soil Texture	Jar.	Gyp.	Shell	Depth	pH_F	pH_{FOX}	Action Level (pH_F)	Depth 1st Action Level (pH_F)	No	Upp Depth	Low Depth	Depth 1st Action Level	Action Level Select %S	pH KCl =>6.5 TPA =0	pH KCl =>6.5 TPA >0	<=4.5 pH KCl <6.5 TPA >0	pH KCl =>6.5	<=5.5 pH KCl <6.5	<=4.5 pH KCl <5.5	S_{CR}	S_{POS}	s-TSA	s-TPA	$a\text{-}S_{CR}$	$a\text{-}S_{POS}$	TSA	TPA
			(m)							(m)	23Af	23Bf				(m)				%S			%S			%S				mol H+/t			
																				s-ANC_E	s-Ca+s-Mg	s-TSA	s-TAA	s-C_{IN}	s-ANC_{BT}	s-TAA	s-TAA	22B	23Ee	s-23H	s-23G	a-22B	a-23Ee	23H	23G
81	1	A2	0.00	0.15	2.5Y44	FSCL				0.10	5.6	3.7			1	0.00	0.10										< 0.02				6			
	2	A3	0.15	0.70	2.5Y44	FSL				0.30	6.7	5.7																						
										0.60	6.7	5.9																						
	3	B21	0.70	1.10	5Y52	ZLC				0.80	6.9	6.0																						
										1.00	6.7	5.8			3	0.80	1.00										< 0.02				6			
	4	B22	1.10	1.40	5Y32	ZLC				1.25	6.5	5.0			4	1.20	1.40	S2	Pc								0.66				412			
	5	B23	1.40	1.80	5Y32	ZLC				1.50	6.7	1.2																						
															5	1.50	1.70		Pc								1.65				1029			
										1.75	6.7	1.0																						
	6	2C1	1.80	2.10	5Y41	S				2.00	6.9	1.3			6	1.90	2.10		Ps								0.27				168			
	7	3C2	2.10	4.80	2.5Y63	KS				2.25	6.8	5.0																						
										2.50	6.5	4.9			7	2.40	2.70										< 0.02				6			
										2.75	6.5	5.4																						
										3.00	6.4	5.4																						
										3.25	6.4	5.2																						
										3.50	6.5	5.3																						
										3.75	6.4	5.6																						
										4.00	6.3	5.8																						
										4.25	6.3	5.2																						
										4.50	6.3	5.1																						
										4.75	6.3	4.5																						
82	1	A2	0.00	0.15	5Y41	CLFS				0.10	6.4	5.1			1	0.00	0.10	S0	Pl								0.08				50			
	2	B21	0.15	0.30	N40	CLFS				0.30	6.5	5.4			2	0.20	0.30										< 0.02				6			
	3	B22	0.30	0.65	N40	ZCL				0.60	6.6	4.7			3	0.40	0.60		Pl								0.07				44			
	4	B23	0.65	0.90	N30	ZCL				0.80	6.8	3.3																						
										0.90	6.9	3.9			4	0.70	0.90		Pl								0.41				256			
83	1	A2p	0.00	0.30	10YR42	CL				0.10	5.0	4.5	a																					
										0.30	4.9	3.7	a																					
	2	B21	0.30	0.65	2.5Y44	CL				0.60	4.7	3.9	a																					
	3	B22	0.65	1.15	2.5Y43	LC				0.80	4.8	3.9	a																					
										1.00	4.9	3.7	a																					
	4	2B1	1.15	1.60	5Y51	CS				1.25	5.1	4.2																						
										1.50	5.1	4.1			4	1.30	1.50										< 0.02				6			
	5	2C1	1.60	2.50	5Y51	S				1.75	5.2	3.3																						
										2.00	5.5	2.1			5	1.80	2.00										< 0.02				6			
										2.25	5.6	2.3																						
										2.50	5.4	1.8			6	2.30	2.50	S2	Ps								0.04				25			
	6	2C2	2.50	2.80	N40	LS				2.75	5.5	1.7			7	2.60	2.80		Ps								0.34				212			
	7	2C3	2.80	3.10	N40	CS				3.00	5.6	1.6			8	2.80	3.00		Ps								0.47				293			
	8	2C4	3.10	3.80	N40	LS				3.25	5.7	1.6																						
										3.50	6.2	1.6			9	3.30	3.50		Ps								0.1				62			
										3.75	6.8	1.8																						
	9	2C5	3.80	4.20	N40	FSCL				4.00	7.0	3.8																						
	10	2C6	4.20	5.30	N40	CL			SS	4.25	7.6	5.8																						
										4.50	7.9	6.1			11	4.30	4.50		Pl	-0.315	-0.090							0.400	0.000	0.000		249	0	0
										4.75	8.1	6.1																						
										5.00	7.8	5.8																						
	11	2C7	5.30	5.90	N40	FSCL			SS	5.50	7.7	6.1																						
	12	2C8	5.90	6.00	N40	FS				6.00	8.0	6.4																						
84	1	A2p	0.00	0.30	2.5Y43	CL				0.10	4.8	2.7	a																					
										0.30	4.9	2.5	a																					
	2	B21	0.30	0.65	2.5Y43	LMC									2	0.30	0.50										< 0.02				6			
										0.60	5.4	3.9																						
	3	B22	0.65	0.95	2.5Y44	FSLC				0.80	5.3	4.0																						
	4	B3	0.95	1.70	2.5Y54	SLC				1.00	5.3	4.0																						
										1.25	5.4	3.8																						
										1.50	5.4	3.0																						
	5	2C1	1.70	2.10	5Y51	CS				1.75	5.1	3.0			5	1.70	1.90										< 0.02				6			
										2.00	5.1	2.6																						
	6	3C2	2.10	2.40	5Y51	KS				2.25	5.9	3.2			6	2.20	2.40										< 0.02				6			
	7	3C3	2.40	3.30	5Y41	LKS				2.50	6.4	2.0																						
										2.75	6.4	1.4			7	2.60	2.80	S3	Ps								0.47				293			
										3.00	6.5	1.4																						
															8	3.00	3.20		Ps								0.21				131			
										3.25	6.7	1.4																						
	8	3C4	3.30	3.85	N40	LKS				3.50	7.1	1.8																						
										3.75	7.4	1.1			9	3.60	3.80		Ps								0.19				119			
	9	4C5	3.85	4.30	N40	FSL				4.00	6.8	1.3																						
										4.25	6.9	1.3			10	4.10	4.30		Pl								0.42				262			
	10	5C6	4.30	4.50	N40	CS				4.50	6.9	1.4			11	4.30	4.50		Ps								0.28				175			
	11	6C7	4.50	5.70	5Y51	KS				4.75	6.9	1.4																						
										5.00	6.8	1.3																						
										5.50	7.1	1.5																						
	12	7C8	5.70	6.00	10Y41	LFS			SS	6.00	7.9	6.3																						

Lab Sample			Lab Results																													
			Existing Acidity				SPOCAS																Neutralising Capacity						DTPA Extractable			
No	Upp Depth	Low Depth	$s\text{-}S_{NAS}$	$a\text{-}S_{NAS}$	s-TAA	TAA	pH_{KCl}	pH_{OX}	S_{KCl}	S_P	Ca_{KCl}	Ca_P	Ca_A	$s\text{-}Ca_A$	$a\text{-}Ca_A$	Mg_{KCl}	Mg_P	Mg_A	$s\text{-}Mg_A$	$a\text{-}Mg_A$	$s\text{-}Ca_A\text{+}s\text{-}Mg_A$	$a\text{-}Ca_A\text{+}a\text{-}Mg_A$	ANC_{BT}	$s\text{-}ANC_{BT}$	$a\text{-}ANC_{BT}$	ANC_E	$s\text{-}ANC_E$	$a\text{-}ANC_E$	Fe	Mn	Cu	Zn
	(m)		%S	mol H+/t	%S	mol H+/t			%S		%Ca			%S	mol H+/t	%Mg			%S	mol H+/t	%S	mol H^+/t	$\%CaCO_3$	%S	mol H+/t	$\%CaCO_3$	%S	mol H+/t	mg/kg			
			s-20J	a-20J	s-23F	23F	23A	23B	23Ce	23De	23Vh	23Wh	23Xh	s-23Xh	a-23Xh	23Sm	23Tm	23Um	s-23Um	a-23Um	s-23Xh+s-23Um	a-23Xh+a-23Um	19A2	s-19A2	a-19A2	23Q	s-23Q	a-23Q	12A1-Fe	12A1-Mn	12A1-Cu	12A1-Zn
1	0.00	0.10																														
3	0.80	1.00																														
4	1.20	1.40																														
5	1.50	1.70																														
6	1.90	2.10																														
7	2.40	2.70																														
1	0.00	0.10																														
2	0.20	0.30																														
3	0.40	0.60																														
4	0.70	0.90																														
4	1.30	1.50																														
5	1.80	2.00																														
6	2.30	2.50																														
7	2.60	2.80																														
8	2.80	3.00																														
9	3.30	3.50																														
11	4.30	4.50			0.00	0	8.6	7.3	0.06	0.46	0.28	1.10	0.82	0.656	409	0.04	0.1	0.06	0.079	49	0.735	459	4.7	1.51	939	2.10	0.67	420				
2	0.30	0.50																														
5	1.70	1.90																														
6	2.20	2.40																														
7	2.60	2.80																														
8	3.00	3.20																														
9	3.60	3.80																														
10	4.10	4.30																														
11	4.30	4.50																														

Field Morphology Summary															Lab Sample			Action Criteria		SPOCAS Acid Base Accounting				Chromium Suite Acid Base Accounting				Lab Results							
										Field pH																		Potential Acidity							
Site ID	Hor No	Horizon Name	Upp Depth	Low Depth	Colour	Soil Texture	Jar.	Gyp.	Shell	Depth	pH_F	pH_{FOX}	Action Level (pH_F)	Depth 1st Action Level (pH_F)	No	Upp Depth	Low Depth	Depth 1st Action Level	Action Level Select %S	pH KCl =>6.5 TPA =0	pH KCl =>6.5 TPA >0	<=4.5 pH KCl <6.5 TPA >0		pH KCl =>6.5	<=5.5 pH KCl <6.5	<=4.5 pH KCl <5.5		S_{CR}	S_{POS}	s-TSA	s-TPA	a-S_{CR}	a-S_{POS}	TSA	TPA
(m)										(m)	23Af	23Bf				(m)				%S				%S				%S				mol H+/t			
																				s-ANC_E	s-Ca+s-Mg	s-TSA	s-TAA	s-C_{IN}	s-ANC_{BT}	s-TAA	s-TAA	22B	23Ee	s-23H	s-23G	a-22B	a-23Ee	23H	23G
85	1	A11	0.00	0.10	10YR42	CLS				0.10	4.7	4.3	a																						
	2	A12	0.10	1.05	10YR42	SLC				0.30	4.6	3.6	a																						
										0.60	4.8	2.8	a																						
										0.80	4.8	3.6	a																						
										1.00	5.0	4.0	a																						
	3	C1	1.05	1.65	10YR44	S				1.25	5.2	4.6																							
										1.50	5.4	5.4																							
	4	2C2	1.65	3.60	10YR56	KS				1.75	5.3	4.7																							
										2.00	5.7	5.9																							
										2.25	5.3	6.1																							
										2.50	6.3	5.9																							
										2.75	6.3	6.1																							
	5	2C3	3.60	7.70	10YR66	KS				3.75	5.9	6.1																							
										4.00	6.2	6.3																							
										4.25	6.2	6.4																							
										4.50	6.3	6.6																							
										4.75	6.3	6.4																							
										5.00	6.5	6.3																							
										5.50	6.9	6.3																							
										6.00	6.5	6.3																							
										6.50	6.4	6.5			11	6.20	6.50										< 0.02					6			
										7.00	6.2	6.4																							
										7.50	6.9	6.5																							
	6	2C4	7.70	8.40	2.5Y63	KS				8.00	6.9	6.2																							
															14	8.00	8.30										< 0.02					0			
	7	3C5	8.40	9.50	N40	ZCL			SS	8.50	8.1	4.7																							
															15	8.50	8.70	S9	Pl	0.019	0.166							0.480	0.000	0.000		299	0	0
										8.75	8.7	5.9																							
										9.00	8.6	6.4																							
										9.25	8.5	5.9																							
										9.50	8.6	6.8																							
	8	3C6	9.50	9.60	N40	SLC			SS																										
86	1	A21p	0.00	0.10	10YR43	SCL				0.10	4.8	4.2	a																						
	2	A22	0.10	0.50	10YR44	SL				0.30	4.9	4.4	a																						
	3	B1	0.50	0.90	10YR56	S				0.60	5.2	5.5																							
										0.80	5.0	4.8	a																						
	4	B2	0.90	1.65	10YR58	S				1.00	5.5	6.0																							
										1.25	5.6	5.9																							
										1.50	5.9	6.4																							
	5	C1	1.65	2.30	2.5Y63	S				1.75	6.1	6.4																							
										2.00	6.4	6.4			6	1.80	2.00										< 0.02					6			
										2.25	6.3	6.5																							
	6	2C2	2.30	2.40	10Y51	CS				2.35	6.1	5.8			7	2.30	2.40										< 0.02					6			
	7	3C3	2.40	4.50	10YR56	S				2.50	6.1	6.4																							
										2.75	6.3	6.4																							
										3.00	6.2	5.9			8	2.80	3.00										< 0.02					0			
										3.25	6.1	5.9																							
										3.50	6.6	6.3																							
										3.75	6.2	6.2																							
										4.00	6.3	6.4			10	3.80	4.00										< 0.02					6			
										4.25	6.3	6.3																							
										4.50	6.3	6.3																							
	8	3C4	4.50	7.00	10YR56	KS				4.75	6.2	6.2																							
										5.00	6.2	6.3																							
										5.25	6.3	6.4																							
										5.50	6.5	6.4																							
										5.75	6.6	0.8																							
										6.00	6.7	6.5																							
															15	6.70	7.00										< 0.02					6			
	9	4C5u	7.00	8.40	10YR41	ZLC			SS	7.25	8.9	6.2																							
										7.50	8.8	6.5			16	7.30	7.50	S7	Pc	-0.332	-0.112							0.440	0.000	0.000		274	0	0
										7.75	9.0	7.7																							
										8.00	8.6	6.0																							
										8.25	9.3	6.5																							

Lab Sample			Lab Results																													
			Existing Acidity				SPOCAS																Neutralising Capacity						DTPA Extractable			
No	Upp Depth	Low Depth	$s\text{-}S_{NAS}$	$a\text{-}S_{NAS}$	s-TAA	TAA	pH_{KCl}	pH_{OX}	S_{KCl}	S_P	Ca_{KCl}	Ca_P	Ca_A	$s\text{-}Ca_A$	$a\text{-}Ca_A$	Mg_{KCl}	Mg_P	Mg_A	$s\text{-}Mg_A$	$a\text{-}Mg_A$	$s\text{-}Ca_A\text{+}s\text{-}Mg_A$	$a\text{-}Ca_A\text{+}a\text{-}Mg_A$	ANC_{BT}	$s\text{-}ANC_{BT}$	$a\text{-}ANC_{BT}$	ANC_E	$s\text{-}ANC_E$	$a\text{-}ANC_E$	Fe	Mn	Cu	Zn
	(m)		%S	mol H+/t	%S	mol H+/t			%S		%Ca			%S	mol H+/t	%Mg			%S	mol H+/t	%S	mol H^+/t	$\%CaCO_3$	%S	mol H+/t	$\%CaCO_3$	%S	mol H+/t	mg/kg			
			s-20J	a-20J	s-23F	23F	23A	23B	23Ce	23De	23Vh	23Wh	23Xh	s-23Xh	a-23Xh	23Sm	23Tm	23Um	s-23Um	a-23Um	s-23Xh+s-23Um	a-23Xh+a-23Um	19A2	s-19A2	a-19A2	23Q	s-23Q	a-23Q	12A1-Fe	12A1-Mn	12A1-Cu	12A1-Zn
11	6.20	6.50																														
14	8.00	8.30																														
15	8.50	8.70			0.00	0	8.8	6.9	0.04	0.52	0.24	0.73	0.49	0.392	244	0.07	0.13	0.06	0.079	49	0.471	294	4.02	1.29	803	0.66	0.21	132				
6	1.80	2.00																														
7	2.30	2.40																														
8	2.80	3.00																														
10	3.80	4.00																														
15	6.70	7.00																														
16	7.30	7.50			0.00	0	8.8	6.9	0.04	0.48	0.24	1.11	0.87	0.696	434	0.07	0.17	0.10	0.132	82	0.828	516	5.26	1.69	1051	2.24	0.72	448				

Field Morphology Summary															Lab Sample			Action Criteria		SPOCAS Acid Base Accounting				Chromium Suite Acid Base Accounting				Lab Results							
										Field pH																		Potential Acidity							
Site ID	Hor No	Horizon Name	Upp Depth	Low Depth	Colour	Soil Texture	Jar.	Gyp.	Shell	Depth	pH_F	pH_{FOX}	Action Level (pH_F)	Depth 1st Action Level (pH_F)	No	Upp Depth	Low Depth	Depth 1st Action Level	Action Level Select %S	pH KCl =>6.5 TPA =0	pH KCl =>6.5 TPA >0	<=4.5 pH KCl <6.5 TPA >0		pH KCl =>6.5	<=5.5 pH KCl <6.5	<=4.5 pH KCl <5.5		S_{CR}	S_{POS}	s-TSA	s-TPA	$a\text{-}S_{CR}$	$a\text{-}S_{POS}$	TSA	TPA
			(m)							(m)						(m)				%S				%S				%S				mol H+/t			
											23Af	23Bf								s-ANC_E	s-Ca+s-Mg	s-TSA	s-TAA	s-C_{IN}	s-ANC_{BT}	s-TAA	s-TAA	22B	23Ee	s-23H	s-23G	a-22B	a-23Ee	23H	23G
87	1	A2p	0.00	0.15	2.5Y52	LC				0.10	5.1	3.2			1	0.00	0.10											< 0.02				6			
	2	B2	0.15	1.05	2.5Y52	LC				0.30	6.0	4.0																							
															2	0.30	0.50											< 0.02				6			
										0.60	6.3	5.1																							
										0.80	6.7	5.8																							
										1.00	7.0	5.8			3	0.80	1.00										< 0.02				0			
	3	2B3	1.05	1.40	10Y41	SL				1.25	6.8	2.7			4	1.20	1.40											0.04				25			
	4	3C1	1.40	1.90	5Y51	S				1.50	6.7	3.0																							
										1.75	6.8	2.0			5	1.60	1.80	S2	Ps								0.03				19			
	5	3C2	1.90	5.90	2.5Y62	S				2.00	6.8	5.9																							
															6	2.00	2.20											< 0.02				0			
										2.25	6.3	5.3																							
										2.50	6.1	5.5																							
										2.75	6.0	5.6																							
										3.00	6.0	5.5																							
										3.25	6.2	5.8																							
										4.00	6.7	6.0																							
										4.25	6.8	6.0																							
										4.50	6.7	6.1																							
										4.75	6.8	5.8																							
										5.00	7.0	6.2																							
										5.50	7.1	6.1																							
															13	5.50	5.70											< 0.02				0			
	6	3C3	5.90	6.60	5Y61	S				6.00	7.1	6.2																							
															14	6.10	6.30		Ps									0.05				31			
										6.50	7.5	1.1																							
	7	4C4	6.60	7.20	10Y41	ZLC			SS	6.75	8.1	5.3			15	6.60	6.80		Pc	-0.239	-0.078								0.430	0.000	0.000		268	0	0
										7.00	8.3	5.8																							
										7.20	8.1	6.2																							
88	1	A2p	0.00	0.20	10YR42	CL				0.10	4.5	3.4	a																						
	2	B2	0.20	0.90	10YR53	CLFS				0.30	5.0	3.2	a																						
															2	0.30	0.50											< 0.02				0			
										0.60	5.3	4.0																							
										0.80	5.2	4.3																							
	3	2C1	0.90	1.90	10YR66	KS				1.00	5.1	3.4																							
										1.25	5.1	4.4																							
										1.50	5.4	5.6			4	1.30	1.60										< 0.02				0			
										1.75	5.6	4.8																							
	4	3C2	1.90	2.20	5Y61	KS				2.00	5.7	3.5																							
										2.10	5.8	3.6			5	1.90	2.20										< 0.02				0			
	5	4C3	2.20	5.98	2.5Y63	KS				2.25	5.7	4.4																							
										2.50	5.9	6.1																							
										2.75	5.7	6.1			6	2.60	2.90										< 0.02				0			
										3.00	5.7	6.1																							
										3.25	5.5	5.5																							
										3.50	6.0	6.0																							
										3.75	5.7	5.7																							
										4.00	5.8	5.8																							
										4.25	5.6	5.8																							
										4.50	5.9	5.8																							
										4.75	5.7	5.7																							
										5.00	6.9	5.8																							
										5.25	6.9	6.0																							
										5.50	6.7	6.1																							
										5.75	6.5	6.0			11	5.60	5.90										< 0.02				0			
	6	4C4	5.98	7.15	2.5Y62	KS				6.00	6.9	6.2																							
															12	6.10	6.40	S6	Ps									0.06				37			
										6.50	7.1	5.7																							
										7.00	7.1	6.2			13	6.70	7.00										< 0.02				0			
	7	5C5u	7.15	8.40	10Y41	ZCL			SS	7.25	7.8	5.7																							
										7.50	7.9	6.1			14	7.30	7.50		Pl	-0.180	-0.007								0.460	0.000	0.000		287	0	0
										7.75	7.9	5.6																							
										8.00	8.1	5.7																							
										8.25	8.3	5.7																							
										8.40	8.4	5.6																							

Lab Sample			Lab Results																													
			Existing Acidity				SPOCAS															Neutralising Capacity						DTPA Extractable			
No	Upp Depth	Low Depth	$s\text{-}S_{NAS}$	$a\text{-}S_{NAS}$	s-TAA	TAA	pH_{KCl}	pH_{OX}	S_{KCl}	S_P	Ca_{KCl}	Ca_P	Ca_A	$s\text{-}Ca_A$	$a\text{-}Ca_A$	Mg_{KCl}	Mg_P	Mg_A	$s\text{-}Mg_A$	$a\text{-}Mg_A$	$s\text{-}Ca_A\text{+}s\text{-}Mg_A$	$a\text{-}Ca_A\text{+}a\text{-}Mg_A$	ANC_{BT}	$s\text{-}ANC_{BT}$	$a\text{-}ANC_{BT}$	ANC_E	$s\text{-}ANC_E$	$a\text{-}ANC_E$	Fe	Mn	Cu	Zn
	(m)		%S	mol H+/t	%S	mol H+/t			%S		%Ca			%S	mol H+/t	%Mg			%S	mol H+/t	%S	mol H^+/t	$\%CaCO_3$	%S	mol H+/t	$\%CaCO_3$	%S	mol H+/t	mg/kg			
			s-20J	a-20J	s-23F	23F	23A	23B	23Ce	23De	23Vh	23Wh	23Xh	s-23Xh	a-23Xh	23Sm	23Tm	23Um	s-23Um	a-23Um	s-23Xh+s-23Um	a-23Xh+a-23Um	19A2	s-19A2	a-19A2	23Q	s-23Q	a-23Q	12A1-Fe	12A1-Mn	12A1-Cu	12A1-Zn
1	0.00	0.10																														
2	0.30	0.50																														
3	0.80	1.00																														
4	1.20	1.40																														
5	1.60	1.80																														
6	2.00	2.20																														
13	5.50	5.70																														
14	6.10	6.30																														
15	6.60	6.80			0.00	0	8.9	7.2	0.06	0.49	0.21	1.03	0.82	0.656	409	0.07	0.15	0.08	0.106	66	0.762	475	5	1.60	999	1.79	0.57	358				
2	0.30	0.50																														
4	1.30	1.60																														
5	1.90	2.20																														
6	2.60	2.90																														
11	5.60	5.90																														
12	6.10	6.40																														
13	6.70	7.00																														
14	7.30	7.50			0.00	0	8.9	7.4	0.06	0.52	0.21	0.97	0.76	0.608	379	0.07	0.14	0.07	0.092	58	0.700	437	4.29	1.37	857	1.56	0.50	312				

Field Morphology Summary															Lab Sample			Action Criteria		SPOCAS Acid Base Accounting				Chromium Suite Acid Base Accounting				Lab Results							
										Field pH																		Potential Acidity							
Site ID	Hor No	Horizon Name	Upp Depth	Low Depth	Colour	Soil Texture	Jar.	Gyp.	Shell	Depth	pH_F	pH_{FOX}	Action Level (pH_F)	Depth 1st Action Level (pH_F)	No	Upp Depth	Low Depth	Depth 1st Action Level	Action Level Select %S	pH KCl =>6.5 TPA =0	pH KCl =>6.5 TPA >0	<=4.5 pH KCl <6.5 TPA >0		pH KCl =>6.5	<=5.5 pH KCl <6.5	<=4.5 pH KCl <5.5		S_{CR}	S_{POS}	s-TSA	s-TPA	a-S_{CR}	a-S_{POS}	TSA	TPA
(m)										(m)					(m)					%S				%S				%S				mol H+/t			
											23Af	23Bf								s-ANC_E	s-Ca+s-Mg	s-TSA	s-TAA	s-C_{IN}	s-ANC_{BT}	s-TAA	s-TAA	22B	23Ee	s-23H	s-23G	a-22B	a-23Ee	23H	23G
89	1	A21	0.00	0.15	2.5Y42	SLC				0.10	4.5	2.1	a		1	0.00	0.10											< 0.02				6			
	2	A22	0.15	0.50	2.5Y42	SCL				0.30	5.8	3.1			2	0.30	0.50											< 0.02				0			
	3	B21	0.50	0.75	5Y41	LC				0.60	6.3	4.2			3	0.50	0.70											< 0.02				0			
	4	C1u	0.75	1.15	N40	CS				0.80	6.5	2.7																							
										1.00	6.6	1.1			4	0.90	1.10	S1	Ps									0.62				387			
	5	2C2u	1.15	1.60	5Y51	S				1.25	6.6	5.6																							
										1.50	6.6	1.6			5	1.30	1.50		Ps									0.15				94			
	6	2C3u	1.60	2.30	5Y51	S				1.75	7.0	1.7																							
										2.00	6.6	1.2			6	1.80	2.00											< 0.02				12			
										2.25	6.7	5.4																							
	7	3C4	2.30	3.30	2.5Y63	S				2.50	6.1	6.0			7	2.30	2.50											< 0.02				0			
										2.75	6.3	5.6																							
										3.00	6.4	5.8																							
										3.25	6.4	5.8																							
	8	3C5	3.30	6.00	2.5Y63	KS				3.50	6.6	6.0																							
										3.75	6.1	5.5																							
										4.00	6.2	5.9			10	3.90	4.10											< 0.02				0			
										4.25	6.1	5.9																							
										4.50	6.4	5.9																							
										4.75	6.4	6.0																							
										5.00	6.2	5.9																							
										5.50	6.4	5.9																							
															13	5.60	5.90											< 0.02				0			
										6.00	6.5	6.2																							
	9	4C6u	6.00	6.60	N30	KS				6.25	6.7	0.6																							
										6.50	6.9	0.7			14	6.30	6.60		Ps									0.65				405			
	10	5C7u	6.60	7.20	10Y41	ZCL			SS	6.75	7.0	5.6																							
										7.00	7.7	5.7			15	6.80	7.00		Pl	-0.142	0.021								0.380	0.000	0.000		237	0	0
										7.20	8.1	5.8																							
90	1	A2	0.00	0.25	10YR44	CLFS				0.10	5.1	3.9																							
	2	B21	0.25	0.60	2.5Y44	FSLC				0.30	6.3	4.4																							
															2	0.30	0.50											< 0.02				6			
										0.60	7.0	7.2																							
	3	2B22	0.60	0.95	2.5Y44	LFS				0.80	6.9	7.7			3	0.70	0.90			-0.027	0.005								0.010	0.000	0.000		6	0	0
	4	2C1	0.95	1.40	5Y31	FSCL				1.00	7.1	3.7																							
										1.25	6.8	1.4			4	1.20	1.40	S1	Pl									0.81				505			
	5	2C2	1.40	2.00	5Y31	SLC				1.50	6.9	1.1																							
										1.75	6.9	1.2			5	1.70	1.90		Pc									0.41				256			
										2.00	6.7	1.4																							
	6	3C3	2.00	5.50	5Y52	KS				2.25	6.6	5.5																							
										2.50	6.4	5.7																							
										2.75	6.5	5.1																							
										3.00	6.6	5.6																							
										3.25	6.6	2.3																							
										3.50	6.5	5.0			8	3.30	3.60		Ps									0.03				19			
										3.75	6.5	6.0																							
										4.00	6.5	5.8																							
										4.25	6.4	5.2																							
										4.50	6.6	6.1																							
										4.75	6.4	5.1																							
										5.00	7.1	6.0																							
										5.25	7.6	5.5			11	5.10	5.40		Ps									0.04				25			
										5.50	7.7	1.7																							
	7	4C4	5.50	6.00	10Y41	FSL			SS	5.75	8.2	6.2			12	5.70	5.90		Pl	-0.171	-0.030								0.270	0.000	0.000		168	0	0
										6.00	8.0	5.8																							
91	1	A2p	0.00	0.20	10YR42	SCL				0.10	5.2	3.8			1	0.00	0.10											< 0.02				0			
	2	B2	0.20	0.60	10YR42	LMC				0.30	5.6	4.0																							
															2	0.30	0.50											< 0.02				6			
										0.60	7.1	5.5																							
	3	B3	0.60	0.85	5Y52	CLFS				0.80	6.7	5.3			3	0.60	0.80											< 0.02				0			
	4	2C1	0.85	1.20	N40	LC				1.00	7.1	4.9																							
															4	1.00	1.20	S1	Pc			0.798				0.748		0.73	0.780	0.738	0.755	455	486	460	471
	5	3C2	1.20	1.50	N40	CS				1.25	7.2	1.5																							
										1.50	7.0	1.8			5	1.30	1.50		Ps									0.27				168			
	6	4C3	1.50	2.00	5Y61	KS				1.75	6.8	1.4																							
										2.00	7.0	2.1			6	1.80	2.00		Ps									0.04				25			
	7	4C4	2.00	3.60	2.5Y62	KS				2.25	7.2	3.3																							
										2.50	6.8	5.8			7	2.30	2.60											< 0.02				6			
										2.75	6.9	5.8																							
										3.00	7.1	5.8																							
										3.25	7.0	6.0																							
										3.50	6.9	5.8																							

Lab Sample			Lab Results																												
			Existing Acidity				SPOCAS															Neutralising Capacity						DTPA Extractable			
No	Upp Depth	Low Depth	$s\text{-}S_{NAS}$	$a\text{-}S_{NAS}$	s-TAA	TAA	pH_{KCl}	pH_{OX}	S_{KCl}	S_P	Ca_{KCl}	Ca_P	Ca_A	$s\text{-}Ca_A$	$a\text{-}Ca_A$	Mg_{KCl}	Mg_P	Mg_A	$s\text{-}Mg_A$	$a\text{-}Mg_A$	$s\text{-}Ca_A\text{+}s\text{-}Mg_A$	$a\text{-}Ca_A\text{+}a\text{-}Mg_A$	ANC_{BT}	$s\text{-}ANC_{BT}$	$a\text{-}ANC_{BT}$	ANC_E	$s\text{-}ANC_E$	$a\text{-}ANC_E$	Fe	Mn	Cu	Zn
	(m)		%S	mol H+/t	%S	mol H+/t			%S		%Ca			%S	mol H+/t	%Mg			%S	mol H+/t	%S	mol H^+/t	$\%CaCO_3$	%S	mol H+/t	$\%CaCO_3$	%S	mol H+/t	mg/kg			
			s-20J	a-20J	s-23F	23F	23A	23B	23Ce	23De	23Vh	23Wh	23Xh	s-23Xh	a-23Xh	23Sm	23Tm	23Um	s-23Um	a-23Um	s-23Xh+s-23Um	a-23Xh+a-23Um	19A2	s-19A2	a-19A2	23Q	s-23Q	a-23Q	12A1-Fe	12A1-Mn	12A1-Cu	12A1-Zn
1	0.00	0.10																													
2	0.30	0.50																													
3	0.50	0.70																													
4	0.90	1.10																													
5	1.30	1.50																													
6	1.80	2.00																													
7	2.30	2.50																													
10	3.90	4.10																													
13	5.60	5.90																													
14	6.30	6.60																													
15	6.80	7.00			0.00	0	8.9	7.1	0.07	0.45	0.21	0.80	0.59	0.472	294	0.07	0.12	0.05	0.066	41	0.538	336	3.8	1.22	759	1.26	0.40	252				
2	0.30	0.50																													
3	0.70	0.90			0.00	0	6.5	6.9	0.00	0.01	0.01	0.02	0.01	0.008	5	0.03	0.03	0.00	0.000	0	0.008	5				0.14	0.04	28				
4	1.20	1.40																													
5	1.70	1.90																													
8	3.30	3.60																													
11	5.10	5.40																													
12	5.70	5.90			0.00	0	9.0	6.9	0.07	0.34	0.19	0.67	0.48	0.384	240	0.06	0.11	0.05	0.066	41	0.450	281	4.4	1.41	879	1.22	0.39	244				
1	0.00	0.10																													
2	0.30	0.50																													
3	0.60	0.80																													
4	1.00	1.20			0.02	11	5.3	2.2	0.05	0.83	0.08	0.11	0.03	0.024	15	0.14	0.15	0.01	0.013	8	0.037	23										
5	1.30	1.50																													
6	1.80	2.00																													
7	2.30	2.60																													

Field Morphology Summary															Lab Sample			Action Criteria		SPOCAS Acid Base Accounting				Chromium Suite Acid Base Accounting				Lab Results							
										Field pH																		Potential Acidity							
Site ID	Hor No	Horizon Name	Upp Depth	Low Depth	Colour	Soil Texture	Jar.	Gyp.	Shell	Depth	pH_F	pH_{FOX}	Action Level (pH_F)	Depth 1st Action Level (pH_F)	No	Upp Depth	Low Depth	Depth 1st Action Level	Action Level Select %S	pH KCl =>6.5 TPA =0	pH KCl =>6.5 TPA >0	<=4.5 pH KCl <6.5 TPA >0		pH KCl =>6.5	<=5.5 pH KCl <6.5	<=4.5 pH KCl <5.5		S_{CR}	S_{POS}	s-TSA	s-TPA	$a\text{-}S_{CR}$	$a\text{-}S_{POS}$	TSA	TPA
			(m)							(m)	23Af	23Bf				(m)				%S				%S				%S				mol H+/t			
																				s-ANC_E	s-Ca+s-Mg	s-TSA	s-TAA	s-C_{IN}	s-ANC_{BT}	s-TAA	s-TAA	22B	23Ee	s-23H	s-23G	a-22B	a-23Ee	23H	23G
92	1	A3	0.00	0.35	5Y42	FSLC				0.10	5.9	2.6			1	0.00	0.10											< 0.02				6			
										0.30	6.6	2.2			2	0.20	0.30											0.04				25			
	2	B2	0.35	0.80	10YR41	LMC				0.60	5.9	2.6																							
										0.80	6.2	1.9			3	0.60	0.80											< 0.02				6			
	3	C1u	0.80	1.60	N30	LC				1.00	6.4	1.5																							
										1.25	6.7	1.3			4	1.10	1.30	S1	Pc									2.28				1422			
										1.50	7.0	1.4																							
	4	2C2u	1.60	2.20	10Y51	KS				1.75	6.9	1.7																							
										2.00	6.8	1.5																							
	5	2C3u	2.20	2.40	10YR56	KS				2.25	6.8	1.4																							
93	1	A2	0.00	0.15	2.5Y42	LMC				0.10	4.7	3.7	a																						
	2	B2	0.15	0.90	10Y41	LC				0.30	4.9	4.1	a																						
										0.60	5.2	3.4			2	0.40	0.60											0.03				19			
										0.80	5.2	3.2																							
	3	C1u	0.90	1.70	N30	LC				1.00	5.7	2.4			3	0.90	1.10											< 0.02				12			
										1.25	5.6	2.7																							
										1.50	6.1	1.3																							
															4	1.50	1.70	S1	Pc									2.88				1796			
	4	C2u	1.70	2.30	N30	ZLC				1.75	6.5	1.3																							
										2.00	6.7	1.4																							
															5	2.00	2.20		Pc									1.27				792			
										2.25	6.7	1.3																							
	5	2C3	2.30	3.60	2.5Y63	KS				2.50	6.6	3.3																							
										2.75	6.6	1.5			6	2.50	2.80											< 0.02				12			
										3.00	6.6	5.9																							
										3.25	6.5	5.9																							
										3.50	6.2	6.1																							
94	1	A2p	0.00	0.20	10YR42	SCL				0.10	4.5	2.5	a		1	0.00	0.10											< 0.02				0			
	2	C1	0.20	0.70	10YR42	S				0.30	4.9	4.0	a																						
										0.60	5.3	4.6																							
	3	C2	0.70	7.30	10YR64	S				0.80	5.4	5.0																							
										1.00	6.1	5.9																							
										1.25	6.3	5.6																							
										1.50	6.4	5.8			4	1.30	1.50											< 0.02				6			
										1.75	5.9	5.7																							
										2.00	5.9	5.7																							
										2.25	6.0	5.5																							
										2.50	6.6	5.8																							
										2.75	6.6	5.8																							
										3.00	6.3	5.6			7	2.80	3.00											< 0.02				0			
										3.25	6.4	5.8																							
										3.50	6.3	5.6																							
										3.75	6.2	5.7																							
										4.00	6.2	5.7																							
										4.25	6.1	5.6																							
										4.50	6.1	5.6																							
										4.75	6.2	5.4																							
										5.00	6.5	5.7			11	4.80	5.00											< 0.02				0			
										5.25	6.8	5.7																							
										5.50	6.6	5.7																							
										5.75	6.5	6.0																							
										6.00	6.3	5.7																							
										6.50	6.9	5.6																							
										7.00	6.5	5.8			15	6.80	7.00											< 0.02				0			
										7.25	8.7	5.9																							
	4	2C3	7.30	8.15	10Y41	ZCL			SS	7.50	8.5	6.2			16	7.30	7.50	S8	Pl	-0.085	0.083								0.450	0.000	0.000		281	0	0
										7.75	8.8	5.9																							
										8.00	8.8	5.9																							
	5	3C4	8.15	8.40	2.5Y63	CS				8.25	8.1	6.5																							
										8.40	7.9	6.4			18	8.20	8.40				0.001								0.010	0.000	0.000		6	0	0

Lab Sample			Lab Results																												
			Existing Acidity				SPOCAS															Neutralising Capacity						DTPA Extractable			
No	Upp Depth	Low Depth	$s\text{-}S_{NAS}$	$a\text{-}S_{NAS}$	s-TAA	TAA	pH_{KCl}	pH_{OX}	S_{KCl}	S_P	Ca_{KCl}	Ca_P	Ca_A	$s\text{-}Ca_A$	$a\text{-}Ca_A$	Mg_{KCl}	Mg_P	Mg_A	$s\text{-}Mg_A$	$a\text{-}Mg_A$	$s\text{-}Ca_A\text{+}s\text{-}Mg_A$	$a\text{-}Ca_A\text{+}a\text{-}Mg_A$	ANC_{BT}	$s\text{-}ANC_{BT}$	$a\text{-}ANC_{BT}$	ANC_E	$s\text{-}ANC_E$	$a\text{-}ANC_E$	Fe	Mn	Cu	Zn
(m)			%S	mol H+/t	%S	mol H+/t			%S		%Ca			%S	mol H+/t	%Mg			%S	mol H+/t	%S	mol H^+/t	$\%CaCO_3$	%S	mol H+/t	$\%CaCO_3$	%S	mol H+/t	mg/kg			
			s-20J	a-20J	s-23F	23F	23A	23B	23Ce	23De	23Vh	23Wh	23Xh	s-23Xh	a-23Xh	23Sm	23Tm	23Um	s-23Um	a-23Um	s-23Xh+s-23Um	a-23Xh+a-23Um	19A2	s-19A2	a-19A2	23Q	s-23Q	a-23Q	12A1-Fe	12A1-Mn	12A1-Cu	12A1-Zn
1	0.00	0.10																													
2	0.20	0.30																													
3	0.60	0.80																													
4	1.10	1.30																													
2	0.40	0.60																													
3	0.90	1.10																													
4	1.50	1.70																													
5	2.00	2.20																													
6	2.50	2.80																													
1	0.00	0.10																													
4	1.30	1.50																													
7	2.80	3.00																													
11	4.80	5.00																													
15	6.80	7.00																													
16	7.30	7.50			0.00	0	8.8	7.2	0.05	0.50	0.24	0.83	0.59	0.472	294	0.07	0.13	0.06	0.079	49	0.551	344	3.96	1.27	791	1.10	0.35	220				
18	8.20	8.40			0.00	0	7.3	6.1	0.01	0.02	0.02	0.02	0.00	0.000	0	0.02	0.03	0.01	0.013	8	0.013	8										

Field Morphology Summary																Lab Sample			Action Criteria		SPOCAS Acid Base Accounting				Chromium Suite Acid Base Accounting				Lab Results							
										Field pH																			Potential Acidity							
Site ID	Hor No	Horizon Name	Upp Depth	Low Depth	Colour	Soil Texture	Jar.	Gyp.	Shell	Depth	pH_F	pH_{FOX}	Action Level (pH_F)	Depth 1st Action Level (pH_F)	No	Upp Depth	Low Depth	Depth 1st Action Level	Action Level Select %S	pH KCl =>6.5 TPA =0	pH KCl =>6.5 TPA >0	<=4.5 pH KCl <6.5 TPA >0		pH KCl =>6.5	<=5.5 pH KCl <6.5	<=4.5 pH KCl <5.5		S_{CR}	S_{POS}	s-TSA	s-TPA	a-S_{CR}	a-S_{POS}	TSA	TPA
(m)										(m)						(m)				%S				%S				%S				mol H+/t			
											23Af	23Bf								s-ANC_E	s-Ca+s-Mg	s-TSA	s-TAA	s-C_{IN}	s-ANC_{BT}	s-TAA	s-TAA	22B	23Ee	s-23H	s-23G	a-22B	a-23Ee	23H	23G
95	1	A3	0.00	0.15	10YR42	CL				0.10	5.1	3.3																								
	2	B2	0.15	0.60	2.5Y51	LMC				0.30	6.7	6.9																								
															2	0.30	0.50											< 0.02				0			
										0.60	6.5	5.1																								
	3	2B31	0.60	0.85	2.5Y53	LS				0.80	6.3	5.4			3	0.60	0.80											< 0.02				0			
	4	2B32	0.85	1.10	7.5YR56	S				1.00	6.3	4.9			4	0.90	1.10											< 0.02				0			
	5	2C1	1.10	2.40	2.5Y52	S				1.25	6.2	3.1																								
										1.50	6.4	3.1			5	1.40	1.60											< 0.02				0			
										1.75	6.4	3.4																								
										2.00	6.4	3.7			6	1.90	2.10											< 0.02				0			
										2.25	6.4	4.1																								
	6	2C2	2.40	4.80	10YR56	S				2.50	6.2	4.5																								
										2.75	6.1	4.8																								
										3.00	5.8	4.7																								
										3.25	5.8	4.9																								
										3.50	6.1	5.1			9	3.30	3.50											< 0.02				0			
										3.75	6.3	5.2																								
										4.00	6.4	5.2																								
										4.25	6.4	5.3																								
										4.50	6.4	5.4																								
										4.75	5.9	5.4																								
96	1	A2	0.00	0.15	10YR21	SCL				0.10	5.9	1.9			1	0.00	0.10											< 0.02				6			
	2	2A21	0.15	0.30	5Y41	CLS				0.30	6.5	3.9			2	0.15	0.30											< 0.02				6			
	3	2A22	0.30	0.60	10Y41	FSL				0.60	6.7	2.8			3	0.40	0.60											< 0.02				6			
	4	3C1u	0.60	1.00	N40	LC				0.80	6.6	2.3																								
										1.00	6.6	1.7			4	0.80	1.00	S1	Pc									0.36				225			
	5	4C2	1.00	2.40	5Y42	S				1.25	6.6	3.6																								
										1.50	6.6	3.5			5	1.30	1.50											< 0.02				0			
										1.75	6.5	3.5																								
										2.00	6.5	3.3																								
										2.25	6.5	4.7																								
	6	4C3u	2.40	4.80	N50	KS				2.50	6.4	1.5			7	2.40	2.60		Ps									0.05				31			
										2.75	6.4	2.4																								
										3.00	6.4	2.2																								
										3.25	6.5	1.5																								
										3.50	6.3	1.2			9	3.40	3.60		Ps									0.06				37			
										3.75	6.3	2.8																								
										4.00	6.4	3.2																								
										4.25	6.2	2.7																								
										4.50	6.3	2.8			11	4.40	4.60											< 0.02				6			
										4.75	6.2	4.6																								
97	1	A2	0.00	0.40	10YR42	CL				0.10	5.2	4.1																								
										0.30	5.4	3.9																								
	2	A3	0.40	0.75	10YR46	S				0.60	6.0	5.2																								
	3	C1	0.75	1.10	10YR58	S				0.80	6.2	5.4																								
										1.00	6.3	5.3			4	0.90	1.10											< 0.02				0			
	4	C2	1.10	1.50	10YR56	FS				1.25	6.1	5.5																								
										1.50	6.3	5.2																								
	5	2C3	1.50	4.80	10YR64	KS				1.75	6.6	5.5																								
										2.00	6.4	5.6																								
										2.25	6.5	5.6																								
										2.50	6.6	5.6			7	2.40	2.70											< 0.02				0			
										2.75	6.6	5.7																								
										3.00	6.6	5.8																								
										3.25	6.6	5.8																								
										3.50	6.6	5.8																								
										3.75	6.7	5.7																								
										4.00	6.6	5.7																								
										4.25	6.6	5.7																								
										4.50	6.4	5.7			10	4.20	4.50											< 0.02				0			
										4.75	6.4	5.6																								
	6	3C4u	4.80	5.15	N50	S				5.00	6.8	1.3			11	4.80	5.00	S5	Ps									0.28				175			

Lab Sample			Lab Results																												
			Existing Acidity				SPOCAS																Neutralising Capacity						DTPA Extractable			
No	Upp Depth	Low Depth	$s\text{-}S_{NAS}$	$a\text{-}S_{NAS}$	s-TAA	TAA	pH_{KCl}	pH_{OX}	S_{KCl}	S_P	Ca_{KCl}	Ca_P	Ca_A	$s\text{-}Ca_A$	$a\text{-}Ca_A$	Mg_{KCl}	Mg_P	Mg_A	$s\text{-}Mg_A$	$a\text{-}Mg_A$	$s\text{-}Ca_A\text{+}s\text{-}Mg_A$	$a\text{-}Ca_A\text{+}a\text{-}Mg_A$	ANC_{BT}	$s\text{-}ANC_{BT}$	$a\text{-}ANC_{BT}$	ANC_E	$s\text{-}ANC_E$	$a\text{-}ANC_E$	Fe	Mn	Cu	Zn
	(m)		%S	mol H+/t	%S	mol H+/t			%S		%Ca			%S	mol H+/t	%Mg			%S	mol H+/t	%S	mol H^+/t	$\%CaCO_3$	%S	mol H+/t	$\%CaCO_3$	%S	mol H+/t	mg/kg			
			s-20J	a-20J	s-23F	23F	23A	23B	23Ce	23De	23Vh	23Wh	23Xh	s-23Xh	a-23Xh	23Sm	23Tm	23Um	s-23Um	a-23Um	s-23Xh+s-23Um	a-23Xh+a-23Um	19A2	s-19A2	a-19A2	23Q	s-23Q	a-23Q	12A1-Fe	12A1-Mn	12A1-Cu	12A1-Zn
2	0.30	0.50																													
3	0.60	0.80																											28.20	2.10	0.2	0.10
4	0.90	1.10																											91.90	8.70	0.2	0.30
5	1.40	1.60																											76.20	5.30	0.4	0.30
6	1.90	2.10																											31.70	3.00	0.2	0.20
9	3.30	3.50																											19.40	1.40	< 0.1	0.40
1	0.00	0.10																													
2	0.15	0.30																													
3	0.40	0.60																													
4	0.80	1.00																											380.10	8.60	0.6	1.60
5	1.30	1.50																											27.90	2.40	0.2	0.40
7	2.40	2.60																											30.60	1.30	0.1	1.10
9	3.40	3.60																											40.60	1.30	0.1	0.90
11	4.40	4.60																											23.20	1.00	0.1	0.60
4	0.90	1.10																													
7	2.40	2.70																													
10	4.20	4.50																													
11	4.80	5.00																													

Field Morphology Summary															Lab Sample			Action Criteria		SPOCAS Acid Base Accounting				Chromium Suite Acid Base Accounting				Lab Results							
										Field pH																		Potential Acidity							
Site ID	Hor No	Horizon Name	Upp Depth	Low Depth	Colour	Soil Texture	Jar.	Gyp.	Shell	Depth	pH_F	pH_{FOX}	Action Level (pH_F)	Depth 1st Action Level (pH_F)	No	Upp Depth	Low Depth	Depth 1st Action Level	Action Level Select %S	pH KCl =>6.5 TPA =0	pH KCl =>6.5 TPA >0	<=4.5 pH KCl <6.5 TPA >0		pH KCl =>6.5	<=5.5 pH KCl <6.5	<=4.5 pH KCl <5.5		S_{CR}	S_{POS}	s-TSA	s-TPA	a-S_{CR}	a-S_{POS}	TSA	TPA
(m)										(m)	23Af	23Bf			(m)					%S				%S				%S				mol H+/t			
																				s-ANC_E	s-Ca+s-Mg	s-TSA	s-TAA	s-C_{IN}	s-ANC_{BT}	s-TAA	s-TAA	22B	23Ee	s-23H	s-23G	a-22B	a-23Ee	23H	23G
98	1	A2p	0.00	0.10	2.5Y42	CL				0.10	5.3	4.0			1	0.00	0.10											< 0.02				0			
	2	B2	0.10	0.30	2.5Y42	FSCL				0.30	6.6	5.2			2	0.20	0.30											< 0.02				6			
	3	B3	0.30	1.20	10YR54	S				0.60	6.3	5.0			3	0.50	0.60											< 0.02				0			
										0.80	6.4	5.5																							
										1.00	6.9	5.5			4	0.80	1.00											< 0.02				0			
	4	C1	1.20	6.00	2.5Y64	S				1.25	6.6	5.1																							
										1.50	6.4	4.6																							
										1.75	6.4	4.9																							
										2.00	6.3	4.7			6	1.80	2.00											< 0.02				0			
										2.25	6.2	4.3																							
										2.50	6.2	2.8			7	2.30	2.50											< 0.02				6			
										2.75	6.2	3.1																							
										3.00	6.2	2.7			8	2.80	3.00											< 0.02				6			
										3.25	6.4	2.8																							
										3.50	6.4	2.7																							
										3.75	6.5	4.2																							
										4.00	6.5	4.8																							
										4.25	6.7	4.9																							
										4.50	6.6	5.2																							
										4.75	6.7	5.2																							
										5.00	6.5	3.5																							
										5.50	6.5	5.6																							
										6.00	6.6	5.6			14	5.80	6.00											< 0.02				0			
99	1	A2p	0.00	0.40	10YR43	ZCL				0.10	4.6	2.5	a																						
										0.30	5.0	2.4	a		2	0.20	0.40											< 0.02				0			
	2	B1	0.40	0.90	2.5Y43	FSCL				0.60	5.4	4.3																							
										0.80	5.7	4.2			3	0.70	0.90											< 0.02				0			
	3	B21	0.90	1.45	5Y41	MC				1.00	5.4	3.1																							
										1.25	5.3	3.3			4	1.20	1.40											< 0.02				6			
	4	B22u	1.45	1.65	5Y41	MC				1.50	4.6	4.6	a																						
															5	1.50	1.65												0.040	0.000	0.074		25	0	46
	5	B23u	1.65	2.10	10Y31	LC				1.75	5.3	1.4																							
										2.00	5.7	1.3			6	1.90	2.10	S2	Pc									1.62				1010			
	6	2C1u	2.10	2.70	N40	S				2.25	6.0	1.1																							
										2.50	5.9	1.2			7	2.30	2.50		Ps									0.37				231			
	7	3C2u	2.70	3.60	5Y52	S				2.75	5.9	1.2																							
										3.00	5.9	1.1																							
										3.25	5.9	1.1																							
										3.50	6.0	1.7			9	3.30	3.50		Ps									0.07				44			
	8	4C3	3.60	4.80	2.5Y64	KS				3.75	6.0	5.0																							
										4.00	6.1	5.2			10	3.80	4.10											< 0.02				0			
										4.25	6.0	5.3																							
										4.50	6.3	5.5																							
										4.75	6.3	5.3																							
100	1	A2p	0.00	0.20	10YR42	CL				0.10	4.9	4.1	a																						
	2	B21	0.20	0.50	10YR44	FSCL				0.30	5.6	4.2																							
	3	B22	0.50	0.95	2.5YR43	S				0.60	5.9	5.2																							
										0.80	6.2	5.6			3	0.70	0.90																		
	4	B3	0.95	1.70	7.5YR44	S				1.00	6.3	5.7																							
										1.25	6.4	6.6			4	1.10	1.30											< 0.02				0			
										1.50	6.3	5.5																							
	5	C1	1.70	1.90	5Y52	S				1.75	6.6	5.4																							
										1.85	6.4	4.6			5	1.70	1.90											< 0.02				0			
	6	C2	1.90	2.25	2.5Y54	S				2.00	6.4	5.1																							
															6	2.00	2.20											< 0.02				0			
										2.25	6.4	5.2																							
	7	2C3	2.25	3.60	2.5Y62	KS				2.50	6.3	5.6																							
										2.75	6.4	5.7																							
										3.00	6.4	5.7																							
										3.25	6.6	5.6			8	3.10	3.40											< 0.02				0			
										3.50	6.5	5.7																							
	8	2C4	3.60	5.20	N40	KS			SS	3.75	7.1	6.1																							
										4.00	7.4	5.9			9	3.70	4.00											< 0.02				0			
										4.25	7.4	5.9																							
										4.50	7.5	6.0			10	4.30	4.60											0.02				12			
										4.75	7.5	3.9																							
										5.00	7.2	5.9			11	4.90	5.20											< 0.02				12			
	9	3C5	5.20	6.00	N30	FSCL			SS	5.25	7.4	6.3																							
										5.50	8.2	6.4			12	5.30	5.50	S6	Pl	0.010	0.122								0.260	0.000	0.000		162	0	0
										5.75	8.1	5.9																							
										6.00	8.1	6.5																							

Lab Sample			Lab Results																													
			Existing Acidity				SPOCAS																Neutralising Capacity						DTPA Extractable			
No	Upp Depth	Low Depth	$s\text{-}S_{NAS}$	$a\text{-}S_{NAS}$	s-TAA	TAA	pH_{KCl}	pH_{OX}	S_{KCl}	S_P	Ca_{KCl}	Ca_P	Ca_A	$s\text{-}Ca_A$	$a\text{-}Ca_A$	Mg_{KCl}	Mg_P	Mg_A	$s\text{-}Mg_A$	$a\text{-}Mg_A$	$s\text{-}Ca_A\text{+}s\text{-}Mg_A$	$a\text{-}Ca_A\text{+}a\text{-}Mg_A$	ANC_{BT}	$s\text{-}ANC_{BT}$	$a\text{-}ANC_{BT}$	ANC_E	$s\text{-}ANC_E$	$a\text{-}ANC_E$	Fe	Mn	Cu	Zn
	(m)		%S	mol H+/t	%S	mol H+/t			%S		%Ca			%S	mol H+/t	%Mg			%S	mol H+/t	%S	mol H^+/t	$\%CaCO_3$	%S	mol H+/t	$\%CaCO_3$	%S	mol H+/t	mg/kg			
			s-20J	a-20J	s-23F	23F	23A	23B	23Ce	23De	23Vh	23Wh	23Xh	s-23Xh	a-23Xh	23Sm	23Tm	23Um	s-23Um	a-23Um	s-23Xh+s-23Um	a-23Xh+a-23Um	19A2	s-19A2	a-19A2	23Q	s-23Q	a-23Q	12A1-Fe	12A1-Mn	12A1-Cu	12A1-Zn
1	0.00	0.10																														
2	0.20	0.30																														
3	0.50	0.60																														
4	0.80	1.00																														
6	1.80	2.00																														
7	2.30	2.50																														
8	2.80	3.00																														
14	5.80	6.00																														
2	0.20	0.40																														
3	0.70	0.90																														
4	1.20	1.40																														
5	1.50	1.65			0.14	86	3.8	4.3	0.01	0.05	0.04	0.05	0.01	0.008	5	0.05	0.05	0.00	0.000	0	0.008	5										
6	1.90	2.10																														
7	2.30	2.50																														
9	3.30	3.50																														
10	3.80	4.10																														
3	0.70	0.90																											24.60	4.70	0.3	0.50
4	1.10	1.30																											25.90	23.00	0.3	0.20
5	1.70	1.90																											13.40	2.30	0.2	0.30
6	2.00	2.20																											15.90	0.90	0.1	0.10
8	3.10	3.40																														
9	3.70	4.00																											23.00	1.20	0.2	0.30
10	4.30	4.60																														
11	4.90	5.20																														
12	5.30	5.50			0.00	0	8.9	7.1	0.06	0.32	0.19	0.40	0.21	0.168	105	0.06	0.09	0.03	0.040	25	0.208	129	3.24	1.04	647	0.36	0.12	72	66.30	21.60	0.4	0.70

Field Morphology Summary															Lab Sample			Action Criteria		SPOCAS Acid Base Accounting				Chromium Suite Acid Base Accounting				Lab Results							
										Field pH																		Potential Acidity							
Site ID	Hor No	Horizon Name	Upp Depth	Low Depth	Colour	Soil Texture	Jar.	Gyp.	Shell	Depth	pH_F	pH_{FOX}	Action Level (pH_F)	Depth 1st Action Level (pH_F)	No	Upp Depth	Low Depth	Depth 1st Action Level	Action Level Select %S	pH KCl =>6.5 TPA =0	pH KCl =>6.5 TPA >0	<=4.5 pH KCl <6.5 TPA >0		pH KCl =>6.5	<=5.5 pH KCl <6.5	<=4.5 pH KCl <5.5		S_{CR}	S_{POS}	s-TSA	s-TPA	a-S_{CR}	a-S_{POS}	TSA	TPA
(m)										(m)						(m)				%S				%S				%S				mol H+/t			
											23Af	23Bf								s-ANC_E	s-Ca+s-Mg	s-TSA	s-TAA	s-C_{IN}	s-ANC_{BT}	s-TAA	s-TAA	22B	23Ee	23H	23G	a-22B	a-23Ee	23H	23G
101	1	A1	0.00	0.10	10YR42	CL				0.10	6.7	6.0																							
	2	B2	0.10	0.55	10YR53	CLFS				0.30	6.9	5.2			2	0.30	0.50											< 0.02				0			
	3	C1	0.55	1.70	10YR54	S				0.60	6.9	5.2																							
										0.80	7.0	5.7																							
										1.00	6.6	5.4			3	0.80	1.00											< 0.02				0			
										1.25	6.5	5.4																							
										1.50	6.0	5.4																							
	4	C2	1.70	4.90	5Y51	KS				1.75	6.3	5.3																							
										2.00	6.1	5.3			5	1.80	2.10											< 0.02				0			
										2.25	6.6	5.0																							
										2.50	6.6	5.2																							
										2.75	6.4	5.0																							
										3.00	6.4	5.2																							
										3.25	6.3	5.1			7	3.00	3.30											< 0.02				0			
										3.50	6.4	5.2																							
										3.75	6.4	5.3																							
										4.00	6.5	5.3																							
										4.25	6.6	5.5																							
										4.50	6.7	5.4																							
										4.75	6.6	5.3			10	4.70	4.90	S2	Ps									0.06				37			
	5	2C3u	4.90	6.00	10Y41	FS				5.00	6.8	1.1																							
										5.25	6.8	2.5																							
										5.50	6.8	1.2			11	5.30	5.50		Ps			0.361							0.350	0.260	0.271		218	162	169
										5.75	7.1	3.4																							
										6.00	7.3	1.5																							
102	1	A1	0.00	0.10	2.5Y41	CLS				0.10	5.6	3.5			1	0.00	0.10											< 0.02				6			
	2	B21	0.10	0.30	5Y41	SLMC				0.30	6.2	4.9			2	0.20	0.30											< 0.02				6			
	3	B22	0.30	0.60	10Y41	SLMC				0.60	6.8	5.8			3	0.40	0.60											< 0.02				0			
	4	2C1	0.60	0.90	10Y31	SLC				0.80	6.8	1.6			4	0.70	0.90	S1	Pc									0.26				162			
	5	2C2u	0.90	1.35	10YR31	LS				1.00	6.5	1.3																							
										1.25	6.6	1.4			5	1.10	1.30		Ps									0.26				162			
	6	2C3u	1.35	1.75	10YR41	FSL				1.50	6.2	1.4																							
															6	1.50	1.70		Pl									0.24				150			
										1.75	6.4	1.0																							
	7	3C	1.75	2.40	5YR51	S				2.00	6.9	2.0																							
															7	2.00	2.20		Ps									0.04				25			
										2.25	6.8	3.4																							
	8	4C	2.40	3.60	5Y52	S				2.50	6.9	4.4																							
										2.75	6.9	4.0																							
										3.00	7.0	5.1																							
										3.25	6.9	4.8			9	3.00	3.30											0.02				12			
										3.50	6.7	5.0																							
103	1	A1	0.00	0.40	2.5Y42	LMC				0.10	5.2	3.6			1	0.00	0.10											< 0.02				12			
										0.30	5.0	3.4	a		2	0.20	0.40											< 0.02				6			
	2	B21	0.40	0.80	2.5Y61	CL				0.60	4.5	3.4	a																						
										0.80	4.4	3.0	a		3	0.60	0.80												0.020	0.000	0.061		12	0	38
	3	B22	0.80	1.15	10Y51	ZLC	J			1.00	4.3	2.4	a		4	0.90	1.10												0.020	0.000	0.059		12	0	37
	4	2B23u	1.15	2.00	N40	LC				1.25	4.1	2.7	a																						
										1.50	4.7	1.4	a		5	1.30	1.50	S2	Pc										0.230	0.170	0.297		143	106	185
										1.75	5.1	1.5																							
										2.00	6.0	1.6			6	1.80	2.00		Pc									1.3				811			
	5	2C1	2.00	4.30	10Y51	S				2.25	6.2	1.5			7	2.20	2.40		Ps									0.28				175			
										2.50	6.1	3.5																							
										2.75	6.3	3.8																							
										3.00	6.3	2.1			8	2.70	3.00		Ps									0.13				81			
										3.25	6.2	4.2																							
										3.50	6.2	4.6																							
										3.75	6.6	5.3																							
										4.00	6.5	5.2																							
										4.25	6.6	5.3																							
	6	3C2	4.30	4.80	10Y51	KS			SS	4.50	6.5	5.4			11	4.40	4.70		Ps									0.05				31			
										4.75	6.9	4.5																							
	7	3C3	4.80	5.10	10Y41	CKS			SS	5.00	6.9	5.6																							
	8	3C4	5.10	6.00	10Y41	FSCL			SS	5.25	7.2	5.8																							
										5.50	7.8	5.8																							
										5.75	8.0	5.9																							
										6.00	7.5	6.3			14	5.80	6.00		Pl	-0.145	0.031								0.430	0.000	0.000		268	0	0

Lab Sample			Lab Results																													
			Existing Acidity				SPOCAS																Neutralising Capacity						DTPA Extractable			
No	Upp Depth	Low Depth	$s\text{-}S_{NAS}$	$a\text{-}S_{NAS}$	s-TAA	TAA	pH_{KCl}	pH_{OX}	S_{KCl}	S_P	Ca_{KCl}	Ca_P	Ca_A	$s\text{-}Ca_A$	$a\text{-}Ca_A$	Mg_{KCl}	Mg_P	Mg_A	$s\text{-}Mg_A$	$a\text{-}Mg_A$	$s\text{-}Ca_A\text{+}s\text{-}Mg_A$	$a\text{-}Ca_A\text{+}a\text{-}Mg_A$	ANC_{BT}	$s\text{-}ANC_{BT}$	$a\text{-}ANC_{BT}$	ANC_E	$s\text{-}ANC_E$	$a\text{-}ANC_E$	Fe	Mn	Cu	Zn
	(m)		%S	mol H+/t	%S	mol H+/t			%S		%Ca			%S	mol H+/t	%Mg			%S	mol H+/t	%S	mol H^+/t	$\%CaCO_3$	%S	mol H+/t	$\%CaCO_3$	%S	mol H+/t	mg/kg			
			s-20J	a-20J	s-23F	23F	23A	23B	23Ce	23De	23Vh	23Wh	23Xh	s-23Xh	a-23Xh	23Sm	23Tm	23Um	s-23Um	a-23Um	s-23Xh+s-23Um	a-23Xh+a-23Um	19A2	s-19A2	a-19A2	23Q	s-23Q	a-23Q	12A1-Fe	12A1-Mn	12A1-Cu	12A1-Zn
2	0.30	0.50																														
3	0.80	1.00																														
5	1.80	2.10																														
7	3.00	3.30																														
10	4.70	4.90																														
11	5.30	5.50			0.01	7	4.7	2.6	0.07	0.42	0.03	0.04	0.01	0.008	5	0.06	0.06	0.00	0.000	0	0.008	5	< 0.5	0.02	14							
1	0.00	0.10																														
2	0.20	0.30																														
3	0.40	0.60																														
4	0.70	0.90																														
5	1.10	1.30																														
6	1.50	1.70																														
7	2.00	2.20																														
9	3.00	3.30																														
1	0.00	0.10																														
2	0.20	0.40																														
3	0.60	0.80			0.08	53	3.8	4.2	0.04	0.06	0.03	0.03	0.00	0.000	0	0.05	0.06	0.01	0.013	8	0.013	8										
4	0.90	1.10	0.203	126	0.09	56	3.8	4.1	0.03	0.05	0.03	0.03	0.00	0.000	0	0.06	0.06	0.00	0.000	0	0.000	0										
5	1.30	1.50			0.13	79	3.7	2.8	0.03	0.26	0.03	0.03	0.00	0.000	0	0.06	0.06	0.00	0.000	0	0.000	0										
6	1.80	2.00																											431.00	11.50	1	6.30
7	2.20	2.40																														
8	2.70	3.00																											28.70	3.10	0.3	0.50
11	4.40	4.70																											32.30	4.90	0.4	0.60
14	5.80	6.00			0.00	0	8.8	6.9	0.06	0.49	0.23	0.88	0.65	0.520	324	0.08	0.14	0.06	0.079	49	0.599	374	4.53	1.45	905	1.35	0.43	270	74.50	39.00	0.6	0.60

Field Morphology Summary															Lab Sample			Action Criteria		SPOCAS Acid Base Accounting				Chromium Suite Acid Base Accounting				Lab Results							
										Field pH																		Potential Acidity							
Site ID	Hor No	Horizon Name	Upp Depth	Low Depth	Colour	Soil Texture	Jar.	Gyp.	Shell	Depth	pH_F	pH_{FOX}	Action Level (pH_F)	Depth 1st Action Level (pH_F)	No	Upp Depth	Low Depth	Depth 1st Action Level	Action Level Select %S	pH KCl =>6.5 TPA =0	pH KCl =>6.5 TPA >0	<=4.5 pH KCl <6.5 TPA >0		pH KCl =>6.5	<=5.5 pH KCl <6.5	<=4.5 pH KCl <5.5		S_{CR}	S_{POS}	s-TSA	s-TPA	$a\text{-}S_{CR}$	$a\text{-}S_{POS}$	TSA	TPA
(m)										(m)	23Af	23Bf				(m)				%S				%S				%S				mol H+/t			
																				s-ANC_E	s-Ca+s-Mg	s-TSA	s-TAA	s-C_{IN}	s-ANC_{BT}	s-TAA	s-TAA	22B	23Ee	s-23H	s-23G	a-22B	a-23Ee	23H	23G
104	1	A1	0.00	0.10	10YR41	CL				0.10	5.0	2.2	a		1	0.00	0.10											< 0.02				0			
	2	B22	0.10	0.30	10YR41	LC				0.30	5.8	3.7																							
	3	B22	0.30	0.85	10YR58	MC				0.60	6.0	4.0																							
										0.80	6.2	4.3			3	0.60	0.80										< 0.02				0			
	4	B3	0.85	1.15	N40	MC				1.00	6.1	4.5			4	0.90	1.10											< 0.02				6			
	5	2C1u	1.15	1.90	N60	S				1.25	6.1	3.4																							
										1.50	6.4	1.5			5	1.40	1.60	S2	Ps								0.07				44			
										1.75	6.5	1.3																							
	6	2C2u	1.90	2.70	N40	CS				2.00	6.6	1.5			6	1.90	2.10		Ps								0.43				268			
										2.25	6.3	1.6																							
										2.50	6.5	1.3																							
	7	2C3u	2.70	4.10	N30	LS				2.75	6.4	1.3																							
										3.00	6.5	3.6			8	2.80	3.00		Ps								0.06				37			
										3.25	6.4	1.4																							
										3.50	6.5	1.2																							
										3.75	6.3	1.4																							
										4.00	6.5	1.3			10	3.80	4.00		Ps								0.24				150			
	8	3C4	4.10	6.00	N40	FSL			SS	4.25	6.9	5.9																							
										4.50	7.2	3.0			11	4.30	4.50		Pl	0.057	0.169								0.370	0.000	0.000		231	0	0
										4.75	7.4	5.8																							
										5.00	7.4																								
										5.25	7.6	5.6																							
										5.50	7.7	5.7																							
										5.75	7.7	5.9																							
										6.00	7.9	5.6																							
105	1	A1	0.00	0.30	10YR43	FSCL				0.10	4.4	2.4	a																						
										0.30	4.5	2.5	a																						
	2	A2	0.30	0.95	10YR54	FSC				0.60	5.1	3.7																							
										0.80	5.3	3.8																							
	3	B21	0.95	1.25	2.5Y54	CLFS				1.00	5.4	3.8																							
										1.25	5.3	3.8																							
	4	B22	1.25	1.60	2.5Y54	CL				1.50	5.1	3.2			5	1.40	1.60											< 0.02				0			
	5	B3	1.60	2.10	5Y51	FSCL				1.75	5.1	3.4																							
										2.00	5.7	2.7			6	1.90	2.10										< 0.02				6			
	6	2C1u	2.10	2.70	5Y51	LS				2.25	5.9	2.7																							
										2.50	6.0	1.4			7	2.30	2.50	S3	Ps								0.22				137			
	7	2C2u	2.70	4.70	5Y51	LKS				2.75	6.1	1.5																							
										3.00	6.1	1.4			8	2.80	3.10		Ps								0.21				131			
										3.25	6.4	1.5																							
										3.50	6.4	1.4																							
										3.75	6.3	4.0																							
										4.00	6.3	4.1			10	3.90	4.10		Ps								0.05				31			
										4.25	6.6	3.3																							
										4.50	6.9	3.8																							
	8	3C3u	4.70	5.40	N40	SL			SS	4.75	7.2	1.8																							
										5.00	7.1	3.7																							
															12	5.00	5.20		Pl								0.33				206			
										5.25	7.2	5.3																							
	9	4C4	5.40	6.00	N40	SCL			SS	5.50	7.7	5.9																							
															13	5.50	5.70		Pl	0.021	0.139								0.340	0.000	0.000		212	0	0
										5.75	8.0	5.9																							
										6.00	8.1	6.1																							
106	1	A1	0.00	0.20	2.5Y41	CL				0.10	5.9	3.6			1	0.00	0.10											< 0.02				6			
	2	B2	0.20	0.45	5Y41	LMC				0.30	6.0	4.4			2	0.20	0.40											< 0.02				0			
	3	2C1u	0.45	1.45	N30	LC				0.60	6.4	1.2																							
										0.80	6.8	1.2			3	0.70	0.90	S0	Pc								2.22				1385			
										1.00	6.9	1.2																							
										1.25	6.9	1.7			4	1.20	1.40		Pc								1.45				904			
										1.45	7.6	1.4																							
	4	2C2u	1.45	2.15	10Y51	FSL				1.75	6.9	1.2			5	1.70	1.90		Pl								0.38				237			
										2.00	7.3	1.2																							
	5	3C3u	2.15	3.30	N50	LS				2.25	7.3	1.8																							
										2.50	6.9	1.3																							
										2.75	6.8	1.3			7	2.60	2.80		Ps								0.15				94			
										3.00	6.7	1.2																							
										3.25	5.9	1.6																							
	6	3C4u	3.30	3.60	N40	FSL				3.50	6.3	1.3																							

Lab Sample			Lab Results																												
			Existing Acidity				SPOCAS															Neutralising Capacity						DTPA Extractable			
No	Upp Depth	Low Depth	$s\text{-}S_{NAS}$	$a\text{-}S_{NAS}$	s-TAA	TAA	pH_{KCl}	pH_{OX}	S_{KCl}	S_P	Ca_{KCl}	Ca_P	Ca_A	$s\text{-}Ca_A$	$a\text{-}Ca_A$	Mg_{KCl}	Mg_P	Mg_A	$s\text{-}Mg_A$	$a\text{-}Mg_A$	$s\text{-}Ca_A\text{+}s\text{-}Mg_A$	$a\text{-}Ca_A\text{+}a\text{-}Mg_A$	ANC_{BT}	$s\text{-}ANC_{BT}$	$a\text{-}ANC_{BT}$	ANC_E	$s\text{-}ANC_E$	$a\text{-}ANC_E$	Fe	Mn	Cu	Zn
	(m)		%S	mol H+/t	%S	mol H+/t			%S		%Ca			%S	mol H+/t	%Mg			%S	mol H+/t	%S	mol H^+/t	$\%CaCO_3$	%S	mol H+/t	$\%CaCO_3$	%S	mol H+/t	mg/kg			
			s-20J	a-20J	s-23F	23F	23A	23B	23Ce	23De	23Vh	23Wh	23Xh	s-23Xh	a-23Xh	23Sm	23Tm	23Um	s-23Um	a-23Um	s-23Xh+s-23Um	a-23Xh+a-23Um	19A2	s-19A2	a-19A2	23Q	s-23Q	a-23Q	12A1-Fe	12A1-Mn	12A1-Cu	12A1-Zn
1	0.00	0.10																													
3	0.60	0.80																													
4	0.90	1.10																													
5	1.40	1.60																													
6	1.90	2.10																													
8	2.80	3.00																													
10	3.80	4.00																													
11	4.30	4.50			0.00	0	8.9	7.0	0.06	0.43	0.20	0.51	0.31	0.248	155	0.07	0.11	0.04	0.053	33	0.301	188	3.11	1.00	621	0.31	0.10	62				
5	1.40	1.60																													
6	1.90	2.10																													
7	2.30	2.50																													
8	2.80	3.10																													
10	3.90	4.10																													
12	5.00	5.20																													
13	5.50	5.70			0.00	0	8.9	7.1	0.05	0.39	0.21	0.52	0.31	0.248	155	0.06	0.1	0.04	0.053	33	0.301	188	4	1.28	799	0.43	0.14	86				
1	0.00	0.10																													
2	0.20	0.40																													
3	0.70	0.90																													
4	1.20	1.40																													
5	1.70	1.90																													
7	2.60	2.80																													

Field Morphology Summary															Lab Sample			Action Criteria		SPOCAS Acid Base Accounting				Chromium Suite Acid Base Accounting				Lab Results							
										Field pH										pH KCI =>6.5			<=4.5 pH KCI <6.5					Potential Acidity							
Site ID	Hor No	Horizon Name	Upp Depth	Low Depth	Colour	Soil Texture	Jar.	Gyp.	Shell	Depth	pH_F	pH_{FOX}	Action Level (pH_F)	Depth 1st Action Level (pH_F)	No	Upp Depth	Low Depth	Depth 1st Action Level	Action Level Select %S	TPA =0		TPA >0	TPA >0	pH KCI =>6.5	<=5.5 pH KCI <6.5	<=4.5 pH KCI <5.5		S_{CR}	S_{POS}	s-TSA	s-TPA	a-S_{CR}	a-S_{POS}	TSA	TPA
(m)										(m)						(m)				%S				%S				%S				mol H+/t			
											23Af	23Bf								s-ANC_E	s-Ca+s-Mg	s-TSA	s-TAA	s-C_{IN}	s-ANC_{BT}	s-TAA	s-TAA	22B	23Ee	s-23H	s-23G	a-22B	a-23Ee	23H	23G
107	1	A2	0.00	0.30	10YR32	CL				0.10	5.2	2.5																							
										0.30	5.5	2.8																							
	2	B21	0.30	0.60	2.5Y41	LC				0.60	5.4	3.3			2	0.40	0.60											< 0.02				0			
	3	B22	0.60	1.30	5Y61	LC				0.80	5.2	2.8																							
										1.00	5.3	2.8			3	0.90	1.10											< 0.02				0			
										1.25	5.3	2.4																							
	4	B23	1.30	1.60	2.5Y31	LC				1.50	4.9	1.4	a		4	1.40	1.60											0.02				12			
	5	B3	1.60	1.85	5Y31	LC				1.75	5.0	1.5	a		5	1.60	1.80	S2	Pc									0.41				256			
	6	C1u	1.85	3.10	N30	SLC				2.00	4.7	1.1	a																						
										2.25	5.5	1.2			6	2.10	2.30		Pc									1.61				1004			
										2.50	5.7	1.4																							
										2.75	5.8	1.6			7	2.60	2.80		Pc									0.81				505			
										3.00	5.9	1.5																							
	7	C2u	3.10	3.35	N30	FSLC				3.25	6.0	1.6																							
	8	C3u	3.35	3.75	N30	SLC				3.50	6.3	1.7																							
										3.75	6.3	1.8																							
	9	C4u	3.75	4.40	N30	ZLC				4.00	6.6	1.7																							
										4.25	7.0	1.6																							
	10	C5u	4.40	4.75	N30	ZLC				4.50	6.8	2.1																							
															11	4.50	4.70		Pc									0.87				543			
	11	C6	4.75	4.80	N30	SCL			SS	4.80	7.3	4.5																							
108	1	A2p	0.00	0.35	10YR52	CL				0.10	5.0	2.7	a																						
										0.30	5.1	3.0																							
	2	B21	0.35	1.05	10YR44	CL				0.60	5.6	3.5																							
										0.80	5.5	3.4			3	0.60	0.80											< 0.02				2			
										1.00	5.3	3.4																							
	3	B3	1.05	1.50	10Y61	CLFS				1.25	4.9	3.3	a		4	1.10	1.30											< 0.02				6			
										1.50	5.0	3.4	a																						
	4	C1	1.50	1.85	2.5Y52	FSLC				1.75	5.3	2.9			5	1.60	1.80											< 0.02				1			
	5	C2	1.85	2.20	10Y31	FSCL				2.00	5.5	1.6																							
															6	2.00	2.20	S2	Pl									1.841				1148			
	6	2C3	2.20	6.00	5Y51	KS				2.25	5.6	1.4																							
										2.50	5.6	1.7																							
										2.75	5.6	1.8			7	2.50	2.80		Ps									0.212				132			
										3.00	5.7	2.0																							
										3.25	5.7	2.1			8	3.10	3.40		Ps									0.08				50			
										3.50	5.6	2.0																							
										3.75	5.7	2.1																							
										4.00	5.6	2.1			9	3.70	4.00		Ps									0.1				62			
										4.25	5.6	2.2																							
										4.50	5.6	2.2																							
										4.75	5.8	2.2																							
										5.00	6.1	1.7																							
										5.25	5.9	2.0																							
										5.50	6.3	2.0			12	5.40	5.70		Ps									0.03				19			
										5.75	6.1	1.9																							
										6.00	6.3	1.7																							
109	1	A2p	0.00	0.30	10YR43	CL				0.10	5.1	3.0																							
										0.30	5.5	3.1																							
	2	B21	0.30	0.50	2.5Y62	CLS				0.40	5.6	4.0																							
	3	B22	0.50	0.70	2.5Y62	CS				0.60	5.7	4.3			3	0.50	0.70											< 0.02				6			
	4	B3	0.70	1.00	2.5Y53	LS				0.80	4.3	3.1	a																						
										1.00	3.4	2.1	A	A1	4	0.80	1.00											< 0.02				6			
	5	C1	1.00	1.35	5Y42	CS				1.25	4.0	1.9	A		5	1.10	1.30											0.027				17			
	6	C2	1.35	2.10	N40	LS				1.50	4.2	1.4	a																						
															6	1.50	1.70	S2	Ps									0.64				399			
										1.75	4.2	1.6	a																						
										2.00	4.7	1.7	a		7	1.90	2.10		Ps									0.583				364			
	7	2C3	2.10	2.70	N40	S				2.25	5.3	1.5																							
										2.50	6.2	2.2			8	2.30	2.50		Ps									0.342				213			
	8	2C4	2.70	3.10	10Y51	S				2.75	6.3	1.9																							
										3.00	6.6	1.8																							
	9	2C5	3.10	3.80	N30	LS				3.25	6.5	1.5																							
										3.50	7.0	2.1																							
										3.75	6.9	2.3																							
	10	2C6	3.80	4.10	N40	LFS				4.00	7.3	2.2			11	3.80	4.00		Ps									0.143				89			
	11	3C7	4.10	5.20	N30	FSL			SS	4.25	7.5	1.7																							
										4.50	7.6	5.9																							
										4.75	7.9	6.4																							
										5.00	7.8	5.3																							
	12	3C8	5.20	6.00	N30	FSCL			SS	5.25	7.7	5.3																							
										5.50	7.8	6.0			14	5.30	5.50		Pl	0.031	0.172								0.490	0.000	0.000		306	0	0
										5.75	8.4	6.1																							
										6.00	8.1	6.1																							

Lab Sample			Lab Results																												
			Existing Acidity				SPOCAS															Neutralising Capacity						DTPA Extractable			
No	Upp Depth	Low Depth	$s\text{-}S_{NAS}$	$a\text{-}S_{NAS}$	s-TAA	TAA	pH_{KCl}	pH_{OX}	S_{KCl}	S_P	Ca_{KCl}	Ca_P	Ca_A	$s\text{-}Ca_A$	$a\text{-}Ca_A$	Mg_{KCl}	Mg_P	Mg_A	$s\text{-}Mg_A$	$a\text{-}Mg_A$	$s\text{-}Ca_A\text{+}s\text{-}Mg_A$	$a\text{-}Ca_A\text{+}a\text{-}Mg_A$	ANC_{BT}	$s\text{-}ANC_{BT}$	$a\text{-}ANC_{BT}$	ANC_E	$s\text{-}ANC_E$	$a\text{-}ANC_E$	Fe	Mn	Cu	Zn
	(m)		%S	mol H+/t	%S	mol H+/t			%S		%Ca			%S	mol H+/t	%Mg			%S	mol H+/t	%S	mol H^+/t	%$CaCO_3$	%S	mol H+/t	%$CaCO_3$	%S	mol H+/t	mg/kg			
			s-20J	a-20J	s-23F	23F	23A	23B	23Ce	23De	23Vh	23Wh	23Xh	s-23Xh	a-23Xh	23Sm	23Tm	23Um	s-23Um	a-23Um	s-23Xh+s-23Um	a-23Xh+a-23Um	19A2	s-19A2	a-19A2	23Q	s-23Q	a-23Q	12A1-Fe	12A1-Mn	12A1-Cu	12A1-Zn
2	0.40	0.60																													
3	0.90	1.10																													
4	1.40	1.60																													
5	1.60	1.80																													
6	2.10	2.30																													
7	2.60	2.80																													
11	4.50	4.70																													
3	0.60	0.80																													
4	1.10	1.30																													
5	1.60	1.80																													
6	2.00	2.20																													
7	2.50	2.80																													
8	3.10	3.40																													
9	3.70	4.00																													
12	5.40	5.70																													
3	0.50	0.70																													
4	0.80	1.00			0.04	22	4.3		0.01		0.01					0.01															
5	1.10	1.30			0.04	25	4.3		0.02		0.01					0.01															
6	1.50	1.70			0.05	33	4.2		0.06		0.01					0.01															
7	1.90	2.10																													
8	2.30	2.50																													
11	3.80	4.00																													
14	5.30	5.50			0.00	0	8.8	7.3	0.05	0.54	0.19	0.67	0.48	0.384	240	0.06	0.13	0.07	0.092	58	0.476	297	4	1.28	799	0.62	0.20	124				

Field Morphology Summary															Lab Sample			Action Criteria		SPOCAS Acid Base Accounting				Chromium Suite Acid Base Accounting				Lab Results							
										Field pH																	Potential Acidity							
Site ID	Hor No	Horizon Name	Upp Depth	Low Depth	Colour	Soil Texture	Jar.	Gyp.	Shell	Depth	pH_F	pH_{FOX}	Action Level (pH_F)	Depth 1st Action Level (pH_F)	No	Upp Depth	Low Depth	Depth 1st Action Level	Action Level Select %S	pH KCl =>6.5 TPA =0	pH KCl =>6.5 TPA >0	<=4.5 pH KCl <6.5 TPA >0		pH KCl =>6.5	<=5.5 pH KCl <6.5	<=4.5 pH KCl <5.5	S_{CR}	S_{POS}	s-TSA	s-TPA	$a\text{-}S_{CR}$	$a\text{-}S_{POS}$	TSA	TPA
(m)										(m)						(m)				%S				%S			%S				mol H+/t			
											23Af	23Bf								$s\text{-}ANC_E$	s-Ca+s-Mg	s-TSA	s-TAA	$s\text{-}C_{IN}$	$s\text{-}ANC_{BT}$	s-TAA	s-TAA	22B	23Ee	s-23H	s-23G	a-22B	a-23Ee	23H	23G
110	1	A1p	0.00	0.20	10YR42	CL				0.10	5.2	2.5																							
	2	B21	0.20	0.80	10YR42	CL				0.30	5.7	2.8																							
															2	0.30	0.50										< 0.02				6			
										0.60	6.2	4.3																							
										0.80	6.3	4.7																							
	3	B22	0.80	1.40	5Y61	LMC				1.00	6.2	4.7																							
										1.25	4.9	2.7	a		4	1.20	1.40										< 0.02				11			
	4	C1	1.40	2.30	N30	ZLC				1.50	5.5	1.9																							
										1.75	5.3	1.7			5	1.70	1.90	S2	Pc								2.018				1259			
										2.00	5.8	1.8																							
										2.25	5.9	1.8			6	2.10	2.30		Pc								1.31				817			
	5	2C2	2.30	3.60	N50	KS				2.50	5.7	1.5																							
										2.75	5.9	1.8																							
										3.00	6.1	1.6			8	2.80	3.00		Ps								0.23				143			
										3.25	5.9	1.4																							
										3.50	5.9	1.6																							
111	1	A2p	0.00	0.35	10YR42	CL				0.10	5.1	2.8																							
										0.30	5.8	3.7																							
	2	B2	0.35	0.75	2.5Y62	SLC				0.60	7.4	7.0			2	0.40	0.60										< 0.02				0			
	3	2B2	0.75	1.00	10YR43	CKS				0.80	7.1	6.6																							
										1.00	6.7	3.1			3	0.80	1.00										< 0.02				0			
	4	B3	1.00	1.50	5Y51	LS				1.25	7.0	2.8																							
										1.50	7.1	2.1			4	1.30	1.50										0.02				12			
	5	C1	1.50	2.30	N30	S				1.75	7.0	1.9																							
										2.00	6.3	1.7			5	1.80	2.00	S2	Ps								1.57				979			
										2.25	6.0	1.4																							
	6	C2	2.30	3.90	N30	KS				2.50	6.4	1.5			6	2.30	2.60		Ps								0.73				455			
										2.75	6.2	1.5																							
										3.00	6.3	1.6																							
										3.25	6.2	1.8																							
										3.50	6.2	2.0																							
										3.75	6.8	2.1																							
	7	C3	3.90	4.70	10Y51	KS				4.00	7.3	2.1																							
										4.25	7.5	2.1																							
										4.50	7.7	2.4			9	4.20	4.50										< 0.02				12			
	8	2C4	4.70	6.00	N40	FSL			SS	4.75	7.6	2.1																							
										5.00	8.5	6.3																							
										5.25	8.6	5.7																							
										5.50	7.8	6.1																							
										5.75	8.6	6.7																							
										6.00	8.4	6.4																							
112	1	B2	0.00	0.20	5Y42	MC				0.10	4.4	2.7	a		1	0.00	0.10										< 0.02				0			
	2	C1	0.20	0.45	N40	LC				0.30	5.5	3.0			2	0.20	0.40										0.03				19			
	3	C2	0.45	1.05	N40	LC				0.60	5.2	1.5																							
										0.80	5.1	2.2																							
										1.00	6.0	1.8			3	0.80	1.00	S0	Pc								1.943				1212			
	4	2C3	1.05	1.80	N40	SCL				1.25	6.0	1.5																							
										1.50	6.5	1.7			4	1.30	1.50		Pl								1.528				953			
										1.75	6.6	1.7																							
	5	2C4	1.80	3.10	N40	LKS				2.00	7.2	1.4			5	1.80	2.00		Ps								0.799				498			
										2.25	7.1	1.8																							
										2.50	6.8	1.6																							
										2.75	6.9	1.5																							
										3.00	7.1	1.4																							
	6	3C5	3.10	3.75	N40	ZCL				3.25	7.1	1.8																							
										3.50	7.2	1.6			8	3.30	3.50		Pl								0.61				380			
										3.75	7.1	3.1																							
	7	3C6	3.75	4.80	N40	FSL			SS	4.00	8.4	5.5																							
										4.25	8.1	5.2																							
										4.50	8.0	5.2																							
										4.75	8.6	6.2																							

Lab Sample			Lab Results																												
			Existing Acidity				SPOCAS															Neutralising Capacity						DTPA Extractable			
No	Upp Depth	Low Depth	$s\text{-}S_{NAS}$	$a\text{-}S_{NAS}$	s-TAA	TAA	pH_{KCl}	pH_{OX}	S_{KCl}	S_P	Ca_{KCl}	Ca_P	Ca_A	$s\text{-}Ca_A$	$a\text{-}Ca_A$	Mg_{KCl}	Mg_P	Mg_A	$s\text{-}Mg_A$	$a\text{-}Mg_A$	$s\text{-}Ca_A\text{+}s\text{-}Mg_A$	$a\text{-}Ca_A\text{+}a\text{-}Mg_A$	ANC_{BT}	$s\text{-}ANC_{BT}$	$a\text{-}ANC_{BT}$	ANC_E	$s\text{-}ANC_E$	$a\text{-}ANC_E$	Fe	Mn	Cu	Zn
	(m)		%S	mol H+/t	%S	mol H+/t			%S		%Ca			%S	mol H+/t	%Mg			%S	mol H+/t	%S	mol H^+/t	%$CaCO_3$	%S	mol H+/t	%$CaCO_3$	%S	mol H+/t	mg/kg			
			s-20J	a-20J	s-23F	23F	23A	23B	23Ce	23De	23Vh	23Wh	23Xh	s-23Xh	a-23Xh	23Sm	23Tm	23Um	s-23Um	a-23Um	s-23Xh+s-23Um	a-23Xh+a-23Um	19A2	s-19A2	a-19A2	23Q	s-23Q	a-23Q	12A1-Fe	12A1-Mn	12A1-Cu	12A1-Zn
2	0.30	0.50																													
4	1.20	1.40																													
5	1.70	1.90																													
6	2.10	2.30																													
8	2.80	3.00																													
2	0.40	0.60																													
3	0.80	1.00																													
4	1.30	1.50																													
5	1.80	2.00																													
6	2.30	2.60																													
9	4.20	4.50																													
1	0.00	0.10																													
2	0.20	0.40																													
3	0.80	1.00																													
4	1.30	1.50																													
5	1.80	2.00																													
8	3.30	3.50																													

Field Morphology Summary															Lab Sample			Action Criteria		SPOCAS Acid Base Accounting						Chromium Suite Acid Base Accounting				Lab Results							
										Field pH																			Potential Acidity							
Site ID	Hor No	Horizon Name	Upp Depth	Low Depth	Colour	Soil Texture	Jar.	Gyp.	Shell	Depth	pH_F	pH_{FOX}	Action Level (pH_F)	Depth 1st Action Level (pH_F)	No	Upp Depth	Low Depth	Depth 1st Action Level	Action Level Select %S	pH KCl =>6.5 TPA =0	pH KCl =>6.5 TPA >0	<=4.5 pH KCl <6.5 TPA >0		pH KCl =>6.5	<=5.5 pH KCl <6.5	<=4.5 pH KCl <5.5		S_{CR}	S_{POS}	s-TSA	s-TPA	a-S_{CR}	a-S_{POS}	TSA	TPA
(m)										(m)						(m)				%S				%S				%S				mol H+/t			
											23Af	23Bf								s-ANC_E	s-Ca+s-Mg	s-TSA	s-TAA	s-C_{IN}	s-ANC_{BT}	s-TAA	s-TAA	22B	23Ee	s-23H	s-23G	a-22B	a-23Ee	23H	23G
113	1	A1p	0.00	0.10	2.5Y42	CLS				0.10	4.5	2.6	a																							
	2	B2	0.10	0.40	2.5Y51	SLC				0.30	5.4	3.8																								
	3	B3	0.40	0.70	2.5Y52	SCL				0.60	6.5	3.8																								
	4	2C1	0.70	1.00	5Y62	S				0.80	6.6	3.5																								
										1.00	6.5	1.7			4	0.80	1.00	S1	Ps									0.038				24			
	5	2C2	1.00	2.20	10Y51	KS				1.25	6.2	1.8																								
										1.50	6.3	1.8			5	1.30	1.50		Ps									0.042				26			
										1.75	6.5	2.0																								
										2.00	6.5	2.7			6	1.80	2.00											0.026				16			
	6	2C3	2.20	3.00	5Y42	KS				2.25	6.6	3.7																								
										2.50	6.6	3.0			7	2.30	2.50											< 0.02				9			
										2.75	6.9	3.2																								
										3.00	6.8	1.8			8	2.80	3.00		Ps									0.19				119			
	7	3C4	3.00	3.30	N40	LFS				3.25	7.3	4.6			9	3.10	3.30		Ps									0.442				276			
	8	3C5	3.30	4.80	N40	LFS			SS	3.50	7.3	6.5																								
										3.75	7.2	5.1			10	3.60	3.80		Ps									0.288				180			
										4.00	7.6	4.5																								
										4.25	7.1	5.5			11	4.10	4.30		Ps	-0.042	0.048								0.227	0.000	0.000		142	0	0
										4.50	7.1	6.4																								
										4.75	7.5	6.1																								
114	1	A2p	0.00	0.25	10YR31	CL				0.10	4.6	2.6	a																							
	2	B21	0.25	0.60	2.5Y41	CLS				0.30	4.8	3.0	a																							
										0.60	5.6	4.0																								
	3	B22	0.60	0.90	2.5Y62	LS				0.80	6.1	4.8																								
	4	B23	0.90	1.20	2.5Y62	KS				1.00	6.5	5.5																								
															4	1.00	1.20											< 0.02				6			
	5	2C1	1.20	2.80	10Y41	LKS				1.25	6.8	1.7																								
										1.50	7.2	2.0			5	1.30	1.50	S2	Ps									0.132				82			
										1.75	7.3	1.7																								
										2.00	7.0	2.0			6	1.80	2.00		Ps									0.319				199			
										2.25	6.9	1.8																								
										2.50	6.6	1.7			7	2.30	2.50		Ps									0.426				266			
										2.75	7.0	1.8																								
	6	2C2	2.80	3.40	N40	S				3.00	7.2	1.8			8	2.80	3.00		Ps									0.166				104			
										3.25	6.7	1.6																								
	7	3C3	3.40	3.70	N40	FS				3.50	7.3	1.9			9	3.40	3.60		Ps									0.211				132			
	8	4C4	3.70	4.35	N40	FS				3.75	6.8	2.0																								
										4.00	7.2	1.7			10	3.90	4.10		Ps									0.603				376			
										4.25	7.2	1.9																								
	9	5C5	4.35	4.55	N40	CS				4.50	7.6	3.9																								
	10	6C6	4.55	4.80	N40	LFS			SS	4.75	7.1	4.9																								
115	1	A2	0.00	0.25	10YR21	CL				0.10	4.2	2.5	a																							
	2	B2	0.25	0.75	5Y61	SCL				0.30	4.4	3.2	a																							
										0.60	6.4	4.8																								
	3	2C1	0.75	1.10	5Y62	S				0.80	7.0	4.9																								
										1.00	7.1	5.2			3	0.80	1.00											< 0.02				3			
	4	2C2	1.10	2.85	10Y51	S				1.25	6.9	2.0																								
										1.50	7.0	1.9			4	1.30	1.50	S2	Ps									0.142				89			
										1.75	7.1	2.2																								
										2.00	7.0	2.5			5	1.80	2.00											0.023				14			
										2.25	6.9	4.1																								
										2.50	6.9	3.0			6	2.30	2.50		Ps									0.039				24			
										2.75	7.0	2.6																								
	5	3C3	2.85	3.50	N40	LFS			SS	3.00	7.0	3.1			7	2.85	3.00		Ps	0.054	0.156								0.270	0.000	0.000		168	0	0
										3.25	7.2	6.0																								
										3.50	7.7	3.9																								
	6	3C4	3.50	3.75	N40	S			SS						9	3.50	3.70		Ps									0.083				52			
										3.75	7.4	3.8																								
	7	3C5	3.75	6.00	N40	LFS			SS	4.00	7.0	5.9																								
										4.25	7.2	6.1																								
										4.50	7.2	2.0																								
										4.75	7.5	6.2																								
										5.00	7.5	5.6																								
										5.25	8.0	6.1																								
										5.50	7.6	5.9																								
										5.75	8.1	6.1																								
										6.00	7.6	6.1																								

Lab Sample			Lab Results																													
			Existing Acidity				SPOCAS																Neutralising Capacity						DTPA Extractable			
No	Upp Depth	Low Depth	$s\text{-}S_{NAS}$	$a\text{-}S_{NAS}$	s-TAA	TAA	pH_{KCl}	pH_{OX}	S_{KCl}	S_P	Ca_{KCl}	Ca_P	Ca_A	$s\text{-}Ca_A$	$a\text{-}Ca_A$	Mg_{KCl}	Mg_P	Mg_A	$s\text{-}Mg_A$	$a\text{-}Mg_A$	$s\text{-}Ca_A\text{+}s\text{-}Mg_A$	$a\text{-}Ca_A\text{+}a\text{-}Mg_A$	ANC_{BT}	$s\text{-}ANC_{BT}$	$a\text{-}ANC_{BT}$	ANC_E	$s\text{-}ANC_E$	$a\text{-}ANC_E$	Fe	Mn	Cu	Zn
	(m)		%S	mol H+/t	%S	mol H+/t			%S		%Ca			%S	mol H+/t	%Mg			%S	mol H+/t	%S	mol H^+/t	$\%CaCO_3$	%S	mol H+/t	$\%CaCO_3$	%S	mol H+/t	mg/kg			
			s-20J	a-20J	s-23F	23F	23A	23B	23Ce	23De	23Vh	23Wh	23Xh	s-23Xh	a-23Xh	23Sm	23Tm	23Um	s-23Um	a-23Um	s-23Xh+s-23Um	a-23Xh+a-23Um	19A2	s-19A2	a-19A2	23Q	s-23Q	a-23Q	12A1-Fe	12A1-Mn	12A1-Cu	12A1-Zn
4	0.80	1.00																														
5	1.30	1.50																														
6	1.80	2.00																														
7	2.30	2.50																														
8	2.80	3.00																														
9	3.10	3.30																														
10	3.60	3.80																														
11	4.10	4.30			0.00	0	8.9	7.1	0.07	0.30	0.19	0.46	0.27	0.216	135	0.05	0.09	0.04	0.053	33	0.269	168	3.2	1.03	639	0.55	0.18	110				
4	1.00	1.20																														
5	1.30	1.50																														
6	1.80	2.00																														
7	2.30	2.50																														
8	2.80	3.00																														
9	3.40	3.60																														
10	3.90	4.10																														
3	0.80	1.00																														
4	1.30	1.50																														
5	1.80	2.00																														
6	2.30	2.50																														
7	2.85	3.00			0.00	0	8.8	6.7	0.07	0.34	0.18	0.36	0.18	0.144	90	0.06	0.08	0.02	0.026	16	0.170	106	1.6	0.51	320	0.17	0.05	34				
9	3.50	3.70																														

Field Morphology Summary																Lab Sample			Action Criteria		SPOCAS Acid Base Accounting				Chromium Suite Acid Base Accounting				Lab Results							
										Field pH																			Potential Acidity							
Site ID	Hor No	Horizon Name	Upp Depth	Low Depth	Colour	Soil Texture	Jar.	Gyp.	Shell	Depth	pH_F	pH_{FOX}	Action Level (pH_F)	Depth 1st Action Level (pH_F)	No	Upp Depth	Low Depth	Depth 1st Action Level	Action Level Select %S	pH KCl =>6.5 TPA =0	pH KCl =>6.5 TPA >0	<=4.5 pH KCl <6.5 TPA >0		pH KCl =>6.5	<=5.5 pH KCl <6.5	<=4.5 pH KCl <5.5		S_{CR}	S_{POS}	s-TSA	s-TPA	a-S_{CR}	a-S_{POS}	TSA	TPA
(m)										(m)						(m)				%S				%S				%S				mol H+/t			
											23Af	23Bf								s-ANC_E	s-Ca+s-Mg	s-TSA	s-TAA	s-C_{IN}	s-ANC_{BT}	s-TAA	s-TAA	22B	23Ee	s-23H	s-23G	a-22B	a-23Ee	23H	23G
116	1	A2p	0.00	0.25	10YR21	CL				0.10	4.1	2.4	a		1	0.00	0.10											0.022				14			
	2	B21	0.25	0.90	5Y41	LC				0.30	4.2	2.9	a																							
															2	0.30	0.50											< 0.02				12			
										0.60	4.3	2.6	a																							
										0.80	4.4	2.0	a		3	0.70	0.90											0.053				33			
	3	C1	0.90	1.50	N30	ZCL				1.00	4.5	2.1	a																							
										1.25	5.5	1.9			4	1.10	1.30	S1	Pl									2.664				1662			
										1.50	5.7	1.7			5	1.30	1.50		Pl									1.782				1111			
	4	2C2	1.50	3.20	10Y51	S				1.75	6.3	2.0																								
										2.00	6.6	2.8			6	1.80	2.00		Ps									0.887				553			
										2.25	7.1	2.0																								
										2.50	7.5	1.7																								
										2.75	7.2	1.8																								
										3.00	7.4	2.8			8	2.80	3.00		Ps									0.071				44			
	5	3C3	3.20	3.50	N40	SCL			SS	3.25	7.8	5.3																								
										3.50	7.8	3.6			9	3.30	3.50		Pl	0.060	0.182								0.290	0.000	0.000		181	0	0
	6	4C4	3.50	4.80	N40	LFS			SS	3.75	8.1	5.2																								
										4.00	8.2	5.9																								
										4.25	8.0	4.7																								
										4.50	7.6	5.5																								
										4.75	7.8	5.6																								
117	1	A2p	0.00	0.20	2.5Y42	CL				0.10	5.6	3.3																								
	2	B21	0.20	0.55	2.5Y62	CLS				0.30	5.8	4.3																								
	3	B22	0.55	1.30	5Y52	SLC				0.60	5.9	4.0																								
										0.80	5.8	3.9																								
										1.00	5.9	3.6																								
										1.25	5.7	3.6																								
	4	B23	1.30	1.70	10YR56	CS				1.50	5.6	3.1			4	1.30	1.50											< 0.02				6			
	5	C1	1.70	3.70	10Y51	S				1.75	5.9	2.9																								
										2.00	6.1	1.6			5	1.80	2.00											< 0.02				3			
										2.25	6.0	1.8																								
										2.50	6.0	2.1			6	2.30	2.50	S2	Ps									0.298				186			
										2.75	6.0	2.0																								
										3.00	6.2	1.7																								
										3.25	6.1	2.0																								
										3.50	6.0	1.9			8	3.30	3.50		Ps									0.117				73			
	6	C2	3.70	4.60	N60	KS				3.75	6.2	1.6																								
										4.00	6.5	2.1																								
										4.25	6.5	2.4																								
										4.50	6.6	2.3			10	4.30	4.50		Ps									0.048				30			
	7	2C3	4.60	6.00	N40	LFS			SS	4.75	7.2	2.2																								
										5.00	8.0	5.1																								
										5.25	8.4	6.6																								
										5.50	8.1	7.1			12	5.30	5.50		Ps									0.276				172			
										5.75	8.9	6.4																								
										6.00	8.9	5.8																								
118	1	A2p	0.00	0.25	10YR32	FSCL				0.10	6.2	4.3																								
	2	B21	0.25	0.55	10YR56	LFS				0.30	6.0	4.0																								
	3	B22	0.55	0.90	2.5Y53	CFS				0.60	6.0	4.0																								
										0.80	6.1	4.0																								
	4	2C1	0.90	1.40	N40	CLFS				1.00	6.4	3.1																								
										1.25	6.5	2.8																								
	5	3C2	1.40	1.65	N40	LMC				1.50	6.9	3.5																								
	6	4C3	1.65	2.35	N30	LC				1.75	6.8	1.9																								
										2.00	6.8	2.0																								
										2.25	6.8	1.8																								
	7	5C4	2.35	6.00	10Y41	S			SS	2.50	6.6	1.7																								
										2.75	6.9	1.6																								
										3.00	7.4	1.9																								
										3.25	7.2	1.7																								
										3.50	7.1	1.9																								
										3.75	7.3	2.0																								
										4.00	7.2	2.0																								
										4.25	7.1	2.1																								
										4.50	7.1	2.5																								
										4.75	7.0	2.5																								
										5.00	7.4	2.5																								
										5.25	7.6	2.2																								
										5.50	7.6	2.0			12	5.40	5.70	S3	Ps		0.011			0.035				0.035	0.020	0.006	0.006	22	12	4	4
										5.75	7.3	2.5																								
										6.00	7.3	1.4																								

Lab Sample			Lab Results																												
			Existing Acidity				SPOCAS																Neutralising Capacity						DTPA Extractable			
No	Upp Depth	Low Depth	$s\text{-}S_{NAS}$	$a\text{-}S_{NAS}$	s-TAA	TAA	pH_{KCl}	pH_{OX}	S_{KCl}	S_P	Ca_{KCl}	Ca_P	Ca_A	$s\text{-}Ca_A$	$a\text{-}Ca_A$	Mg_{KCl}	Mg_P	Mg_A	$s\text{-}Mg_A$	$a\text{-}Mg_A$	$s\text{-}Ca_A\text{+}s\text{-}Mg_A$	$a\text{-}Ca_A\text{+}a\text{-}Mg_A$	ANC_{BT}	$s\text{-}ANC_{BT}$	$a\text{-}ANC_{BT}$	ANC_E	$s\text{-}ANC_E$	$a\text{-}ANC_E$	Fe	Mn	Cu	Zn
	(m)		%S	mol H+/t	%S	mol H+/t			%S		%Ca			%S	mol H+/t	%Mg			%S	mol H+/t	%S	mol H^+/t	$\%CaCO_3$	%S	mol H+/t	$\%CaCO_3$	%S	mol H+/t	mg/kg			
			s-20J	a-20J	s-23F	23F	23A	23B	23Ce	23De	23Vh	23Wh	23Xh	s-23Xh	a-23Xh	23Sm	23Tm	23Um	s-23Um	a-23Um	s-23Xh+s-23Um	a-23Xh+a-23Um	19A2	s-19A2	a-19A2	23Q	s-23Q	a-23Q	12A1-Fe	12A1-Mn	12A1-Cu	12A1-Zn
1	0.00	0.10																														
2	0.30	0.50			0.07	43	4.2		0.05		0.06					0.1																
3	0.70	0.90																														
4	1.10	1.30																														
5	1.30	1.50																														
6	1.80	2.00																														
8	2.80	3.00																														
9	3.30	3.50			0.00	0	8.8	6.5	0.05	0.34	0.15	0.32	0.17	0.136	85	0.05	0.07	0.02	0.026	16	0.162	101	1.9	0.61	380	0.17	0.05	34				
4	1.30	1.50																														
5	1.80	2.00																														
6	2.30	2.50																														
8	3.30	3.50																														
10	4.30	4.50																														
12	5.30	5.50																														
12	5.40	5.70			0.00	0	6.6	5.3	0.02	0.04	0.01	0.01	0.00	0.000	0	0.02	0.02	0.00	0.000	0	0.000	0	< 0.5	0.00	0							

Field Morphology Summary															Lab Sample			Action Criteria		SPOCAS Acid Base Accounting				Chromium Suite Acid Base Accounting				Lab Results							
										Field pH																		Potential Acidity							
Site ID	Hor No	Horizon Name	Upp Depth	Low Depth	Colour	Soil Texture	Jar.	Gyp.	Shell	Depth	pH_F	pH_{FOX}	Action Level (pH_F)	Depth 1st Action Level (pH_F)	No	Upp Depth	Low Depth	Depth 1st Action Level	Action Level Select %S	pH KCl =>6.5 TPA =0	pH KCl =>6.5 TPA >0	<=4.5 pH KCl <6.5 TPA >0		pH KCl =>6.5	<=5.5 pH KCl <6.5	<=4.5 pH KCl <5.5		S_{CR}	S_{POS}	s-TSA	s-TPA	a-S_{CR}	a-S_{POS}	TSA	TPA
(m)										(m)						(m)				%S				%S				%S				mol H+/t			
											23Af	23Bf								s-ANC_E	s-Ca+s-Mg	s-TSA	s-TAA	s-C_{IN}	s-ANC_{BT}	s-TAA	s-TAA	22B	23Ee	s-23H	s-23G	a-22B	a-23Ee	23H	23G
119	1	A2p	0.00	0.30	10YR41	CL				0.10	4.8	2.2	a		1	0.00	0.10											< 0.02				12			
										0.30	3.8	2.2	A	A0																					
	2	B2	0.30	0.50	10YR42	CLS				0.50	4.6	1.6	a		2	0.30	0.50											< 0.02	0.040	0.000	0.013	5	25	0	8
	3	C1	0.50	0.70	10YR32	CL				0.70	5.3	1.4			3	0.50	0.70	S0	Pl									0.087				54			
	4	C2	0.70	1.05	N30	ZCL				1.00	5.5	2.0			4	0.80	1.00		Pl									2.283				1424			
	5	2C3	1.05	1.60	N40	CS				1.25	5.5	2.4																							
										1.50	5.3	1.9			5	1.30	1.50		Ps									1.014				632			
	6	2C4	1.60	2.80	N50	LS				1.75	5.4	1.3																							
										2.00	5.5	1.5			6	1.80	2.00		Ps									0.373				233			
										2.25	5.7	1.6																							
										2.50	6.0	1.8																							
										2.75	6.4	1.9																							
	7	2C5	2.80	4.80	N50	LFS				3.00	6.5	1.7			8	2.80	3.00		Ps									0.361				225			
										3.25	6.4	1.4																							
										3.50	6.5	1.4																							
										3.75	6.5	1.8																							
										4.00	6.8	1.7			10	3.80	4.00		Ps									0.554				346			
										4.25	6.7	1.8																							
										4.50	6.7	1.7																							
										4.75	6.9	1.9																							
120	1	A2p	0.00	0.20	2.5Y52	CL				0.10	6.1	3.8																							
	2	B2	0.20	1.05	2.5Y62	SCL				0.30	6.9	4.8																							
															2	0.30	0.50											< 0.02				6			
										0.60	7.3	5.4																							
										0.80	6.9	5.3																							
										1.00	6.0	3.8			3	0.80	1.00											< 0.02				2			
	3	2C1	1.05	1.40	N30	SL				1.25	6.2	1.7			4	1.20	1.40	S2	Pl									0.628				392			
	4	2C2	1.40	2.60	N40	LS				1.50	6.6	1.7																							
										1.75	6.4	1.8			5	1.70	1.90		Ps									0.241				150			
										2.00	6.5	1.9																							
										2.25	6.5	1.8			6	2.20	2.40		Ps									0.288				180			
										2.50	6.9	1.7																							
	5	3C3	2.60	2.85	N40	ZCL				2.75	6.8	2.0			7	2.60	2.80		Pl									1.086				677			
	6	4C4	2.85	3.10	N40	LFS				3.00	6.7	1.8																							
	7	4C5	3.10	3.70	N40	S				3.25	6.9	1.6																							
										3.50	6.8	1.9			9	3.30	3.50		Ps									0.155				97			
	8	4C6	3.70	4.05	N40	FS				3.75	7.2	1.8																							
										4.00	7.5	3.4																							
	9	5C7	4.05	4.80	N40	CFS			SS	4.25	7.4	4.8																							
										4.50	7.5	5.0																							
										4.75	7.6	5.4																							
121	1	A2p	0.00	0.30	10YR32	CL				0.10	4.8	3.1	a																						
										0.30	4.8	2.8	a																						
	2	B2	0.30	0.65	10Y61	SCL									2	0.30	0.50											< 0.02				4			
										0.60	4.6	3.3	a																						
	3	B3	0.65	1.10	10Y61	SCL				0.80	4.7	3.2	a																						
										1.00	4.9	2.6	a		3	0.80	1.00											< 0.02				12			
	4	C1u	1.10	2.00	N40	LS				1.25	6.0	1.6																							
										1.50	6.3	1.5			4	1.30	1.50	S2	Ps									0.477				298			
										1.75	6.6	2.2																							
										2.00	6.6	1.6			5	1.80	2.00		Ps									0.45				281			
	5	2C2u	2.00	2.50	N40	S				2.25	6.8	1.7																							
										2.50	6.7	2.0			6	2.30	2.50		Ps									0.097				60			
	6	2C3u	2.50	3.50	N40	KS			SS	2.75	7.0	1.6																							
										3.00	7.0	3.2			7	2.80	3.00		Ps									0.074				46			
										3.25	7.1	1.7																							
										3.50	7.5	5.5																							
	7	3C4u	3.50	4.80	N30	LFS			SS	3.75	7.1	6.3																							
										4.00	7.2	6.2																							
										4.25	7.8	6.1																							
										4.50	7.7	5.7																							
										4.75	7.3	6.2																							

Lab Sample			Lab Results																													
			Existing Acidity				SPOCAS																Neutralising Capacity						DTPA Extractable			
No	Upp Depth	Low Depth	$s\text{-}S_{NAS}$	$a\text{-}S_{NAS}$	s-TAA	TAA	pH_{KCl}	pH_{OX}	S_{KCl}	S_P	Ca_{KCl}	Ca_P	Ca_A	$s\text{-}Ca_A$	$a\text{-}Ca_A$	Mg_{KCl}	Mg_P	Mg_A	$s\text{-}Mg_A$	$a\text{-}Mg_A$	$s\text{-}Ca_A\text{+}s\text{-}Mg_A$	$a\text{-}Ca_A\text{+}a\text{-}Mg_A$	ANC_{BT}	$s\text{-}ANC_{BT}$	$a\text{-}ANC_{BT}$	ANC_E	$s\text{-}ANC_E$	$a\text{-}ANC_E$	Fe	Mn	Cu	Zn
	(m)		%S	mol H+/t	%S	mol H+/t			%S		%Ca			%S	mol H+/t	%Mg			%S	mol H+/t	%S	mol H^+/t	$\%CaCO_3$	%S	mol H+/t	$\%CaCO_3$	%S	mol H+/t	mg/kg			
			s-20J	a-20J	s-23F	23F	23A	23B	23Ce	23De	23Vh	23Wh	23Xh	s-23Xh	a-23Xh	23Sm	23Tm	23Um	s-23Um	a-23Um	s-23Xh+s-23Um	a-23Xh+a-23Um	19A2	s-19A2	a-19A2	23Q	s-23Q	a-23Q	12A1-Fe	12A1-Mn	12A1-Cu	12A1-Zn
1	0.00	0.10			0.11	66	4.1		0.02		0.07					0.03																
2	0.30	0.50			0.08	52	3.9	4.0	0.03	0.07	0.02	0.03	0.01	0.008	5	0.02	0.02	0.00	0.000	0	0.008	5										
3	0.50	0.70																														
4	0.80	1.00																														
5	1.30	1.50																														
6	1.80	2.00																														
8	2.80	3.00																														
10	3.80	4.00																														
2	0.30	0.50																														
3	0.80	1.00																														
4	1.20	1.40																											332.50	7.95	0.37	4.79
5	1.70	1.90																											71.90	3.46	0.43	0.89
6	2.20	2.40																														
7	2.60	2.80																											126.10	9.90	2.9	3.20
9	3.30	3.50																											45.80	1.80	0.1	0.50
2	0.30	0.50																														
3	0.80	1.00																														
4	1.30	1.50																														
5	1.80	2.00																														
6	2.30	2.50																														
7	2.80	3.00																														

Field Morphology Summary															Lab Sample			Action Criteria		SPOCAS Acid Base Accounting				Chromium Suite Acid Base Accounting				Lab Results							
										Field pH										pH KCI =>6.5			<=4.5 pH KCI <6.5					Potential Acidity							
Site ID	Hor No	Horizon Name	Upp Depth	Low Depth	Colour	Soil Texture	Jar.	Gyp.	Shell	Depth	pH_F	pH_{FOX}	Action Level (pH_F)	Depth 1st Action Level (pH_F)	No	Upp Depth	Low Depth	Depth 1st Action Level	Action Level Select %S	TPA =0	TPA >0		TPA >0	pH KCI =>6.5	<=5.5 pH KCI <6.5	<=4.5 pH KCI <5.5		S_{CR}	S_{POS}	s-TSA	s-TPA	a-S_{CR}	a-S_{POS}	TSA	TPA
(m)										(m)						(m)				%S				%S				%S				mol H+/t			
											23Af	23Bf								s-ANC_E	s-Ca+s-Mg	s-TSA	s-TAA	s-C_{IN}	s-ANC_{BT}	s-TAA	s-TAA	22B	23Ee	s-23H	s-23G	a-22B	a-23Ee	23H	23G
122	1	A2	0.00	0.35	2.5Y2.5/1	LC				0.10	5.8	4.3			1	0.00	0.10											< 0.02				11			
										0.30	5.7	4.5																							
	2	B2	0.35	0.80	5Y42	LC				0.60	5.6	3.7			2	0.40	0.60											< 0.02				10			
										0.80	6.2	4.5																							
	3	C1	0.80	1.10	5Y42	ZLC				1.00	5.6	3.8			3	0.90	1.10											0.029				18			
	4	2C2u	1.10	1.55	N40	SLC				1.25	5.8	1.5																							
										1.50	5.5	1.6			4	1.30	1.50	S2	Pc									0.941				587			
	5	3C3u	1.55	1.90	10Y51	LS				1.75	5.9	1.4			5	1.70	1.90		Ps									1.672				1043			
	6	3C4u	1.90	4.15	10Y51	LKS				2.00	6.0	1.8																							
										2.25	6.6	1.8																							
										2.50	6.1	1.7			6	2.20	2.50		Ps									0.15				94			
										2.75	6.0	1.8																							
										3.00	6.3	3.1																							
										3.25	6.2	2.2																							
										3.50	6.2	1.7			8	3.40	3.70		Ps									0.165				103			
										3.75	6.3	2.6																							
										4.00	6.7	1.6																							
	7	4C5u	4.15	4.80	N40	LFS			SS	4.25	7.0	5.0																							
										4.50	7.7	5.8			10	4.40	4.60		Ps	0.094	0.220								0.520	0.000	0.000		324	0	0
										4.75	7.6	6.1																							
123	1	A3	0.00	0.25	10YR31	CL				0.10	5.9	3.7																							
	2	B2	0.25	0.65	2.5Y42	CL				0.30	6.4	4.6																							
										0.60	7.2	5.3																							
	3	B3	0.65	1.30	5Y61	FSLC				0.80	7.2	5.8																							
										1.00	7.2	5.4			3	0.80	1.00											< 0.02				4			
										1.25	7.9	3.9																							
	4	2C1u	1.30	3.90	10Y51	LS				1.50	8.1	3.1			4	1.30	1.50											< 0.02				12			
										1.75	7.8	3.1																							
										2.00	7.7	1.9			5	1.80	2.00	S2	Ps									0.085				53			
										2.25	7.7	1.9																							
										2.50	7.4	1.8																							
										2.75	7.4	2.1																							
										3.00	7.4	2.1			7	2.90	3.20											0.023				14			
										3.25	7.6	3.9																							
										3.50	7.7	2.5																							
										3.75	7.7	2.5																							
	5	3C2u	3.90	4.50	10Y41	LS				4.00	7.6	2.4																							
										4.25	7.5	1.9			9	4.10	4.30		Ps									0.114				71			
										4.50	7.8	2.5																							
	6	4C3	4.50	5.10	N40	FSCL				4.75	8.2	4.3			10	4.60	4.80		Pl									0.644				402			
										5.00	8.2	3.7																							
	7	4C4	5.10	6.00	N40	FSL			SS	5.25	8.2	5.8																							
										5.50	8.1	5.7																							
										5.75	8.6	4.8																							
										6.00	8.6	5.5																							
124	1	A2p	0.00	0.50	10YR32	CL				0.10	4.3	3.0	a		1	0.00	0.10											< 0.02				8			
										0.30	4.6	3.2	a																						
															2	0.30	0.50											< 0.02				11			
	2	B21	0.50	0.80	5Y41	LC				0.60	4.5	3.4	a																						
										0.80	4.4	3.2	a		3	0.60	0.80											< 0.02				10			
	3	B22	0.80	1.20	5Y42	CLFS				1.00	5.5	3.2																							
															4	1.00	1.20											< 0.02				4			
	4	2C1	1.20	1.55	10Y51	CLFS				1.25	5.4	3.5																							
										1.50	5.7	4.1			5	1.30	1.50											0.027				17			
	5	2C2	1.55	2.80	N40	FSCL				1.75	5.9	1.5																							
										2.00	5.9	1.6			6	1.80	2.00	S2	Pl									1.618				1009			
										2.25	6.2	1.5																							
										2.50	6.3	1.5			7	2.30	2.50		Pl									0.988				616			
										2.75	6.4	1.4																							
	6	3C3	2.80	3.60	N50	KS				3.00	6.9	1.3																							
										3.25	7.1	4.0																							
										3.50	7.0	3.1																							

Lab Sample			Lab Results																													
			Existing Acidity				SPOCAS																Neutralising Capacity						DTPA Extractable			
No	Upp Depth	Low Depth	$s\text{-}S_{NAS}$	$a\text{-}S_{NAS}$	s-TAA	TAA	pH_{KCl}	pH_{OX}	S_{KCl}	S_P	Ca_{KCl}	Ca_P	Ca_A	$s\text{-}Ca_A$	$a\text{-}Ca_A$	Mg_{KCl}	Mg_P	Mg_A	$s\text{-}Mg_A$	$a\text{-}Mg_A$	$s\text{-}Ca_A\text{+}s\text{-}Mg_A$	$a\text{-}Ca_A\text{+}a\text{-}Mg_A$	ANC_{BT}	$s\text{-}ANC_{BT}$	$a\text{-}ANC_{BT}$	ANC_E	$s\text{-}ANC_E$	$a\text{-}ANC_E$	Fe	Mn	Cu	Zn
	(m)		%S	mol H+/t	%S	mol H+/t			%S		%Ca			%S	mol H+/t	%Mg			%S	mol H+/t	%S	mol H^+/t	$\%CaCO_3$	%S	mol H+/t	$\%CaCO_3$	%S	mol H+/t	mg/kg			
			s-20J	a-20J	s-23F	23F	23A	23B	23Ce	23De	23Vh	23Wh	23Xh	s-23Xh	a-23Xh	23Sm	23Tm	23Um	s-23Um	a-23Um	s-23Xh+s-23Um	a-23Xh+a-23Um	19A2	s-19A2	a-19A2	23Q	s-23Q	a-23Q	12A1-Fe	12A1-Mn	12A1-Cu	12A1-Zn
1	0.00	0.10																														
2	0.40	0.60																														
3	0.90	1.10																														
4	1.30	1.50																														
5	1.70	1.90																														
6	2.20	2.50																														
8	3.40	3.70																														
10	4.40	4.60			0.00	0	8.6	7.1	0.10	0.62	0.24	0.72	0.48	0.384	240	0.08	0.13	0.05	0.066	41	0.450	281	3.6	1.15	719	0.37	0.12	74				
3	0.80	1.00																														
4	1.30	1.50																														
5	1.80	2.00																														
7	2.90	3.20																														
9	4.10	4.30																														
10	4.60	4.80																														
1	0.00	0.10																														
2	0.30	0.50																														
3	0.60	0.80																														
4	1.00	1.20																														
5	1.30	1.50																														
6	1.80	2.00																														
7	2.30	2.50																														

Field Morphology Summary															Lab Sample			Action Criteria		SPOCAS Acid Base Accounting				Chromium Suite Acid Base Accounting				Lab Results							
										Field pH										pH KCI =>6.5		<=4.5 pH KCI <6.5		pH KCI =>6.5	<=5.5 pH KCI <6.5	<=4.5 pH KCI <5.5		Potential Acidity							
Site ID	Hor No	Horizon Name	Upp Depth	Low Depth	Colour	Soil Texture	Jar.	Gyp.	Shell	Depth	pH_F	pH_{FOX}	Action Level (pH_F)	Depth 1st Action Level (pH_F)	No	Upp Depth	Low Depth	Depth 1st Action Level	Action Level Select %S	TPA =0	TPA >0	TPA >0						S_{CR}	S_{POS}	s-TSA	s-TPA	a-S_{CR}	a-S_{POS}	TSA	TPA
			(m)							(m)						(m)				%S				%S				%S				mol H+/t			
											23Af	23Bf								s-ANC_E	s-Ca+s-Mg	s-TSA	s-TAA	s-C_{IN}	s-ANC_{BT}	s-TAA	s-TAA	22B	23Ee	s-23H	s-23G	a-22B	a-23Ee	23H	23G
125	1	A2	0.00	0.30	10YR31	LC				0.10	5.2	3.1																							
										0.30	5.3	4.0																							
	2	B21	0.30	0.70	2.5Y51	FSLC				0.60	5.4	4.0																							
	3	B22	0.70	1.60	5Y61	ZLC				0.80	5.2	3.3																							
										1.00	6.1	2.9			3	0.80	1.00											< 0.02				8			
										1.25	5.7	3.7																							
										1.50	6.8	3.4			4	1.30	1.50											< 0.02				1			
	4	B3	1.60	1.90	10Y41	ZLC				1.75	7.0	3.3			5	1.70	1.90											0.08				50			
	5	2C1	1.90	2.35	2.5Y62	S				2.00	6.9	3.1																							
										2.25	6.9	4.4			6	2.10	2.30											0.02				12			
	6	2C2	2.35	4.20	5Y61	LKS				2.50	6.5	4.2																							
										2.75	6.6	4.4			7	2.60	2.90											0.026				16			
										3.00	6.6	4.7																							
										3.25	6.6	4.5																							
										3.50	6.7	4.8																							
										3.75	6.6	4.5																							
										4.00	6.7	3.9			9	3.80	4.10											0.023				14			
	7	3C3	4.20	5.10	N40	FSL			SS	4.25	7.0	4.5																							
										4.50	7.2	4.9			10	4.30	4.50	S5	Pl									0.549				342			
										4.75	7.7	3.8																							
										5.00	7.9	3.8			11	4.80	5.00		Pl									0.664				414			
	8	3C4	5.10	5.70	N40	SL			SS	5.25	8.0	4.9																							
										5.50	8.1	3.2																							
	9	3C5	5.70	6.00	N40	FSL			SS	5.75	8.1	4.6																							
										6.00	8.2	3.3																							
126	1	A1	0.00	0.30	10YR42	CL				0.10	5.4	2.5			1	0.00	0.10											< 0.02				2			
										0.30	5.0	3.7	a																						
	2	B2	0.30	0.70	5Y62	CS				0.60	4.7	3.8	a																						
	3	B3	0.70	1.00	5Y52	LS				0.80	5.3	4.2																							
										1.00	5.6	3.7			3	0.80	1.00											< 0.02				9			
	4	C1	1.00	2.50	N40	LS				1.25	5.4	1.3																							
										1.50	5.7	1.1			4	1.30	1.50	S1	Ps									0.197				123			
										1.75	6.1	1.4																							
										2.00	6.3	1.3			5	1.80	2.00		Ps									0.266				166			
										2.25	6.5	1.1																							
										2.50	6.3	1.2																							
	5	2C2	2.50	2.95	10Y41	SCL				2.75	6.6	1.4			7	2.70	2.90		Pl									0.346				216			
	6	3C3	2.95	3.50	5Y41	S				3.00	6.7	1.2																							
										3.25	7.0	5.3			8	3.20	3.40		Ps									0.199				124			
										3.50	7.0	1.6																							
	7	4C4	3.50	4.80	N40	LFS			SS	3.75	6.5	3.6			9	3.70	3.90		Ps	-0.029	0.078								0.310	0.000	0.000		193	0	0
										4.00	6.7	4.0																							
										4.25	6.8	4.7																							
										4.50	6.9	4.7																							
										4.75	7.1	4.4																							
127	1	A2	0.00	0.20	10YR21	L				0.10	5.5	2.8																							
	2	B1	0.20	0.70	10YR42	CLS				0.30	5.8	4.1																							
										0.60	5.4	3.8			2	0.40	0.60											< 0.02				1			
	3	B22	0.70	1.10	2.5Y64	CS				0.80	5.7	3.9																							
										1.00	6.0	4.2																							
	4	B3	1.10	1.60	2.5Y64	S				1.25	5.6	3.7																							
										1.50	6.1	2.9			4	1.30	1.50											< 0.02				6			
	5	C1u	1.60	2.20	10Y61	LFS				1.75	6.3	2.8																							
										2.00	6.4	1.6			5	1.80	2.00	S2	Ps									0.047				29			
	6	C2u	2.20	3.00	10Y41	LFS				2.25	6.2	1.6																							
										2.50	5.9	1.6			6	2.30	2.50		Ps									0.169				105			
										2.75	6.3	1.6																							
										3.00	6.4	1.5																							
	7	2C3u	3.00	3.40	N40	CS				3.25	6.5	1.4			8	3.20	3.40		Ps									0.117				73			
	8	2C4u	3.40	5.00	N40	LKS				3.50	6.6	2.4																							
										3.75	6.6	1.5																							
										4.00	6.6	1.7																							
										4.25	6.8	1.5																							
										4.50	6.9	1.9			10	4.20	4.50		Ps									0.256				160			
										4.75	7.2	2.3																							
										5.00	8.2	3.0																							
	9	3C5	5.00	5.60	N40	FSCL			SS	5.25	8.0	3.2																							
										5.50	7.8	2.9																							
	10	3C6	5.60	6.00	N40	FSL			SS	5.75	8.0	3.2																							
										6.00	7.9	3.5																							

Lab Sample			Lab Results																													
			Existing Acidity				SPOCAS																Neutralising Capacity						DTPA Extractable			
No	Upp Depth	Low Depth	$s\text{-}S_{NAS}$	$a\text{-}S_{NAS}$	s-TAA	TAA	pH_{KCl}	pH_{OX}	S_{KCl}	S_P	Ca_{KCl}	Ca_P	Ca_A	$s\text{-}Ca_A$	$a\text{-}Ca_A$	Mg_{KCl}	Mg_P	Mg_A	$s\text{-}Mg_A$	$a\text{-}Mg_A$	$s\text{-}Ca_A\text{+}s\text{-}Mg_A$	$a\text{-}Ca_A\text{+}a\text{-}Mg_A$	ANC_{BT}	$s\text{-}ANC_{BT}$	$a\text{-}ANC_{BT}$	ANC_E	$s\text{-}ANC_E$	$a\text{-}ANC_E$	Fe	Mn	Cu	Zn
	(m)		%S	mol H+/t	%S	mol H+/t			%S		%Ca			%S	mol H+/t	%Mg			%S	mol H+/t	%S	mol H^+/t	$\%CaCO_3$	%S	mol H+/t	$\%CaCO_3$	%S	mol H+/t	mg/kg			
			s-20J	a-20J	s-23F	23F	23A	23B	23Ce	23De	23Vh	23Wh	23Xh	s-23Xh	a-23Xh	23Sm	23Tm	23Um	s-23Um	a-23Um	s-23Xh+s-23Um	a-23Xh+a-23Um	19A2	s-19A2	a-19A2	23Q	s-23Q	a-23Q	12A1-Fe	12A1-Mn	12A1-Cu	12A1-Zn
3	0.80	1.00																														
4	1.30	1.50																														
5	1.70	1.90																														
6	2.10	2.30																														
7	2.60	2.90																														
9	3.80	4.10																														
10	4.30	4.50																														
11	4.80	5.00																														
1	0.00	0.10																														
3	0.80	1.00																														
4	1.30	1.50																														
5	1.80	2.00																														
7	2.70	2.90																														
8	3.20	3.40																														
9	3.70	3.90			0.00	0	8.9	7.0	0.07	0.38	0.19	0.57	0.38	0.304	190	0.07	0.103	0.03	0.044	27	0.348	217	3.4	1.09	679	0.62	0.20	124				
2	0.40	0.60																														
4	1.30	1.50																														
5	1.80	2.00																														
6	2.30	2.50																														
8	3.20	3.40																														
10	4.20	4.50																														

Field Morphology Summary															Lab Sample			Action Criteria		SPOCAS Acid Base Accounting				Chromium Suite Acid Base Accounting				Lab Results							
										Field pH																		Potential Acidity							
Site ID	Hor No	Horizon Name	Upp Depth	Low Depth	Colour	Soil Texture	Jar.	Gyp.	Shell	Depth	pH_F	pH_{FOX}	Action Level (pH_F)	Depth 1st Action Level (pH_F)	No	Upp Depth	Low Depth	Depth 1st Action Level	Action Level Select %S	pH KCl =>6.5 TPA =0	pH KCl =>6.5 TPA >0	<=4.5 pH KCl <6.5 TPA >0		pH KCl =>6.5	<=5.5 pH KCl <6.5	<=4.5 pH KCl <5.5		S_{CR}	S_{POS}	s-TSA	s-TPA	a-S_{CR}	a-S_{POS}	TSA	TPA
			(m)							(m)						(m)				%S				%S				%S				mol H+/t			
											23Af	23Bf								s-ANC_E	s-Ca+s-Mg	s-TSA	s-TAA	s-C_{IN}	s-ANC_{BT}	s-TAA	s-TAA	22B	23Ee	s-23H	s-23G	a-22B	a-23Ee	23H	23G
128	1	A2	0.00	0.30	10YR32	SCL				0.10	5.5	3.1																							
										0.30	5.8	4.5																							
	2	B21	0.30	0.60	10YR54	CLFS				0.60	5.8	4.1																							
	3	B22	0.60	1.40	10YR51	LC				0.80	6.1	4.4																							
										1.00	5.9	3.8																							
										1.25	5.7	3.8																							
	4	B23	1.40	2.25	2.5Y61	CLKS				1.50	5.6	4.8																							
															5	1.50	1.70											< 0.02				4			
										1.75	5.6	5.6																							
										2.00	5.7	5.0																							
										2.25	5.7	4.7																							
	5	2C1	2.25	2.60	5Y62	CKS				2.50	6.3	5.0			7	2.40	2.60											< 0.02				4			
	6	2C2	2.60	3.30	5Y62	LKS				2.75	5.9	4.0																							
										3.00	6.3	4.0			8	2.90	3.10											< 0.02				2			
										3.25	6.2	4.1																							
	7	2C3	3.30	7.20	N50	LKS				3.50	6.3	4.1			9	3.40	3.70											< 0.02				6			
										3.75	5.9	4.4																							
										4.00	6.1	4.3																							
										4.25	6.1	4.5																							
										4.50	6.1	3.9																							
										4.75	6.3	4.5			11	4.60	4.90											< 0.02				4			
										5.00	6.3	4.5																							
										5.50	6.4	4.6																							
										6.00	6.3	3.9			13	5.80	6.10											< 0.02				9			
										6.50	6.1	1.9																							
										7.00	6.3	1.6																							
															15	7.00	7.20	S4	Ps									0.049				31			
	8	3C4	7.20	8.15	5Y62	LS				7.50	6.4	4.8			16	7.40	7.60											< 0.02				5			
										8.00	6.5	4.8			17	7.90	8.10											< 0.02				7			
	9	4C5	8.15	8.35	N50	ZCL			SS	8.25	7.8	3.9			18	8.15	8.35		Pl	-0.255	0.002								0.460	0.000	0.000		287	0	0
	10	5D1	8.35	8.80	10GY71	FSL				8.50	8.6	7.0																							
															19	8.50	8.70				0.010								0.010	0.000	0.000		6	0	0
										8.75	8.5	6.6																							
	11	5D2	8.80	9.30	10GY71	FSCL				9.00	8.4	7.0																							
															20	9.00	9.20				0.010								0.010	0.000	0.000		6	0	0
										9.25	7.8	6.8																							
129	1	A2p	0.00	0.35	2.5Y42	CL				0.10	5.2	2.4																							
										0.30	6.2	3.3																							
	2	B21	0.35	0.80	2.5Y51	CL				0.60	6.6	4.9																							
										0.80	6.7	4.7																							
	3	B22	0.80	1.20	5Y51	CLFS				1.00	6.8	4.6			3	0.90	1.10											< 0.02				3			
	4	B3	1.20	1.70	10Y51	FSCL				1.25	6.9	3.5																							
										1.50	6.7	3.0			4	1.40	1.60											< 0.02				2			
	5	C1u	1.70	4.80	N30	ZCL				1.75	6.8	1.3																							
										2.00	7.1	1.4			5	1.80	2.00	S2	Pl									1.103				688			
										2.25	6.9	1.6																							
										2.50	6.9	1.4			6	2.30	2.50		Pl									1.797				1121			
										2.75	7.1	1.3																							
										3.00	7.0	1.6																							
										3.25	7.1	1.3																							
										3.50	7.1	1.3			8	3.30	3.50		Pl									1.115				695			
										3.75	6.9	2.4																							
										4.00	7.1	2.0																							
										4.25	7.4	1.7																							
										4.50	7.1	1.4																							
										4.75	7.5	1.4																							

Lab Sample			Lab Results																													
			Existing Acidity				SPOCAS																Neutralising Capacity						DTPA Extractable			
No	Upp Depth	Low Depth	$s\text{-}S_{NAS}$	$a\text{-}S_{NAS}$	s-TAA	TAA	pH_{KCl}	pH_{OX}	S_{KCl}	S_P	Ca_{KCl}	Ca_P	Ca_A	$s\text{-}Ca_A$	$a\text{-}Ca_A$	Mg_{KCl}	Mg_P	Mg_A	$s\text{-}Mg_A$	$a\text{-}Mg_A$	$s\text{-}Ca_A\text{+}s\text{-}Mg_A$	$a\text{-}Ca_A\text{+}a\text{-}Mg_A$	ANC_{BT}	$s\text{-}ANC_{BT}$	$a\text{-}ANC_{BT}$	ANC_E	$s\text{-}ANC_E$	$a\text{-}ANC_E$	Fe	Mn	Cu	Zn
	(m)		%S	mol H+/t	%S	mol H+/t			%S		%Ca			%S	mol H+/t	%Mg			%S	mol H+/t	%S	mol H^+/t	$\%CaCO_3$	%S	mol H+/t	$\%CaCO_3$	%S	mol H+/t	mg/kg			
			s-20J	a-20J	s-23F	23F	23A	23B	23Ce	23De	23Vh	23Wh	23Xh	s-23Xh	a-23Xh	23Sm	23Tm	23Um	s-23Um	a-23Um	s-23Xh+s-23Um	a-23Xh+a-23Um	19A2	s-19A2	a-19A2	23Q	s-23Q	a-23Q	12A1-Fe	12A1-Mn	12A1-Cu	12A1-Zn
5	1.50	1.70																														
7	2.40	2.60																														
8	2.90	3.10																														
9	3.40	3.70																											28.10	1.40	0.3	0.40
11	4.60	4.90																														
13	5.80	6.10																											21.20	1.80	0.2	0.10
15	7.00	7.20																														
16	7.40	7.60																											9.90	0.80	0.1	0.10
17	7.90	8.10																														
18	8.15	8.35			0.00	0	8.6	6.8	0.05	0.51	0.36	1.17	0.81	0.648	404	0.05	0.08	0.03	0.040	25	0.688	429	6.6	2.11	1319	1.91	0.61	382	107.50	33.00	0.8	0.60
19	8.50	8.70			0.00	0	7.5	6.3	0.00	0.01	0.05	0.05	0.00	0.000	0	0.04	0.04	0.00	0.000	0	0.000	0							6.10	1.90	0.1	0.10
20	9.00	9.20			0.00	0	6.5	6.5	0.00	0.01	0.07	0.07	0.00	0.000	0	0.07	0.07	0.00	0.000	0	0.000	0										
3	0.90	1.10																														
4	1.40	1.60																														
5	1.80	2.00																														
6	2.30	2.50																														
8	3.30	3.50																														

Field Morphology Summary																Lab Sample			Action Criteria		SPOCAS Acid Base Accounting				Chromium Suite Acid Base Accounting				Lab Results							
										Field pH																			Potential Acidity							
Site ID	Hor No	Horizon Name	Upp Depth	Low Depth	Colour	Soil Texture	Jar.	Gyp.	Shell	Depth	pH_F	pH_{FOX}	Action Level (pH_F)	Depth 1st Action Level (pH_F)	No	Upp Depth	Low Depth	Depth 1st Action Level	Action Level Select %S	pH KCl =>6.5 TPA =0	pH KCl =>6.5 TPA >0	<=4.5 pH KCl <6.5 TPA >0		pH KCl =>6.5	<=5.5 pH KCl <6.5	<=4.5 pH KCl <5.5		S_{CR}	S_{POS}	s-TSA	s-TPA	a-S_{CR}	a-S_{POS}	TSA	TPA
			(m)							(m)	23Af	23Bf				(m)				%S				%S				%S				mol H+/t			
																				s-ANC_E	s-Ca+s-Mg	s-TSA	s-TAA	s-C_{IN}	s-ANC_{BT}	s-TAA	s-TAA	22B	23Ee	s-23H	s-23G	a-22B	a-23Ee	23H	23G
130	1	A2p	0.00	0.35	10YR43	CL				0.10	5.1	2.6																								
										0.30	4.9	2.6	a																							
	2	B2	0.35	0.70	10YR46	FSL				0.60	4.8	3.7	a																							
	3	B3	0.70	2.20	10YR56	S				0.80	5.4	4.2																								
										1.00	5.4	4.7																								
										1.25	5.5	4.6																								
										1.50	5.4	4.6																								
										1.75	5.7	4.6																								
										2.00	5.7	5.2																								
	4	C1	2.20	5.00	2.5Y73	S				2.25	5.5	4.6																								
										2.50	5.6	5.2			6	2.30	2.50										< 0.02				6				
										2.75	5.6	5.3																								
										3.00	5.7	5.3																								
										3.25	5.6	5.2																								
										3.50	5.6	5.1																								
										3.75	5.8	5.4																								
										4.00	6.0	5.5			9	3.80	4.00										< 0.02				8				
										4.25	5.9	5.4																								
										4.50	5.7	5.3																								
										4.75	5.8	5.3																								
										5.00	6.1	5.2																								
	5	2C2	5.00	6.20	2.5Y73	KS				5.25	6.1	5.3																								
										5.50	6.0	5.6																								
										5.75	6.0	5.4																								
										6.00	6.1	5.2																								
	6	2C3	6.20	6.80	2.5Y74	KS				6.25	6.1	5.3																								
										6.50	5.7	5.4																								
										6.75	5.6	5.4																								
	7	2C4	6.80	8.30	2.5Y73	KS				7.00	5.8	5.3																								
										7.25	6.4	5.4																								
										7.50	6.9	5.4			16	7.40	7.60										< 0.02				1				
										7.75	6.8	5.5																								
										8.00	6.7	5.5																								
										8.25	6.5	5.3																								
	8	2C5	8.30	10.60	2.5Y63	S				8.50	6.8	5.7																								
										8.75	6.9	5.6																								
										9.00	7.2	5.5																								
										9.25	7.1	5.6																								
										9.50	6.8	5.6																								
										9.75	7.4	5.7																								
										10.00	7.5	5.7																								
										10.25	7.5	5.6																								
										10.50	7.8	5.6			22	10.30	10.50										< 0.02				1				
	9	3C6	10.60	10.80	N60	FSLC				10.75	8.1	7.1			23	10.60	10.80	S9	Pc			0.093						0.130	0.074	0.074		81	46	46	
	10	4C7	10.80	11.40	2.5Y74	CLFS				11.00	7.0	5.7																								
										11.25	6.9	5.6			24	11.10	11.30										< 0.02				0				
	11	4C8	11.40	12.00	10Y71	FSCL				11.50	7.0	5.9																								
										12.00	6.7	5.5																								
131	1	O1	0.00	0.15	10YR42	IP				0.10	5.5	2.0			1	0.00	0.10	S0	Pl								0.146				91				
	2	B2	0.15	0.45	10Y51	ZLC				0.30	6.1	3.1			2	0.20	0.40										< 0.02				4				
	3	C1u	0.45	1.10	N40	ZLC				0.60	6.7	1.5																								
										0.80	6.7	1.5			3	0.70	0.90		Pc								0.913				569				
										1.00	6.5	1.4																								
	4	2C2u	1.10	1.40	N50	LS				1.25	6.3	2.4																								
	5	3C3	1.40	1.90	2.5Y64	LS				1.50	6.0	4.7																								
										1.75	6.4	5.0																								
132	1	A1p	0.00	0.35	2.5Y42	KSCL				0.10	5.1	2.5			1	0.00	0.10										< 0.02				0				
										0.30	5.5	3.4																								
	2	B2	0.35	0.65	10YR66	LS				0.60	6.3	3.0			2	0.40	0.60										< 0.02				0				
	3	2C1	0.65	1.20	N40	ZLC				0.80	7.1	3.0																								
										1.00	7.2	2.2			3	0.80	1.00										0.03				19				
	4	2C2	1.20	1.40	N50	LS				1.25	7.3	1.6			4	1.20	1.40	S2	Ps								0.09				56				
	5	3C3	1.40	3.60	2.5Y74	S				1.50	6.4	4.9																								
										1.75	6.6	5.3			5	1.70	1.90										< 0.02				0				
										2.00	6.1	5.2																								
										2.25	6.0	5.1																								
															8	3.20	3.40										< 0.02				6				

Lab Sample			Lab Results																												
			Existing Acidity				SPOCAS															Neutralising Capacity						DTPA Extractable			
No	Upp Depth	Low Depth	$s\text{-}S_{NAS}$	$a\text{-}S_{NAS}$	s-TAA	TAA	pH_{KCl}	pH_{OX}	S_{KCl}	S_P	Ca_{KCl}	Ca_P	Ca_A	$s\text{-}Ca_A$	$a\text{-}Ca_A$	Mg_{KCl}	Mg_P	Mg_A	$s\text{-}Mg_A$	$a\text{-}Mg_A$	$s\text{-}Ca_A\text{+}s\text{-}Mg_A$	$a\text{-}Ca_A\text{+}a\text{-}Mg_A$	ANC_{BT}	$s\text{-}ANC_{BT}$	$a\text{-}ANC_{BT}$	ANC_E	$s\text{-}ANC_E$	$a\text{-}ANC_E$	Fe	Mn	Cu	Zn
	(m)		%S	mol H+/t	%S	mol H+/t			%S		%Ca			%S	mol H+/t	%Mg			%S	mol H+/t	%S	mol H^+/t	$\%CaCO_3$	%S	mol H+/t	$\%CaCO_3$	%S	mol H+/t	mg/kg			
			s-20J	a-20J	s-23F	23F	23A	23B	23Ce	23De	23Vh	23Wh	23Xh	s-23Xh	a-23Xh	23Sm	23Tm	23Um	s-23Um	a-23Um	s-23Xh+s-23Um	a-23Xh+a-23Um	19A2	s-19A2	a-19A2	23Q	s-23Q	a-23Q	12A1-Fe	12A1-Mn	12A1-Cu	12A1-Zn
6	2.30	2.50																											11.40	6.60	0.3	0.10
9	3.80	4.00																											7.20	1.20	0.1	0.10
16	7.40	7.60																											6.70	0.80	0.1	0.40
22	10.30	10.50																											7.40	0.80	0.1	0.10
23	10.60	10.80			0.00	0	7.1	3.5	0.02	0.15	0.03	0.03	0.00	0.000	0	0.06	0.07	0.01	0.013	8	0.013	8										
24	11.10	11.30																														
1	0.00	0.10																														
2	0.20	0.40																														
3	0.70	0.90																														
1	0.00	0.10																														
2	0.40	0.60																														
3	0.80	1.00																														
4	1.20	1.40																														
5	1.70	1.90																														
8	3.20	3.40																														

Field Morphology Summary															Lab Sample			Action Criteria		SPOCAS Acid Base Accounting				Chromium Suite Acid Base Accounting				Lab Results							
										Field pH																		Potential Acidity							
Site ID	Hor No	Horizon Name	Upp Depth	Low Depth	Colour	Soil Texture	Jar.	Gyp.	Shell	Depth	pH_F	pH_{FOX}	Action Level (pH_F)	Depth 1st Action Level (pH_F)	No	Upp Depth	Low Depth	Depth 1st Action Level	Action Level Select %S	pH KCl =>6.5 TPA =0	pH KCl =>6.5 TPA >0	<=4.5 pH KCl <6.5 TPA >0		pH KCl =>6.5	<=5.5 pH KCl <6.5	<=4.5 pH KCl <5.5		S_{CR}	S_{POS}	s-TSA	s-TPA	a-S_{CR}	a-S_{POS}	TSA	TPA
(m)										(m)						(m)				%S				%S				%S				mol H+/t			
											23Af	23Bf								s-ANC_E	s-Ca+s-Mg	s-TSA	s-TAA	s-C_{IN}	s-ANC_{BT}	s-TAA	s-TAA	22B	23Ee	s-23H	s-23G	a-22B	a-23Ee	23H	23G
133	1	O1	0.00	0.15	10YR41	LC				0.10	4.6	1.6	a		1	0.00	0.10											< 0.02				12			
	2	B2	0.15	0.45	10Y51	ZLC				0.30	5.7	2.2			2	0.20	0.40											< 0.02				6			
	3	C1	0.45	0.65	10Y41	FSCL				0.60	6.2	1.7			3	0.45	0.65	S0	Pl									0.24				150			
	4	2C2u	0.65	1.20	10Y41	S				0.80	6.2	1.6																							
										1.00	6.3	1.8			4	0.90	1.10		Ps									0.04				25			
	5	2C3u	1.20	2.40	2.5Y64	S				1.25	6.2	2.0			5	1.20	1.40											< 0.02				12			
										1.50	6.2	1.6																							
										1.75	6.1	5.2																							
										2.00	6.3	5.2																							
										2.25	6.4	5.1			7	2.20	2.40											< 0.02				0			
134	1	A2p	0.00	0.35	10YR52	CL				0.10	5.3	2.7																							
										0.30	6.3	5.0																							
	2	B21	0.35	0.80	2.5Y53	SCL				0.60	6.6	5.4																							
										0.80	7.4	5.6																							
	3	B22	0.80	1.25	2.5Y51	CLS				1.00	7.4	5.6			3	0.80	1.00											< 0.02				0			
										1.25	7.3	5.7																							
	4	B23	1.25	1.50	N60	CS				1.50	6.8	1.6			4	1.30	1.50											< 0.02				0			
	5	C1	1.50	1.90	10Y41	CS				1.75	6.5	1.3			5	1.60	1.80	S2	Ps									0.88				549			
	6	2C2	1.90	2.40	N50	LS				2.00	7.4	1.8																							
										2.25	6.4	2.0			6	2.10	2.30		Ps									0.03				19			
	7	2C3	2.40	4.30	10Y61	LS				2.50	6.5	2.1																							
										2.75	6.5	1.5			7	2.60	2.80		Ps									0.09				56			
										3.00	6.5	2.1																							
										3.25	6.4	2.3																							
										3.50	6.4	1.9																							
										3.75	6.6	2.5			9	3.60	3.80											< 0.02				12			
										4.00	6.5	1.4																							
										4.25	6.6	1.3																							
	8	2C4	4.30	6.00	10Y51	LKS				4.50	6.6	1.9																							
										4.75	6.6	1.8																							
										5.00	6.6	4.5																							
										5.25	6.5	4.1			12	5.10	5.30											< 0.02				6			
										5.50	6.7	4.8																							
										5.75	6.5	4.2																							
										6.00	6.6	4.3																							
135	1	A1p	0.00	0.30	10YR43	CL				0.10	5.0	3.1	a																						
										0.30	7.1	5.2																							
	2	A3	0.30	0.60	5Y51	CLFS				0.60	7.3	5.3																							
	3	B21	0.60	0.80	5Y52	FSCL				0.80	6.6	3.1			3	0.60	0.80											< 0.02				0			
	4	B22	0.80	1.00	10Y51	CS				1.00	5.8	3.0																							
	5	C1	1.00	1.50	2.5Y56	LS				1.25	6.2	4.6																							
										1.50	5.9	4.3																							
	6	2C2	1.50	1.80	5Y52	KS				1.75	6.4	3.4			6	1.60	1.80											< 0.02				0			
	7	2C3	1.80	2.40	5Y52	S				2.00	6.5	3.5																							
										2.25	6.5	3.9			7	2.10	2.30											< 0.02				0			
	8	2C4	2.40	6.20	2.5Y64	S				2.50	5.9	4.3																							
										2.75	6.0	3.9			8	2.60	2.80											< 0.02				0			
										3.00	6.0	4.5																							
										3.25	5.9	4.8																							
										3.50	5.8	5.2																							
										3.75	6.4	5.1																							
										4.00	6.5	5.2																							
										4.25	6.4	5.2																							
										4.50	6.3	5.3																							
										4.75	6.2	5.4																							
										5.00	7.3	5.3																							
										5.25	7.0	5.4																							
										5.50	6.8	5.3																							
										5.75	6.3	5.3																							
										6.00	6.7	5.6																							
	9	2C5	6.20	7.20	2.5Y64	KS				6.25	6.6	5.4																							
										6.50	6.8	5.5																							
										6.75	6.9	5.4			16	6.70	6.90											< 0.02				0			
										7.00	6.7	5.7																							
	10	3C6u	7.20	7.85	N40	LFS			SS	7.25	7.9	6.6			17	7.20	7.40	S8	Ps	-0.346	-0.167								0.300	0.000	0.000		187	0	0
										7.50	7.8	6.5																							
										7.75	8.1	6.6																							
	11	3C7u	7.85	8.40	N40	FSCL			SS	8.00	8.2	6.3																							
										8.25	8.7	5.3			19	8.10	8.30		Pl	-0.252	-0.079								0.340	0.000	0.000		212	0	0
										8.40	8.4	6.5																							
136	1	A1	0.00	0.02	N2.5/0	ZL				0.02	7.7	2.5			1	0.00	0.02	S0	Pl									0.76				474			
	2	B21	0.02	0.20	10Y41	SLMC				0.10	7.3	5.0			2	0.03	0.20											< 0.02				6			
	3	B22u	0.20	0.45	10Y41	SLC				0.30	7.4	2.0			3	0.20	0.40											0.08				50			
	4	C1u	0.45	0.70	N30	ZLC				0.60	7.0	1.4			4	0.50	0.70		Pc									0.94				586			
	5	2C2u	0.70	1.00	N40	LS				0.80	7.5	1.3																							
										1.00	7.0	1.6			5	0.70	1.00		Ps									0.51				318			

Lab Sample			Lab Results																													
			Existing Acidity				SPOCAS																Neutralising Capacity						DTPA Extractable			
No	Upp Depth	Low Depth	$s\text{-}S_{NAS}$	$a\text{-}S_{NAS}$	s-TAA	TAA	pH_{KCl}	pH_{OX}	S_{KCl}	S_P	Ca_{KCl}	Ca_P	Ca_A	$s\text{-}Ca_A$	$a\text{-}Ca_A$	Mg_{KCl}	Mg_P	Mg_A	$s\text{-}Mg_A$	$a\text{-}Mg_A$	$s\text{-}Ca_A\text{+}s\text{-}Mg_A$	$a\text{-}Ca_A\text{+}a\text{-}Mg_A$	ANC_{BT}	$s\text{-}ANC_{BT}$	$a\text{-}ANC_{BT}$	ANC_E	$s\text{-}ANC_E$	$a\text{-}ANC_E$	Fe	Mn	Cu	Zn
	(m)		%S	mol H+/t	%S	mol H+/t			%S		%Ca			%S	mol H+/t	%Mg			%S	mol H+/t	%S	mol H^+/t	$\%CaCO_3$	%S	mol H+/t	$\%CaCO_3$	%S	mol H+/t	mg/kg			
			s-20J	a-20J	s-23F	23F	23A	23B	23Ce	23De	23Vh	23Wh	23Xh	s-23Xh	a-23Xh	23Sm	23Tm	23Um	s-23Um	a-23Um	s-23Xh+s-23Um	a-23Xh+a-23Um	19A2	s-19A2	a-19A2	23Q	s-23Q	a-23Q	12A1-Fe	12A1-Mn	12A1-Cu	12A1-Zn
1	0.00	0.10																														
2	0.20	0.40																														
3	0.45	0.65																														
4	0.90	1.10																														
5	1.20	1.40																														
7	2.20	2.40																														
3	0.80	1.00																														
4	1.30	1.50																														
5	1.60	1.80																														
6	2.10	2.30																														
7	2.60	2.80																														
9	3.60	3.80																														
12	5.10	5.30																														
3	0.60	0.80																														
6	1.60	1.80																														
7	2.10	2.30																														
8	2.60	2.80																														
16	6.70	6.90																														
17	7.20	7.40			0.00	0	9.0	7.0	0.07	0.37	0.22	0.98	0.76	0.608	379	0.07	0.14	0.07	0.092	58	0.700	437	5.4	1.73	1079	2.09	0.67	418				
19	8.10	8.30			0.00	0	8.9	7.3	0.07	0.41	0.21	0.88	0.67	0.536	334	0.07	0.14	0.07	0.092	58	0.628	392	4.6	1.47	919	1.71	0.55	342				
1	0.00	0.02																														
2	0.03	0.20																														
3	0.20	0.40																														
4	0.50	0.70																														
5	0.70	1.00																														

Acid Sulfate Soils of Halifax, North Queensland

Volume 2

Appendix 3: Decoded Borehole Descriptions

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Department of Environment and Resource Management
Queensland Acid Sulfate Soils Investigation Team (QASSIT), Brisbane

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Project: IAS **Site:** 79

Location: GDA 94 ZONE 55 426089mE 7946606mN Lat: -18.57 Long: 146.29955

Described By: Lauren OBrien (OBRL) **Date:** 31/JUL/08

Landscape:

Landform Pattern: alluvial plain **Element:** plain

Depth to Water: 2

Surface Condition: Recently cultivated

Disturbances: Cultivation - Rainfed

Classifications:

ASC: REGOLITHIC, Brown-Orthic, Tenosol

Profile Morphology:

Horizon	Depth (m)	Description
A2p	0 to .4	Dark olive brown (2.5Y33) moist; sandy clay loam; subangular blocky weak 2-5mm structure;common 1-2mm roots; moist when sampled; clear to
B2	.4 to 1.3	Yellowish brown (10YR56) moist; sand; single grain structure; few 2-10% extremely coarse >60mm argillaceous soft segregations; moderately moist when sampled; gradual to
C1	1.3 to 4.8	Yellowish brown (10YR56) moist; coarse sand; many 20-50% subangular quartz small pebbles 2-6 mm; single grain structure; few 2-10% medium 2-6mm organic (humified) soft segregations;wet when sampled; diffuse to
C2	4.8 to 6.6	Brownish yellow (10YR66) moist; coarse sand; many 20-50% subangular quartz small pebbles 2-6 mm; single grain structure; wet when sampled; diffuse to
C3	6.6 to 9.45	Brownish yellow (10YR66) moist; coarse sand; many 20-50% subangular quartz small pebbles 2-6 mm; very few <2% subangular quartz medium pebbles 6-20 mm; very few <2% rounded conglomerate large pebbles 20-60 mm; very few <2% rounded consolidated rock (unidentified) large pebbles 20-60 mm; single grain structure; wet when sampled; sharp to
2C4	9.45 to 9.95	Dark grey (N40) moist; silty light clay; massive structure; wet when sampled; gradual to
2C5	9.95 to 10.3	Dark grey (N40) moist; clay loam; few 2-10% angular platy shell small pebbles 2-6 mm; massive structure; wet when sampled; gradual to
2C6	10.3 to 10.75	Dark grey (N40) moist; sandy light clay; few 2-10% angular platy shell medium pebbles 6-20 mm; few 2-10% angular platy shell small pebbles 2-6 mm; massive structure; wet when sampled; sharp to
3C7	10.75 to 10.8	Black (5Y2.5/1) moist; light clay; wet when sampled

Field Tests:

Depth	H2O2-	PH-2	PH-3
.1	2	5.4	3.8
.3	1	5.8	4.8
.6	2	5.6	5.3
.8	2	5.5	5.0
1	1	5.1	3.3
1.25	1	5.8	4.8
1.5	3	5.7	6.3
1.75	1	5.9	7.0
2	2	6.3	8.6
2.25	1	6.5	6.9
2.5	1	6.1	8.1
2.75	1	6.3	7.5
3	1	6.3	7.2
3.25	2	6.2	6.1
3.5	3	6.3	7.9
3.75	2	6.2	6.8
4	2	6.2	6.8
4.25	2	6.3	6.7
4.5	2	6.3	6.8
4.75	2	6.2	6.6

(Continued)

Project: IAS **Site:** 79

Field Tests:

Depth	H2O2-	PH-2	PH-3
5	2	6.1	6.5
5.25		6.4	
5.5		6.5	
5.75		6.3	
6	1	6.4	6.5
6.25	1	6.3	6.5
6.5	1	6.2	6.4
6.75	1	6.3	6.5
7	1	6.3	6.5
7.5	1	5.9	6.3
8	1	6.2	6.3
8.5	1	6.8	6.2
9	1	7.0	5.9
9.5	1	8.3	5.3
10	3	8.2	6.1
10.5	2	8.5	5.8
10.8	4	7.9	0.9

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Horizon Notes:

Horizon	B2	Segregation in single layer @ 0.9m.
Horizon	C1	Segregation single layer at 1.6m
Horizon	3C7	Organics present. Insufficient volume to sample.

Project: IAS **Site:** 80

Location: GDA 94 ZONE 55 426398mE 7946554mN Lat: -18.57048 Long: 146.30247

Described By: Lauren OBrien (OBRL) **Date:** 31/JUL/08

Landscape:

Landform Pattern: alluvial plain **Element:** prior stream

Depth to Water: 0.8

Classifications:

ASC: REDOXIC, Hydrosol

Profile Morphology:

Horizon	Depth (m)	Description
A2	0 to .23	Dark greyish brown (10YR42) moist; clay loam; massive structure; common 1-2mm roots; moist when sampled; sharp to
B2	.23 to .75	Brown (10YR43) moist; few 2-10% fine <5mm faint brown mottles, few 2-10% medium 5-15mm distinct dark mottles; light clay; subangular blocky weak 2-5mm structure; few 2-10% medium 2- 6mm manganiferous soft segregations; common 1-2mm roots; moist when sampled; clear to
B3	.75 to 1.2	Greyish brown (2.5Y52) moist; few 2-10% medium 5-15mm distinct orange mottles; loamy sand; massive structure; very few <2% fine <2mm manganiferous nodules; few 2-10% medium 2-6mm ferruginous root linings; few 2-10% very coarse 20-60mm argillaceous soft segregations; few <1mm roots; moist when sampled; abrupt to
C1	1.2 to 1.5	Greyish brown (2.5Y52) moist; sand; single grain structure; wet when sampled; clear to
C2	1.5 to 1.8	Greyish brown (2.5Y52) moist; sand; single grain structure; wet when sampled; clear to
C3	1.8 to 6.4	Light yellowish brown (10YR64) moist; coarse sand; many 20-50% subangular quartz small pebbles 2-6 mm; common 10-20% subangular quartz medium pebbles 6-20 mm; very few <2% subrounded conglomerate large pebbles 20-60 mm; single grain structure; wet when sampled; gradual to
C4	6.4 to 6.95	Light brownish grey (2.5Y63) moist; coarse sand; abundant 50-90% subrounded quartz small pebbles 2-6 mm; few 2-10% subrounded quartz medium pebbles 6-20 mm; few 2-10% subrounded metamorphic rock (unidentified) medium pebbles 6-20 mm; very few <2% subrounded conglomerate large pebbles 20-60 mm; few 2-10% coarse 6-20mm argillaceous soft segregations; wet when sampled; sharp to
2C5	6.95 to 7.2	Dark grey (5Y41) moist; sandy light clay; few 2-10% subrounded quartz small pebbles 2-6 mm; massive structure; wet when sampled; sharp to
3C6	7.2 to 8.4	Grey (5Y51) moist; sand; common 10-20% subrounded quartz small pebbles 2-6 mm; single grain structure; few 2-10% medium 2-6mm organic (humified) soft segregations; few 2-10% coarse 6-20mm organic (humified) soft segregations; wet when sampled

Field Tests:

Depth	H2O2-	PH-2	PH-3	Depth	H2O2-	PH-2	PH-3
.1	2	4.6	2.9	3.5	1	6.0	6.0
.3	2	4.7	3.0	3.75	1	5.8	5.7
.6	3	5.3	3.5	4	1	6.4	6.1
.8	2	5.7	3.9	4.25	1	5.9	6.2
1	1	5.8	3.5	4.5	1	6.0	5.8
1.25	1	6.1	3.8	4.75	1	6.2	6.1
1.5	1	5.9	5.2	5	1	6.4	6.2
1.75	1	5.9	2.7	5.5	1	6.3	6.4
2	1	5.9	4.5	6	1	6.5	6.5
2.25	1	5.9	5.9	6.5	1	7.2	6.0
2.5	1	5.9	5.6	7	4	7.1	1.1
2.75		5.8	5.5	7.5	1	6.6	5.7
3	1	5.7	5.8	8	1	6.8	5.7
3.25	1	6.1	6.0	8.4	1	6.9	1.2

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Horizon Notes:

Horizon	B3	2LS2 segregations is a lens at 1.15m
Horizon	3C6	Segregations at bottom of horizon only

Project: IAS **Site:** 81

Location: GDA 94 ZONE 55 426901mE 7946562mN Lat: -18.57042 Long: 146.30724

Described By: Lauren OBrien (OBRL) **Date:** 31/JUL/08

Landscape:

Landform Pattern: alluvial plain **Element:** plain

Classifications:

ASC: SULFIDIC, REDOXIC, Hydrosol

Profile Morphology:

Horizon	Depth (m)	Description
A2	0 to .15	Olive brown (2.5Y44) moist; fine sandy clay loam; massive structure; wet when sampled; clear to
A3	.15 to .7	Olive brown (2.5Y44) moist; common 10-20% medium 5-15mm faint gley mottles; fine sandy loam; massive structure; moist when sampled; clear to
B21	.7 to 1.1	Olive grey (5Y52) moist; common 10-20% medium 5-15mm distinct orange mottles; silty light clay; massive structure; moist when sampled; sharp to
B22	1.1 to 1.4	Dark olive grey (5Y32) moist; silty light clay; massive structure; wet when sampled; sharp to
B23	1.4 to 1.8	Dark olive grey (5Y32) moist; fibric silty light clay; massive structure; wet when sampled; sharp to
2C1	1.8 to 2.1	Dark grey (5Y41) moist; sand; single grain structure; wet when sampled; clear to
3C2	2.1 to 4.8	Light brownish grey (2.5Y63) moist; coarse sand; common 10-20% subrounded quartz small pebbles 2-6 mm; single grain structure; wet when sampled

Field Tests:

Depth	H2O2-	PH-2	PH-3
.1	2	5.6	3.7
.3	2	6.7	5.7
.6	1	6.7	5.9
.8	1	6.9	6.0
1	1	6.7	5.8
1.25	2	6.5	5.0
1.5	4	6.7	1.2
1.75	4	6.7	1.0
2	4	6.9	1.3
2.25	1	6.8	5.0
2.5	1	6.5	4.9
2.75	1	6.5	5.4
3	1	6.4	5.4
3.25	1	6.4	5.2
3.5	1	6.5	5.3
3.75	1	6.4	5.6
4	1	6.3	5.8
4.25	1	6.3	5.2
4.5	1	6.3	5.1
4.75	1	6.3	4.5

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Observation Notes:

Location ~15m behind gated bund; reclaimed mangrove land.

Horizon Notes:

Horizon B23 Sand lens at 1.7m

Project: IAS **Site:** 82

Location: GDA 94 ZONE 55 426935mE 7946557mN Lat: -18.57047 Long: 146.30756

Described By: Lauren OBrien (OBRL) **Date:** 08/SEP/08

Landscape:

Landform Pattern: tidal flat **Element:** intertidal flat

Depth to Water: .01

Classifications:

ASC: SULFIDIC, INTERTIDAL, Hydrosol

Profile Morphology:

Horizon	Depth (m)	Description
A2	0 to .15	Dark grey (5Y41) moist; clay loam, fine sandy; massive structure; wet when sampled; clear to
B21	.15 to .3	Dark grey (N40) moist; many 20-50% coarse 15-30mm distinct orange mottles; clay loam, fine sandy; massive structure; wet when sampled; clear to
B22	.3 to .65	Dark grey (N40) moist; few 2-10% coarse 15-30mm distinct orange mottles; silty clay loam; massive structure; wet when sampled; clear to
B23	.65 to .9	Very dark grey (N30) moist; silty clay loam; massive structure; wet when sampled

Field Tests:

Depth	H2O2-	PH-2	PH-3
.1	2	6.4	5.1
.3	1	6.5	5.4
.6	2	6.6	4.7
.8	2	6.8	3.3
.9	2	6.9	3.9

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Observation Notes:

Location Gouge sample 10m E of bund and floodgate. 426925E, 7946557N

Horizon Notes:

Horizon	A2	Organics
Horizon	B21	Organics
Horizon	B22	Organics

Project: IAS **Site:** 83

Location: GDA 94 ZONE 55 426427mE 7945952mN Lat: -18.57592 Long: 146.30272

Described By: Lauren OBrien (OBRL) **Date:** 01/AUG/08

Landscape:

Landform Pattern: alluvial plain **Element:** plain

Surface Condition: Soft

Disturbances: Cultivation - Rainfed

Classifications:

ASC: TENOSOLIC, REDOXIC, Hydrosol

Vegetation:

Profile Morphology:

Horizon	Depth (m)	Description
A2p	0 to .3	Dark greyish brown (10YR42) moist; very few <2% fine <5mm faint orange mottles; clay loam; massive structure; moist when sampled; gradual to
B21	.3 to .65	Olive brown (2.5Y44) moist; few 2-10% medium 5-15mm distinct orange mottles, very few <2% medium 5-15mm distinct dark mottles, common 10-20% very coarse >30mm faint pale mottles; clay loam; massive structure; moist when sampled; gradual to
B22	.65 to 1.15	Dark greyish brown (2.5Y43) moist; common 10-20% fine <5mm distinct orange mottles; light clay; massive structure; wet when sampled; sharp to
2B1	1.15 to 1.6	Grey (5Y51) moist; common 10-20% medium 5-15mm prominent brown mottles; clayey sand; single grain structure; wet when sampled; clear to
2C1	1.6 to 2.5	Grey (5Y51) moist; sand; single grain structure; wet when sampled; sharp to
2C2	2.5 to 2.8	Dark grey (N40) moist; loamy sand; single grain structure; wet when sampled; sharp to
2C3	2.8 to 3.1	Dark grey (N40) moist; clayey sand; single grain structure; wet when sampled; sharp to
2C4	3.1 to 3.8	Dark grey (N40) moist; loamy sand; few 2-10% subrounded quartz small pebbles 2-6 mm; single grain structure; wet when sampled; gradual to
2C5	3.8 to 4.2	Dark grey (N40) moist; fine sandy clay loam; massive structure; wet when sampled; gradual to
2C6	4.2 to 5.3	Dark grey (N40) moist; clay loam; few 2-10% angular platy shell small pebbles 2-6 mm; very few <2% angular platy shell medium pebbles 6-20 mm; massive structure; wet when sampled; gradual to
2C7	5.3 to 5.9	Dark grey (N40) moist; fine sandy clay loam; few 2-10% angular platy shell small pebbles 2-6 mm; very few <2% angular platy shell medium pebbles 6-20 mm; massive structure; wet when sampled; sharp to
2C8	5.9 to 6	Dark grey (N40) moist; fine sand; massive structure; wet when sampled

Field Tests:

Depth	H2O2-	PH-2	PH-3	Depth	H2O2-	PH-2	PH-3
.1	1	5.0	4.5	3	2	5.6	1.6
.3	2	4.9	3.7	3.25	2	5.7	1.6
.6	1	4.7	3.9	3.5	4	6.2	1.6
.8	1	4.8	3.9	3.75	3	6.8	1.8
1	1	4.9	3.7	4	4	7.0	3.8
1.25	1	5.1	4.2	4.25	2	7.6	5.8
1.5	1	5.1	4.1	4.5	2	7.9	6.1
1.75	1	5.2	3.3	4.75	2	8.1	6.1
2	2	5.5	2.1	5	1	7.8	5.8
2.25	2	5.6	2.3	5.5	1	7.7	6.1
2.5	1	5.4	1.8	6	1	8.0	6.4
2.75	2	5.5	1.7				

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Horizon Notes:

Horizon	2C1	Clay lens at 2m
Horizon	2C3	Organics
Horizon	2C4	Clay lens at base of horizon

Project: IAS **Site:** 84

Location: GDA 94 ZONE 55 425958mE 7945724mN Lat: -18.57796 Long: 146.29827

Described By: Lauren OBrien (OBRL) **Date:** 01/AUG/08

Landscape:

Landform Pattern: alluvial plain **Element:** plain

Surface Condition: Soft **Disturbances:** Cultivation - Rainfed

Classifications:

ASC: TENOSOLIC, REDOXIC, Hydrosol

Profile Morphology:

Horizon	Depth (m)	Description
A2p	0 to .3	Dark greyish brown (2.5Y43) moist; clay loam; common 10-20% subrounded gravel medium pebbles 6-20 mm; massive structure; common 1-2mm roots; moist when sampled; abrupt to
B21	.3 to .65	Dark greyish brown (2.5Y43) moist; very few <2% fine <5mm faint dark mottles, few 2-10% medium 5-15mm distinct orange mottles; light medium clay; subangular blocky weak 2-5mm structure; few 2-10% fine <2mm manganiferous nodules; common <1mm roots; moist when sampled; clear to
B22	.65 to .95	Olive brown (2.5Y44) moist; very few <2% fine <5mm faint dark mottles, very few <2% fine <5mm faint orange mottles; fine sandy light clay; massive structure; few 2-10% fine <2mm manganiferous nodules; common <1mm roots; moist when sampled; clear to
B3	.95 to 1.7	Light olive brown (2.5Y54) moist; many 20-50% very coarse >30mm distinct gley mottles, common 10-20% medium 5-15mm distinct orange mottles; sandy light clay; massive structure; common 1-2mm roots; moist when sampled; clear to
2C1	1.7 to 2.1	Grey (5Y51) moist; clayey sand; very few <2% subrounded quartz small pebbles 2-6 mm; massive structure; wet when sampled; sharp to
3C2	2.1 to 2.4	Grey (5Y51) moist; coarse sand; common 10-20% subrounded quartz small pebbles 2-6 mm; single grain structure; wet when sampled; clear to
3C3	2.4 to 3.3	Dark grey (5Y41) moist; loamy coarse sand; common 10-20% subrounded quartz small pebbles 2-6 mm; weakly cemented continuous platy organic pan; wet when sampled; gradual to
3C4	3.3 to 3.85	Dark grey (N40) moist; loamy coarse sand; many 20-50% subrounded quartz small pebbles 2-6 mm; single grain structure; wet when sampled; abrupt to
4C5	3.85 to 4.3	Dark grey (N40) moist; fine sandy loam; massive structure; wet when sampled; clear to
5C6	4.3 to 4.5	Dark grey (N40) moist; clayey sand; very few <2% subangular quartz small pebbles 2-6 mm; single grain structure; wet when sampled; clear to
6C7	4.5 to 5.7	Grey (5Y51) moist; coarse sand; common 10-20% subrounded quartz small pebbles 2-6 mm; single grain structure; wet when sampled; abrupt to
7C8	5.7 to 6	Dark greenish grey (10Y41) moist; loamy fine sand; few 2-10% angular platy shell small pebbles 2-6 mm; massive structure; wet when sampled

Field Tests:

Depth	H2O2-	PH-2	PH-3	Depth	H2O2-	PH-2	PH-3
.1	2	4.8	2.7	3	3	6.5	1.4
.3	2	4.9	2.5	3.25	2	6.7	1.4
.6	2	5.4	3.9	3.5	2	7.1	1.8
.8	2	5.3	4.0	3.75	3	7.4	1.1
1	1	5.3	4.0	4	3	6.8	1.3
1.25	1	5.4	3.8	4.25	3	6.9	1.3
1.5	1	5.4	3.0	4.5	3	6.9	1.4
1.75	1	5.1	3.0	4.75	2	6.9	1.4
2	1	5.1	2.6	5	1	6.8	1.3
2.25	1	5.9	3.2	5.5	1	7.1	1.5
2.5		6.4	2.0	6	1	7.9	6.3
2.75	3	6.4	1.4				

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Horizon Notes:

Horizon	A2p	Coarse Fragments in layer at 0.3m
Horizon	7C8	Shell layer at base of horizon

Project: IAS **Site:** 85

Location: GDA 94 ZONE 55 425436mE 7946163mN Lat: -18.57398 Long: 146.29334

Described By: Lauren OBrien (OBRL) **Date:** 01/AUG/08

Landscape:

Landform Pattern: alluvial plain **Element:** plain

Depth to Water: 1.6

Disturbances: Cultivation - Rainfed

Classifications:

ASC: REGOLITHIC, Grey-Orthic, Tenosol

Profile Morphology:

Horizon	Depth (m)	Description
A11	0 to .1	Dark greyish brown (10YR42) moist; clay loam, sandy; angular blocky moderate 2-5mm structure; many 2-5mm roots; moist when sampled; abrupt to
A12	.1 to 1.05	Dark greyish brown (10YR42) moist; sandy light clay; massive structure; moist when sampled; diffuse to
C1	1.05 to 1.65	Dark yellowish brown (10YR44) moist; sand; few 2-10% subrounded quartz small pebbles 2-6 mm; single grain structure; very few <2% extremely coarse >60mm argillaceous soft segregations; wet when sampled; abrupt to
2C2	1.65 to 3.6	Yellowish brown (10YR56) moist; coarse sand; many 20-50% subrounded quartz small pebbles 2-6 mm; very few <2% subrounded quartz medium pebbles 6-20 mm; single grain structure; wet when sampled; diffuse to
2C3	3.6 to 7.7	Brownish yellow (10YR66) moist; coarse sand; many 20-50% subangular quartz small pebbles 2- 6 mm; few 2-10% subrounded quartz medium pebbles 6-20 mm; few 2-10% subrounded metamorphic rock (unidentified) medium pebbles 6-20 mm; very few <2% subrounded conglomerate large pebbles 20-60 mm; single grain structure; wet when sampled; diffuse to
2C4	7.7 to 8.4	Light brownish grey (2.5Y63) moist; coarse sand; many 20-50% subangular quartz small pebbles 2-6 mm; few 2-10% subrounded quartz medium pebbles 6-20 mm; single grain structure; wet when sampled; sharp to
3C5	8.4 to 9.5	Dark grey (N40) moist; silty clay loam; few 2-10% angular platy shell small pebbles 2-6 mm; very few <2% angular platy shell medium pebbles 6-20 mm; massive structure; wet when sampled; clear to
3C6	9.5 to 9.6	Dark grey (N40) moist; sandy light clay; very few <2% angular platy shell small pebbles 2-6 mm; massive structure; wet when sampled

Field Tests:

Depth	H2O2-	PH-2	PH-3	Depth	H2O2-	PH-2	PH-3
.1	2	4.7	4.3	4.5	1	6.3	6.6
.3	2	4.6	3.6	4.75	1	6.3	6.4
.6	2	4.8	2.8	5	1	6.5	6.3
.8	1	4.8	3.6	5.5	1	6.9	6.3
1	1	5.0	4.0	6	1	6.5	6.3
1.25	1	5.2	4.6	6.5	1	6.4	6.5
1.5	1	5.4	5.4	7	1	6.2	6.4
1.75	1	5.3	4.7	7.5	1	6.9	6.5
2	1	5.7	5.9	8	1	6.9	6.2
2.25	1	5.3	6.1	8.5	3	8.1	4.7
2.5	1	6.3	5.9	8.75	2	8.7	5.9
2.75	1	6.3	6.1	9	2	8.6	6.4
3.75	1	5.9	6.1	9.25	2	8.5	5.9
4	1	6.2	6.3	9.5	2	8.6	6.8
4.25	1	6.2	6.4				

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Horizon Notes:

Horizon C1 Segregations occur as clay lens at 1.65m

Project: IAS **Site:** 86

Location: GDA 94 ZONE 55 425561mE 7947550mN Lat: -18.56145 Long: 146.29458

Described By: Lauren OBrien (OBRL) **Date:** 02/AUG/08

Landscape:

Landform Pattern: alluvial plain **Element:** plain

Depth to Water: 0.9

Disturbances: Cultivation - Rainfed

Classifications:

ASC: REGOLITHIC, Brown-Orthic, Tenosol

Profile Morphology:

Horizon	Depth (m)	Description
A21p	0 to .1	Brown (10YR43) moist; sandy clay loam; massive structure; dry when sampled; abrupt to
A22	.1 to .5	Dark yellowish brown (10YR44) moist; sandy loam; massive structure; moderately moist when sampled; abrupt to
B1	.5 to .9	Yellowish brown (10YR56) moist; sand; single grain structure; moderately moist when sampled; clear to
B2	.9 to 1.65	Yellowish brown (10YR58) moist; sand; very few <2% subrounded quartz small pebbles 2-6 mm; single grain structure; wet when sampled; clear to
C1	1.65 to 2.3	Light brownish grey (2.5Y63) moist; sand; very few <2% subrounded quartz small pebbles 2-6 mm; single grain structure; wet when sampled; abrupt to
2C2	2.3 to 2.4	Greenish grey (10Y51) moist; clayey sand; massive structure; wet when sampled; abrupt to
3C3	2.4 to 4.5	Yellowish brown (10YR56) moist; sand; few 2-10% subrounded quartz small pebbles 2-6 mm; single grain structure; wet when sampled; diffuse to
3C4	4.5 to 7	Yellowish brown (10YR56) moist; coarse sand; common 10-20% subrounded quartz small pebbles 2-6 mm; few 2-10% subrounded metamorphic rock (unidentified) medium pebbles 6-20 mm; single grain structure; wet when sampled; sharp to
4C5u	7 to 8.4	Dark grey (10YR41) moist; silty light clay; few 2-10% angular platy shell small pebbles 2-6 mm; very few <2% angular platy shell medium pebbles 6-20 mm; massive structure; uncemented continuous massive organic pan; wet when sampled

Field Tests:

Depth	H2O2-	PH-2	PH-3	Depth	H2O2-	PH-2	PH-3
.1	2	4.8	4.2	3.75	1	6.2	6.2
.3	2	4.9	4.4	4	1	6.3	6.4
.6	2	5.2	5.5	4.25	1	6.3	6.3
.8	2	5.0	4.8	4.5	1	6.3	6.3
1	1	5.5	6.0	4.75	1	6.2	6.2
1.25	1	5.6	5.9	5	1	6.2	6.3
1.5	1	5.9	6.4	5.25	1	6.3	6.4
1.75	1	6.1	6.4	5.5	1	6.5	6.4
2	1	6.4	6.4	5.75	1	6.6	6.8
2.25	1	6.3	6.5	6	1	6.7	6.5
2.35	1	6.1	5.8	7.25	2	8.9	6.2
2.5	1	6.1	6.4	7.5	2	8.8	6.5
2.75	1	6.3	6.4	7.75	1	9.0	7.7
3	1	6.2	5.9	8	2	8.6	6.0
3.25	1	6.1	5.9	8.25	2	9.3	6.5
3.5	1	6.6	6.3				

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Project: IAS **Site:** 87

Location: GDA 94 ZONE 55 425487mE 7947815mN Lat: -18.55905 Long: 146.29389

Described By: Lauren OBrien (OBRL) **Date:** 02/AUG/08

Landscape:

Landform Pattern: flood plain **Element:** scroll

Depth to Water: .5

Disturbances: Cultivation - Rainfed

Classifications:

ASC: SULFIDIC, REDOXIC, Hydrosol

Profile Morphology:

Horizon	Depth (m)	Description
A2p	0 to .15	Greyish brown (2.5Y52) moist; light clay; massive structure; common 1-2mm roots; moist when sampled; clear to
B2	.15 to 1.05	Greyish brown (2.5Y52) moist; few 2-10% coarse 15-30mm distinct gley mottles, few 2-10% medium 5-15mm faint brown mottles; light clay; massive structure; common 1-2mm roots; moist when sampled; gradual to
2B3	1.05 to 1.4	Dark greenish grey (10Y41) moist; very few <2% fine <5mm faint brown mottles; sandy loam; massive structure; few <1mm roots; wet when sampled; abrupt to
3C1	1.4 to 1.9	Grey (5Y51) moist; sand; very few <2% subrounded quartz medium pebbles 6-20 mm; very few <2% subangular metamorphic rock (unidentified) medium pebbles 6-20 mm; single grain structure; wet when sampled; clear to
3C2	1.9 to 5.9	Light brownish grey (2.5Y62) moist; sand; single grain structure; wet when sampled; gradual to
3C3	5.9 to 6.6	Grey (5Y61) moist; sand; common 10-20% subrounded quartz small pebbles 2-6 mm; single grain structure; wet when sampled; sharp to
4C4	6.6 to 7.2	Dark greenish grey (10Y41) moist; silty light clay; few 2-10% angular platy shell medium pebbles 6-20 mm; few 2-10% angular platy shell small pebbles 2-6 mm; single grain structure; wet when sampled

Field Tests:

Depth	H2O2-	PH-2	PH-3	Depth	H2O2-	PH-2	PH-3
.1	2	5.1	3.2	3.25	1	6.2	5.8
.3	2	6.0	4.0	4	1	6.7	6.0
.6	2	6.3	5.1	4.25	1	6.8	6.0
.8	2	6.7	5.8	4.5	1	6.7	6.1
1	2	7.0	5.8	4.75	1	6.8	5.8
1.25	2	6.8	2.7	5	1	7.0	6.2
1.5	2	6.7	3.0	5.5	1	7.1	6.1
1.75	2	6.8	2.0	6	1	7.1	6.2
2	1	6.8	5.9	6.5	3	7.5	1.1
2.25	1	6.3	5.3	6.75	2	8.1	5.3
2.5	1	6.1	5.5	7	2	8.3	5.8
2.75	1	6.0	5.6	7.2	3	8.1	6.2
3	1	6.0	5.5				

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Horizon Notes:

Horizon 2B3 Organics at 1.3m, clay lens at 1.1m

Project: IAS **Site:** 88

Location: GDA 94 ZONE 55 425310mE 7947566mN Lat: -18.56129 Long: 146.2922

Described By: Lauren OBrien (OBRL) **Date:** 02/AUG/08

Landscape:

Landform Pattern: alluvial plain **Element:** plain

Depth to Water: .5

Disturbances: Cultivation - Rainfed

Classifications:

ASC: REDOXIC, Hydrosol

Profile Morphology:

Horizon	Depth (m)	Description
A2p	0 to .2	Dark greyish brown (10YR42) moist; clay loam; angular blocky weak 2-5mm structure; many 1-2mm roots; moist when sampled; clear to
B2	.2 to .9	Brown (10YR53) moist; common 10-20% coarse 15-30mm distinct gley mottles, few 2-10% medium 5-15mm faint brown mottles; clay loam, fine sandy; massive structure; few 2-10% fine <2mm ferruginous root linings; common 1-2mm roots; wet when sampled; sharp to
2C1	.9 to 1.9	Brownish yellow (10YR66) moist; coarse sand; common 10-20% subrounded quartz small pebbles 2-6 mm; common 10-20% subrounded metamorphic rock (unidentified) small pebbles 2-6 mm; very few <2% subrounded metamorphic rock (unidentified) medium pebbles 6-20 mm; single grain structure; wet when sampled; sharp to
3C2	1.9 to 2.2	Grey (5Y61) moist; coarse sand; common 10-20% subrounded quartz small pebbles 2-6 mm; common 10-20% subrounded metamorphic rock (unidentified) small pebbles 2-6 mm; very few <2% subrounded metamorphic rock (unidentified) medium pebbles 6-20 mm; single grain structure; wet when sampled; sharp to
4C3	2.2 to 5.98	Light brownish grey (2.5Y63) moist; coarse sand; wet when sampled; gradual to
4C4	5.98 to 7.15	Light brownish grey (2.5Y62) moist; coarse sand; many 20-50% subrounded quartz small pebbles 2-6 mm; many 20-50% subrounded metamorphic rock (unidentified) small pebbles 2-6 mm; very few <2% subrounded metamorphic rock (unidentified) medium pebbles 6-20 mm; single grain structure; wet when sampled; abrupt to
5C5u	7.15 to 8.4	Dark greenish grey (10Y41) moist; silty clay loam; very few <2% angular platy shell medium pebbles 6-20 mm; few 2-10% angular platy shell small pebbles 2-6 mm; massive structure; wet when sampled

Field Tests:

Depth	H2O2-	PH-2	PH-3	Depth	H2O2-	PH-2	PH-3
.1	1	4.5	3.4	4	1	5.8	5.8
.3	2	5.0	3.2	4.25	1	5.6	5.8
.6	2	5.3	4.0	4.5	1	5.9	5.8
.8	2	5.2	4.3	4.75	1	5.7	5.7
1	1	5.1	3.4	5	1	6.9	5.8
1.25	1	5.1	4.4	5.25	4	6.9	6.0
1.5	1	5.4	5.6	5.5	1	6.7	6.1
1.75	1	5.6	4.8	5.75	1	6.5	6.0
2	1	5.7	3.5	6	1	6.9	6.2
2.1	1	5.8	3.6	6.5	1	7.1	5.7
2.25	1	5.7	4.4	7	1	7.1	6.2
2.5	1	5.9	6.1	7.25	2	7.8	5.7
2.75	1	5.7	6.1	7.5	2	7.9	6.1
3	1	5.7	6.1	7.75	2	7.9	5.6
3.25	1	5.5	5.5	8	2	8.1	5.7
3.5	1	6.0	6.0	8.25	2	8.3	5.7
3.75	1	5.7	5.7	8.4	2	8.4	5.6

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Horizon Notes:

Horizon	B2	Sand lens at 0.8m
Horizon	4C3	Clay lens at 5.95m
Horizon	4C4	Organics at 6.0m

Project: IAS **Site:** 89

Location: GDA 94 ZONE 55 425039mE 7947470mN Lat: -18.56215 Long: 146.28963

Described By: Lauren OBrien (OBRL) **Date:** 02/AUG/08

Landscape:

Landform Pattern: alluvial plain **Element:** creek flat

Disturbances: Cultivation – Rainfed

Classifications:

ASC: SULFIDIC, REDOXIC, Hydrosol

Profile Morphology:

Horizon	Depth (m)	Description
A21	0 to .15	Dark greyish brown (2.5Y42) moist; sandy light clay; massive structure; common 1-2mm roots; moist when sampled; clear to
A22	.15 to .5	Dark greyish brown (2.5Y42) moist; sandy clay loam; angular blocky weak 2-5mm structure; few 1-2mm roots; moist when sampled; clear to
B21	.5 to .75	Dark grey (5Y41) moist; few 2-10% medium 5-15mm faint brown mottles; light clay; massive structure; common <1mm roots; wet when sampled; clear to
C1u	.75 to 1.15	Dark grey (N40) moist; clayey sand; wet when sampled; gradual to
2C2u	1.15 to 1.6	Grey (5Y51) moist; sand; single grain structure; wet when sampled; gradual to
2C3u	1.6 to 2.3	Grey (5Y51) moist; sand; common 10-20% subrounded quartz small pebbles 2-6 mm; single grain structure; wet when sampled; gradual to
3C4	2.3 to 3.3	Light brownish grey (2.5Y63) moist; sand; few 2-10% subrounded quartz small pebbles 2-6 mm; single grain structure; wet when sampled; gradual to
3C5	3.3 to 6	Light brownish grey (2.5Y63) moist; coarse sand; many 20-50% subrounded quartz small pebbles 2-6 mm; very few <2% subrounded metamorphic rock (unidentified) medium pebbles 6-20 mm; single grain structure; wet when sampled; clear to
4C6u	6 to 6.6	Very dark grey (N30) moist; coarse sand; common 10-20% subrounded quartz small pebbles 2-6 mm; single grain structure; wet when sampled; sharp to
5C7u	6.6 to 7.2	Dark greenish grey (10Y41) moist; silty clay loam; very few <2% angular platy shell medium pebbles 6-20 mm; few 2-10% angular platy shell small pebbles 2-6 mm; massive structure; wet when sampled

Field Tests:

Depth	H2O2-	PH-2	PH-3	Depth	H2O2-	PH-2	PH-3
.1	2	4.5	2.1	3.5	1	6.6	6.0
.3	4	5.8	3.1	3.75	1	6.1	5.5
.6	2	6.3	4.2	4	1	6.2	5.9
.8	2	6.5	2.7	4.25	1	6.1	5.9
1	4	6.6	1.1	4.5	1	6.4	5.9
1.25	1	6.6	5.6	4.75	1	6.4	6.0
1.5	4	6.6	1.6	5	1	6.2	5.9
1.75	2	7.0	1.7	5.5	1	6.4	5.9
2	3	6.6	1.2	6	1	6.5	6.2
2.25	2	6.7	5.4	6.25	4	6.7	0.6
2.5	1	6.1	6.0	6.5	4	6.9	0.7
2.75	1	6.3	5.6	6.75	2	7.0	5.6
3	1	6.4	5.8	7	2	7.7	5.7
3.25	1	6.4	5.8	7.2	2	8.1	5.8

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Horizon Notes:

Horizon	B21	Organics
Horizon	2C3u	Iron strip result at 0.9m : ~25mg/L Fe(II)
Horizon	3C4	Iron strip result at 2.75m: ~10mg/L Fe(II)
Horizon	3C5	Iron stip results at 4.6m: ~3mg/l Fe(II). At 5m: ~100mg/L At 6m: ~100mg/L
Horizon	4C6u	Clay/organics lens at 6.5m

Project: IAS **Site:** 90

Location: GDA 94 ZONE 55 426409mE 7947655mN Lat: -18.56053 Long: 146.30262

Described By: Lauren OBrien (OBRL) **Date:** 03/AUG/08

Landscape:

Landform Pattern: alluvial plain **Element:** plain

Depth to Water: .3

Disturbances: Cultivation - Rainfed

Classifications:

ASC: SULFIDIC, REDOXIC, Hydrosol

Profile Morphology:

Horizon	Depth (m)	Description
A2	0 to .25	Dark yellowish brown (10YR44) moist; clay loam, fine sandy; weak structure; common 2-5mm roots; moist when sampled; gradual to
B21	.25 to .6	Olive brown (2.5Y44) moist; few 2-10% very coarse >30mm faint gley mottles, few 2-10% medium 5-15mm distinct orange mottles, few 2-10% medium 5-15mm distinct dark mottles; fine sandy light clay; massive structure; common 1-2mm roots; moist when sampled; clear to
2B22	.6 to .95	Olive brown (2.5Y44) moist; few 2-10% medium 5-15mm distinct dark mottles, common 10-20% coarse 15-30mm faint gley mottles, many 20-50% medium 5-15mm distinct orange mottles; loamy fine sand; massive structure; few 2-10% medium 2-6mm ferromanganiferous soft segregations; moist when sampled; abrupt to
2C1	.95 to 1.4	Very dark grey (5Y31) moist; fine sandy clay loam; massive structure; wet when sampled; gradual to
2C2	1.4 to 2	Very dark grey (5Y31) moist; sandy light clay; massive structure; wet when sampled; clear to
3C3	2 to 5.5	Olive grey (5Y52) moist; coarse sand; common 10-20% subrounded quartz small pebbles 2-6 mm; common 10-20% subrounded metamorphic rock (unidentified) small pebbles 2-6 mm; very few <2% subrounded metamorphic rock (unidentified) medium pebbles 6-20 mm; single grain structure; very few <2% very coarse 20-60mm argillaceous soft segregations; wet when sampled; clear to
4C4	5.5 to 6	Dark greenish grey (10Y41) moist; fine sandy loam; few 2-10% angular platy shell medium pebbles 6-20 mm; massive structure; wet when sampled

Field Tests:

Depth	H2O2-	PH-2	PH-3	Depth	H2O2-	PH-2	PH-3
.1	2	5.1	3.9	3.25	1	6.6	2.3
.3	2	6.3	4.4	3.5	1	6.5	5.0
.6	4	7.0	7.2	3.75	1	6.5	6.0
.8	4	6.9	7.7	4	1	6.5	5.8
1	2	7.1	3.7	4.25	1	6.4	5.2
1.25	3	6.8	1.4	4.5	1	6.6	6.1
1.5	1	6.9	1.1	4.75	1	6.4	5.1
1.75	4	6.9	1.2	5	1	7.1	6.0
2	3	6.7	1.4	5.25	1	7.6	5.5
2.25	1	6.6	5.5	5.5	4	7.7	1.7
2.5	1	6.4	5.7	5.75	2	8.2	6.2
2.75	1	6.5	5.1	6	2	8.0	5.8
3	1	6.6	5.6				

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Horizon Notes:

Horizon	2C1	Organics
Horizon	2C2	Sand lenses
Horizon	3C3	Segregation lens @ 2.4m

Project: IAS **Site:** 91

Location: GDA 94 ZONE 55 425729mE 7947679mN Lat: -18.56029 Long: 146.29617

Described By: Lauren OBrien (OBRL) **Date:** 03/AUG/08

Landscape:

Landform Pattern: alluvial plain **Element:** drainage depression

Disturbances: Cultivation - Rainfed

Classifications:

ASC: SULFIDIC, REDOXIC, Hydrosol

Profile Morphology:

Horizon	Depth (m)	Description
A2p	0 to .2	Dark greyish brown (10YR42) moist; sandy clay loam; massive structure; common 1-2mm roots; moist when sampled; clear to
B2	.2 to .6	Dark greyish brown (10YR42) moist; common 10-20% fine <5mm distinct orange mottles, many 20-50% coarse 15-30mm prominent gley mottles; light medium clay; massive structure; few 2-10% fine <2mm ferruginous root linings; few 2-5mm roots; moist when sampled; abrupt to
B3	.6 to .85	Olive grey (5Y52) moist; common 10-20% coarse 15-30mm faint orange mottles; clay loam, fine sandy; massive structure; very few <2% fine <2mm ferruginous root linings; moist when sampled; abrupt to
2C1	.85 to 1.2	Dark grey (N40) moist; light clay; massive structure; wet when sampled; sharp to
3C2	1.2 to 1.5	Dark grey (N40) moist; clayey sand; single grain structure; wet when sampled; gradual to
4C3	1.5 to 2	Grey (5Y61) moist; coarse sand; many 20-50% subrounded quartz small pebbles 2-6 mm; very few <2% subrounded metamorphic rock (unidentified) medium pebbles 6-20 mm; single grain structure; wet when sampled; diffuse to
4C4	2 to 3.6	Light brownish grey (2.5Y62) moist; coarse sand; common 10-20% subrounded quartz small pebbles 2-6 mm; common 10-20% subrounded metamorphic rock (unidentified) small pebbles 2-6 mm; single grain structure; wet when sampled

Field Tests:

Depth	H2O2-	PH-2	PH-3
.1	2	5.2	3.8
.3	2	5.6	4.0
.6	2	7.1	5.5
.8	2	6.7	5.3
1	2	7.1	4.9
1.25	4	7.2	1.5
1.5	4	7.0	1.8
1.75	3	6.8	1.4
2	1	7.0	2.1
2.25	1	7.2	3.3
2.5	1	6.8	5.8
2.75	1	6.9	5.8
3	1	7.1	5.8
3.25	1	7.0	6.0
3.5	1	6.9	5.8

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Observation Notes:

Location low-lying cnae adjacent to mangroves - swampy drainage line

Horizon Notes:

Horizon B2 Organics

Horizon 2C1 Organics

Project: IAS **Site:** 92

Location: GDA 94 ZONE 55 425744mE 7947547mN Lat: -18.56148 Long: 146.29631

Described By: Lauren OBrien (OBRL) **Date:** 03/AUG/08

Landscape:

Landform Pattern: alluvial plain **Element:** drainage depression

Depth to Water: .01

Disturbances: Cultivation - Rainfed

Classifications:

ASC: SULFIDIC, REDOXIC, Hydrosol

Profile Morphology:

Horizon	Depth (m)	Description
A3	0 to .35	Olive grey (5Y42) moist; common 10-20% coarse 15-30mm distinct orange mottles, few 2-10% fine <5mm faint dark mottles; fine sandy light clay; massive structure; few 2-10% medium 2-6mm ferruginous root linings; weakly cemented continuous massive organic pan; wet when sampled
B2	.35 to .8	Dark grey (10YR41) moist; few 2-10% coarse 15-30mm distinct orange mottles, few 2-10% fine <5mm faint dark mottles; light medium clay; massive structure; very few <2% fine <2mm ferruginous root linings; wet when sampled
C1u	.8 to 1.6	Very dark grey (N30) moist; light clay; massive structure; wet when sampled
2C2u	1.6 to 2.2	Greenish grey (10Y51) moist; coarse sand; many 20-50% subrounded quartz small pebbles 2-6 mm; very few <2% subrounded metamorphic rock (unidentified) medium pebbles 6-20 mm; single grain structure; wet when sampled
2C3u	2.2 to 2.4	Yellowish brown (10YR56) moist; coarse sand; many 20-50% subrounded quartz small pebbles 2-6 mm; very few <2% subrounded metamorphic rock (unidentified) medium pebbles 6-20 mm; single grain structure; wet when sampled

Field Tests:

Depth	H2O2-	PH-2	PH-3
.1	2	5.9	2.6
.3	3	6.6	2.2
.6	2	5.9	2.6
.8	2	6.2	1.9
1	4	6.4	1.5
1.25	4	6.7	1.3
1.5	4	7.0	1.4
1.75	4	6.9	1.7
2	4	6.8	1.5
2.25	4	6.8	1.4

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Observation Notes:

Location cane drain - shallow hole

Horizon Notes:

Horizon	A3	Pan @ 0.35m
Horizon	B2	Slightly sodic
Horizon	C1u	Much organics

Project: IAS **Site:** 93

Location: GDA 94 ZONE 55 424469mE 7947692mN Lat: -18.56012 Long: 146.28423

Described By: Lauren OBrien (OBRL) **Date:** 03/AUG/08

Landscape:

Landform Pattern: alluvial plain **Element:** prior stream

Disturbances: Cultivation - Rainfed

Classifications:

ASC: SULFIDIC, REDOXIC, Hydrosol

Profile Morphology:

Horizon	Depth (m)	Description
A2	0 to .15	Dark greyish brown (2.5Y42) moist; light medium clay; massive structure; common 1-2mm roots; wet when sampled; clear to
B2	.15 to .9	Dark greenish grey (10Y41) moist; many 20-50% medium 5-15mm prominent brown mottles, many 20-50% medium 5-15mm prominent orange mottles; light clay; massive structure; common 10-20% fine <2mm ferruginous root linings; common 2-5mm roots; wet when sampled; clear to
C1u	.9 to 1.7	Very dark grey (N30) moist; few 2-10% fine <5mm faint dark mottles; fibric light clay; massive structure; few 2-5mm roots; wet when sampled; gradual to
C2u	1.7 to 2.3	Very dark grey (N30) moist; silty light clay; massive structure; wet when sampled; clear to
2C3	2.3 to 3.6	Light brownish grey (2.5Y63) moist; coarse sand; many 20-50% subrounded quartz small pebbles 2-6 mm; very few <2% subrounded conglomerate medium pebbles 6-20 mm; very few <2% subrounded metamorphic rock (unidentified) medium pebbles 6-20 mm; single grain structure; wet when sampled

Field Tests:

Depth	H2O2-	PH-2	PH-3
.1	1	4.7	3.7
.3	1	4.9	4.1
.6	2	5.2	3.4
.8	1	5.2	3.2
1	2	5.7	2.4
1.25	2	5.6	2.7
1.5	4	6.1	1.3
1.75	4	6.5	1.3
2	4	6.7	1.4
2.25	4	6.7	1.3
2.5	1	6.6	3.3
2.75	1	6.6	1.5
3	1	6.6	5.9
3.25	1	6.5	5.9
3.5	1	6.2	6.1

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Horizon Notes:

Horizon C1u Almost peat

Project: IAS **Site:** 94

Location: GDA 94 ZONE 55 425188mE 7946922mN Lat: -18.56711 Long: 146.29102

Described By: Lauren OBrien (OBRL) **Date:** 04/AUG/08

Landscape:

Landform Pattern: alluvial plain **Element:** plain

Depth to Water: .2

Surface Condition: Soft

Disturbances: Cultivation - Rainfed

Classifications:

ASC: ACIDIC, REGOLITHIC, Brown-Orthic, Tenosol

Profile Morphology:

Horizon	Depth (m)	Description
A2p	0 to .2	Dark greyish brown (10YR42) moist; sandy clay loam; massive structure; moist when sampled; sharp to
C1	.2 to .7	Dark greyish brown (10YR42) moist; sand; common 10-20% subrounded quartz small pebbles 2-6 mm; single grain structure; wet when sampled; diffuse to
C2	.7 to 7.3	Light yellowish brown (10YR64) moist; sand; single grain structure; wet when sampled; clear to
2C3	7.3 to 8.15	Dark greenish grey (10Y41) moist; silty clay loam; very few <2% angular platy shell medium pebbles 6-20 mm; few 2-10% angular platy shell small pebbles 2-6 mm; massive structure; wet when sampled; abrupt to
3C4	8.15 to 8.4	Light brownish grey (2.5Y63) moist; common 10-20% coarse 15-30mm distinct pale mottles; heavy clayey sand; massive structure; wet when sampled

Field Tests:

Depth	H2O2-	PH-2	PH-3	Depth	H2O2-	PH-2	PH-3
.1	2	4.5	2.5	4.25	1	6.1	5.6
.3	1	4.9	4.0	4.5	1	6.1	5.6
.6	1	5.3	4.6	4.75	1	6.2	5.4
.8	1	5.4	5.0	5	1	6.5	5.7
1	1	6.1	5.9	5.25	1	6.8	5.7
1.25	2	6.3	5.6	5.5	1	6.6	5.7
1.5	1	6.4	5.8	5.75	1	6.5	6.0
1.75	1	5.9	5.7	6	1	6.3	5.7
2	1	5.9	5.7	6.5	1	6.9	5.6
2.25	1	6.0	5.5	7	1	6.5	5.8
2.5	1	6.6	5.8	7.25	2	8.7	5.9
2.75	1	6.6	5.8	7.5	2	8.5	6.2
3	1	6.3	5.6	7.75	2	8.8	5.9
3.25	1	6.4	5.8	8	2	8.8	5.9
3.5	1	6.3	5.6	8.25	1	8.1	6.5
3.75	1	6.2	5.7	8.4	1	7.9	6.4
4	1	6.2	5.7				

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Project: IAS **Site:** 95

Location: GDA 94 ZONE 55 425620mE 7946845mN Lat: -18.56782 Long: 146.29511

Described By: Lauren OBrien (OBRL) **Date:** 04/AUG/08

Landscape:

Landform Pattern: alluvial plain **Element:** plain

Disturbances: Cultivation - Rainfed

Classifications:

ASC: REDOXIC, Hydrosol

Profile Morphology:

Horizon	Depth (m)	Description
A3	0 to .15	Dark greyish brown (10YR42) moist; few 2-10% fine <5mm faint orange mottles; heavy clay loam; platy moderate <2mm structure; moist when sampled; clear to
B2	.15 to .6	Grey (2.5Y51) moist; few 2-10% coarse 15-30mm distinct dark mottles, common 10-20% medium 5-15mm distinct orange mottles; light medium clay; massive structure; few 2-10% fine <2mm ferruginous soft segregations; few 2-10% medium 2-6mm manganiferous soft segregations; moist when sampled; abrupt to
2B31	.6 to .85	Greyish brown (2.5Y53) moist; loamy sand; few 2-10% subrounded quartz small pebbles 2-6 mm; single grain structure; moist when sampled; clear to
2B32	.85 to 1.1	Strong brown (7.5YR56) moist; very few <2% very coarse >30mm prominent gley mottles; sand; single grain structure; wet when sampled; abrupt to
2C1	1.1 to 2.4	Greyish brown (2.5Y52) moist; sand; very few <2% subrounded quartz small pebbles 2-6 mm; single grain structure; wet when sampled
2C2	2.4 to 4.8	Yellowish brown (10YR56) moist; sand; very few <2% subrounded quartz small pebbles 2-6 mm; single grain structure; wet when sampled

Field Tests:

Depth	H2O2-	PH-2	PH-3
.1	2	5.1	3.3
.3	4	6.7	6.9
.6	1	6.5	5.1
.8	1	6.3	5.4
1	1	6.3	4.9
1.25	1	6.2	3.1
1.5	1	6.4	3.1
1.75	1	6.4	3.4
2	1	6.4	3.7
2.25	1	6.4	4.1
2.5	1	6.2	4.5
2.75	1	6.1	4.8
3	1	5.8	4.7
3.25	1	5.8	4.9
3.5	1	6.1	5.1
3.75	1	6.3	5.2
4	1	6.4	5.2
4.25	1	6.4	5.3
4.5	1	6.4	5.4
4.75	1	5.9	5.4

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Project: IAS **Site:** 96

Location: GDA 94 ZONE 55 426191mE 7947088mN Lat: -18.56564 Long: 146.30053

Described By: Lauren OBrien (OBRL) **Date:** 04/AUG/08

Landscape:

Landform Pattern: alluvial plain **Element:** prior stream

Disturbances: Cultivation - Rainfed

Classifications:

ASC: SULFIDIC, OXYAQUIC, Hydrosol

Profile Morphology:

Horizon	Depth (m)	Description
A2	0 to .15	Black (10YR21) moist; sandy clay loam; massive structure; common 2-5mm roots; wet when sampled; sharp to
2A21	.15 to .3	Dark grey (5Y41) moist; clay loam, sandy; massive structure; few 2-10% fine <2mm ferruginous root linings; common 2-5mm roots; wet when sampled; clear to
2A22	.3 to .6	Dark greenish grey (10Y41) moist; fine sandy loam; massive structure; wet when sampled; gradual to
3C1u	.6 to 1	Dark grey (N40) moist; light clay; massive structure; few 2-5mm roots; wet when sampled; gradual to
4C2	1 to 2.4	Olive grey (5Y42) moist; sand; single grain structure; wet when sampled; diffuse to
4C3u	2.4 to 4.8	Grey (N50) moist; coarse sand; many 20-50% subrounded quartz small pebbles 2-6 mm; very few <2% subrounded quartz medium pebbles 6-20 mm; single grain structure; wet when sampled

Field Tests:

Depth	H2O2-	PH-2	PH-3
.1	2	5.9	1.9
.3	1	6.5	3.9
.6	4	6.7	2.8
.8	4	6.6	2.3
1	4	6.6	1.7
1.25	1	6.6	3.6
1.5	1	6.6	3.5
1.75	1	6.5	3.5
2	1	6.5	3.3
2.25	1	6.5	4.7
2.5	3	6.4	1.5
2.75	1	6.4	2.4
3	1	6.4	2.2
3.25	3	6.5	1.5
3.5	4	6.3	1.2
3.75	1	6.3	2.8
4	1	6.4	3.2
4.25	1	6.2	2.7
4.5	1	6.3	2.8
4.75	1	6.2	4.6

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Horizon Notes:

Horizon	A2	Brown coarse sand lens at base of horizon
Horizon	4C3u	Organics

Project: IAS **Site:** 97

Location: GDA 94 ZONE 55 425062mE 7947780mN Lat: -18.55935 Long: 146.28986

Described By: Lauren OBrien (OBRL) **Date:** 04/AUG/08

Landscape:

Landform Pattern: alluvial plain **Element:** Extratidal flat

Depth to Water: 1

Classifications:

ASC: ACIDIC, REGOLITHIC, Brown-Orthic, Tenosol

Profile Morphology:

Horizon	Depth (m)	Description
A2	0 to .4	Dark greyish brown (10YR42) moist; clay loam; platy moderate 2-5mm structure; moist when sampled; abrupt to
A3	.4 to .75	Dark yellowish brown (10YR46) moist; sand; very few <2% subrounded quartz small pebbles 2-6 mm; single grain structure; wet when sampled; gradual to
C1	.75 to 1.1	Yellowish brown (10YR58) moist; sand; very few <2% subangular quartz small pebbles 2-6 mm; single grain structure; wet when sampled; gradual to
C2	1.1 to 1.5	Yellowish brown (10YR56) moist; fine sand; weak structure; wet when sampled; gradual to
2C3	1.5 to 4.8	Light yellowish brown (10YR64) moist; coarse sand; many 20-50% subrounded quartz small pebbles 2-6 mm; single grain structure; wet when sampled; clear to
3C4u	4.8 to 5.15	Grey (N50) moist; sand; single grain structure; wet when sampled

Field Tests:

Depth	H2O2-	PH-2	PH-3
.1	2	5.2	4.1
.3	2	5.4	3.9
.6	1	6.0	5.2
.8	1	6.2	5.4
1	1	6.3	5.3
1.25	1	6.1	5.5
1.5	1	6.3	5.2
1.75	1	6.6	5.5
2	1	6.4	5.6
2.25	1	6.5	5.6
2.5	1	6.6	5.6
2.75	1	6.6	5.7
3	1	6.6	5.8
3.25	1	6.6	5.8
3.5	1	6.6	5.8
3.75	1	6.7	5.7
4	1	6.6	5.7
4.25	1	6.6	5.7
4.5	1	6.4	5.7
4.75	1	6.4	5.6
5	4	6.8	1.3

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Horizon Notes:

Horizon 3C4u Clay lens at base. Drilling stopped at 5.15 by buried tree

Project: IAS **Site:** 98

Location: GDA 94 ZONE 55 424820mE 7947831mN Lat: -18.55888 Long: 146.28757

Described By: Lauren OBrien (OBRL) **Date:** 05/AUG/08

Landscape:

Landform Pattern: alluvial plain **Element:** drainage depression

Disturbances: Cultivation - Rainfed

Classifications:

ASC: REDOXIC, Hydrosol

Profile Morphology:

Horizon	Depth (m)	Description
A2p	0 to .1	Dark greyish brown (2.5Y42) moist; very few <2% fine <5mm faint orange mottles; heavy clay loam; massive structure; wet when sampled; clear to
B2	.1 to .3	Dark greyish brown (2.5Y42) moist; few 2-10% fine <5mm faint dark mottles, few 2-10% fine <5mm faint orange mottles; fine sandy clay loam; massive structure; very few <2% medium 2-6mm manganiferous soft segregations; wet when sampled; sharp to
B3	.3 to 1.2	Yellowish brown (10YR54) moist; few 2-10% medium 5-15mm distinct orange mottles, very few <2% coarse 15-30mm distinct gley mottles; sand; single grain structure; wet when sampled; diffuse to
C1	1.2 to 6	Light yellowish brown (2.5Y64) moist; sand; single grain structure; wet when sampled

Field Tests:

Depth	H2O2-	PH-2	PH-3
.1	2	5.3	4.0
.3	4	6.6	5.2
.6	2	6.3	5.0
.8	2	6.4	5.5
1	1	6.9	5.5
1.25	1	6.6	5.1
1.5	1	6.4	4.6
1.75	1	6.4	4.9
2	1	6.3	4.7
2.25	1	6.2	4.3
2.5	1	6.2	2.8
2.75	1	6.2	3.1
3	1	6.2	2.7
3.25	1	6.4	2.8
3.5	1	6.4	2.7
3.75	1	6.5	4.2
4	1	6.5	4.8
4.25	1	6.7	4.9
4.5	1	6.6	5.2
4.75	1	6.7	5.2
5	1	6.5	3.5
5.5	1	6.5	5.6
6	1	6.6	5.6

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Horizon Notes:

Horizon B3 Clay lens @ 0.8m - Gleyed

Project: IAS **Site:** 99

Location: GDA 94 ZONE 55 424445mE 7947409mN Lat: -18.56268 Long: 146.284

Described By: Lauren OBrien (OBRL) **Date:** 05/AUG/08

Landscape:

Landform Pattern: alluvial plain **Element:** prior stream

Disturbances: Cultivation - Rainfed

Classifications:

ASC: ACIDIC, SULFIDIC, REDOXIC, Hydrosol

Profile Morphology:

Horizon	Depth (m)	Description
A2p	0 to .4	Brown (10YR43) moist; silty clay loam; subangular blocky weak 2-5mm structure; common 1-2mm roots; moist when sampled; clear to
B1	.4 to .9	Dark greyish brown (2.5Y43) moist; few 2-10% fine <5mm faint orange mottles, few 2-10% medium 5-15mm faint grey mottles; fine sandy clay loam; massive structure; common 1-2mm roots; wet when sampled; clear to
B21	.9 to 1.45	Dark grey (5Y41) moist; few 2-10% fine <5mm distinct orange mottles, few 2-10% coarse 15-30mm distinct gley mottles; medium clay; massive structure; common 1-2mm roots; moist when sampled; diffuse to
B22u	1.45 to 1.65	Dark grey (5Y41) moist; very few <2% fine <5mm distinct orange mottles; medium clay; massive structure; moist when sampled; clear to
B23u	1.65 to 2.1	Dark greenish grey (10Y31) moist; fibric light clay; massive structure; wet when sampled; diffuse to
2C1u	2.1 to 2.7	Dark grey (N40) moist; sand; single grain structure; wet when sampled; diffuse to
3C2u	2.7 to 3.6	Olive grey (5Y52) moist; sand; few 2-10% subrounded quartz small pebbles 2-6 mm; single grain structure; wet when sampled; diffuse to
4C3	3.6 to 4.8	Light yellowish brown (2.5Y64) moist; coarse sand; few 2-10% subrounded quartz small pebbles 2-6 mm; very few <2% subangular conglomerate medium pebbles 6-20 mm; single grain structure; wet when sampled

Field Tests:

Depth	H2O2-	PH-2	PH-3
.1	2	4.6	2.5
.3	3	5.0	2.4
.6	2	5.4	4.3
.8	2	5.7	4.2
1	2	5.4	3.1
1.25	1	5.3	3.3
1.5	2	4.6	4.6
1.75	3	5.3	1.4
2	4	5.7	1.3
2.25	1	6.0	1.1
2.5	4	5.9	1.2
2.75	4	5.9	1.2
3	3	5.9	1.1
3.25	3	5.9	1.1
3.5	2	6.0	1.7
3.75	1	6.0	5.0
4	1	6.1	5.2
4.25	1	6.0	5.3
4.5	1	6.3	5.5
4.75	1	6.3	5.3

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Project: IAS **Site:** 100

Location: GDA 94 ZONE 55 426967mE 7947732mN Lat: -18.55985 Long: 146.30791

Described By: Lauren OBrien (OBRL) **Date:** 05/AUG/08

Landscape:

Landform Pattern: alluvial plain **Element:** plain

Depth to Water: 1

Disturbances: Cultivation - Rainfed

Classifications:

ASC: KANDOSOLIC, REDOXIC, Hydrosol

Profile Morphology:

Horizon	Depth (m)	Description
A2p	0 to .2	Dark greyish brown (10YR42) moist; heavy clay loam; massive structure; moist when sampled; clear to
B21	.2 to .5	Dark yellowish brown (10YR44) moist; very few <2% fine <5mm faint dark mottles, few 2-10% fine <5mm faint orange mottles; fine sandy clay loam; massive structure; few 2-10% fine <2mm manganiferous soft segregations; moist when sampled; abrupt to
B22	.5 to .95	Reddish brown (2.5YR43) moist; few 2-10% coarse 15-30mm distinct orange mottles, very few <2% very coarse >30mm distinct gley mottles; sand; single grain structure; moist when sampled; abrupt to
B3	.95 to 1.7	Brown (7.5YR44) moist; sand; single grain structure; wet when sampled; gradual to
C1	1.7 to 1.9	Olive grey (5Y52) moist; sand; common 10-20% subrounded charcoal medium pebbles 6-20 mm; single grain structure; wet when sampled; clear to
C2	1.9 to 2.25	Light olive brown (2.5Y54) moist; sand; very few <2% subrounded quartz small pebbles 2-6 mm; single grain structure; wet when sampled; clear to
2C3	2.25 to 3.6	Light brownish grey (2.5Y62) moist; coarse sand; common 10-20% subrounded quartz small pebbles 2-6 mm; single grain structure; wet when sampled; diffuse to
2C4	3.6 to 5.2	Dark grey (N40) moist; coarse sand; many 20-50% subrounded quartz small pebbles 2-6 mm; very few <2% angular platy shell medium pebbles 6-20 mm; few 2-10% subangular conglomerate medium pebbles 6-20 mm; single grain structure; wet when sampled; clear to
3C5	5.2 to 6	Very dark grey (N30) moist; fine sandy clay loam; few 2-10% angular platy shell small pebbles 2-6 mm; very few <2% angular platy shell medium pebbles 6-20 mm; massive structure; wet when sampled

Field Tests:

Depth	H2O2-	PH-2	PH-3	Depth	H2O2-	PH-2	PH-3
.1	2	4.9	4.1	3	1	6.4	5.7
.3	3	5.6	4.2	3.25	1	6.6	5.6
.6	1	5.9	5.2	3.5	1	6.5	5.7
.8	1	6.2	5.6	3.75	1	7.1	6.1
1	1	6.3	5.7	4	1	7.4	5.9
1.25	3	6.4	6.6	4.25	1	7.4	5.9
1.5	1	6.3	5.5	4.5	1	7.5	6.0
1.75	1	6.6	5.4	4.75	2	7.5	3.9
1.85	1	6.4	4.6	5	1	7.2	5.9
2	1	6.4	5.1	5.25	2	7.4	6.3
2.25	1	6.4	5.2	5.5	2	8.2	6.4
2.5	1	6.3	5.6	5.75	2	8.1	5.9
2.75	1	6.4	5.7	6	2	8.1	6.5

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Horizon Notes:

Horizon	B22	Alternating narrow layers of fine and normal sand
Horizon	C1	Iron strip results: ~3-10 mg/L Fe(II)
Horizon	2C4	Iron strip results: 500+ mg/L Fe(II)

Project: IAS **Site:** 101

Location: GDA 94 ZONE 55 427363mE 7947832mN Lat: -18.55896 Long: 146.31166

Described By: Lauren OBrien (OBRL) **Date:** 05/AUG/08

Landscape:

Landform Pattern: tidal flat **Element:** tidal flat

Depth to Water: .6

Classifications:

ASC: EXTRATIDAL, Hydrosol

Profile Morphology:

Horizon	Depth (m)	Description
A1	0 to .1	Dark greyish brown (10YR42) moist; clay loam; massive structure; common >5mm roots; moist when sampled; clear to
B2	.1 to .55	Brown (10YR53) moist; many 20-50% coarse 15-30mm distinct gley mottles, few 2-10% medium 5-15mm faint orange mottles; clay loam, fine sandy; massive structure; very few <2% fine <2mm manganiferous soft segregations; few <1mm roots; moist when sampled; clear to
C1	.55 to 1.7	Yellowish brown (10YR54) moist; sand; common 10-20% subrounded quartz small pebbles 2-6 mm; single grain structure; few 2-10% calcareous soft segregations; wet when sampled; diffuse to
C2	1.7 to 4.9	Grey (5Y51) moist; coarse sand; common 10-20% subrounded quartz small pebbles 2-6 mm; very few <2% subrounded quartz medium pebbles 6-20 mm; single grain structure; wet when sampled; diffuse to
2C3u	4.9 to 6	Dark greenish grey (10Y41) moist; fine sand; few 2-10% angular charcoal small pebbles 2-6 mm; single grain structure; wet when sampled

Field Tests:

Depth	H2O2-	PH-2	PH-3	Depth	H2O2-	PH-2	PH-3
.1	4	6.7	6.0	3.25	1	6.3	5.1
.3	4	6.9	5.2	3.5	1	6.4	5.2
.6	2	6.9	5.2	3.75	1	6.4	5.3
.8	2	7.0	5.7	4	1	6.5	5.3
1	1	6.6	5.4	4.25	1	6.6	5.5
1.25	1	6.5	5.4	4.5	1	6.7	5.4
1.5	1	6.0	5.4	4.75	1	6.6	5.3
1.75	1	6.3	5.3	5	4	6.8	1.1
2	1	6.1	5.3	5.25	1	6.8	2.5
2.25	1	6.6	5.0	5.5	2	6.8	1.2
2.5	1	6.6	5.2	5.75	2	7.1	3.4
2.75	1	6.4	5	6	2	7.3	1.5
3	1	6.4	5.2				

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Observation Notes:

Location Saltmarsh between cane and mangroves. Area restricted by road and bund

Vegetation Salt couch, pigface, mangrove ferns

Horizon Notes:

Horizon 2C3u Clay lenses 5.0m, 5.6m

Project: IAS **Site:** 102

Location: GDA 94 ZONE 55 427295mE 7947953mN Lat: -18.55786 Long: 146.31102

Described By: Lauren OBrien (OBRL) **Date:** 05/AUG/08

Landscape:

Landform Pattern: tidal flat **Element:** intertidal flat

Classifications:

ASC: SULFIDIC, INTERTIDAL, Hydrosol

Profile Morphology:

Horizon	Depth (m)	Description
A1	0 to .1	Dark grey (2.5Y41) moist; clay loam, sandy; massive structure; many 1-2mm roots; wet when sampled; clear to
B21	.1 to .3	Dark grey (5Y41) moist; sandy light medium clay; massive structure; common 10-20% fine <2mm ferruginous root linings; few 1-2mm roots; wet when sampled; abrupt to
B22	.3 to .6	Dark greenish grey (10Y41) moist; many 20-50% medium 5-15mm distinct orange mottles; sandy light medium clay; massive structure; few 1-2mm roots; moist when sampled; abrupt to
2C1	.6 to .9	Dark greenish grey (10Y31) moist; sandy light clay; massive structure; wet when sampled; diffuse to
2C2u	.9 to 1.35	Very dark grey (10YR31) moist; loamy sand; single grain structure; wet when sampled; clear to
2C3u	1.35 to 1.75	Dark grey (10YR41) moist; fine sandy loam; single grain structure; wet when sampled; gradual to
3C	1.75 to 2.4	Grey (5YR51) moist; sand; few 2-10% subrounded quartz small pebbles 2-6 mm; single grain structure; wet when sampled; diffuse to
4C	2.4 to 3.6	Olive grey (5Y52) moist; sand; few 2-10% subrounded quartz small pebbles 2-6 mm; single grain structure; wet when sampled

Field Tests:

Depth	H2O2-	PH-2	PH-3
.1	2	5.6	3.5
.3	2	6.2	4.9
.6	2	6.8	5.8
.8	4	6.8	1.6
1	4	6.5	1.3
1.25	4	6.6	1.4
1.5	4	6.2	1.4
1.75	2	6.4	1.0
2	1	6.9	2.0
2.25	1	6.8	3.4
2.5	1	6.9	4.4
2.75	1	6.9	4.0
3	1	7.0	5.1
3.25	1	6.9	4.8
3.5	1	6.7	5.0

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Observation Notes:

Location edge of mangrove - cane adjacent.

Vegetation Abyssinia spp. site in sporobolus

Horizon Notes:

Horizon 2C1 Organics

Project: IAS **Site:** 103

Location: GDA 94 ZONE 55 425101mE 7948537mN Lat: -18.55251 Long: 146.29026

Described By: Lauren OBrien (OBRL) **Date:** 06/AUG/08

Landscape:

Landform Pattern: alluvial plain **Element:** plain

Depth to Water: 1

Classifications:

ASC: SULFURIC, REDOXIC, Hydrosol

Profile Morphology:

Horizon	Depth (m)	Description
A1	0 to .4	Dark greyish brown (2.5Y42) moist; very few <2% fine <5mm distinct orange mottles; light medium clay; massive structure; common 10-20% fine <2mm ferruginous root linings; common 1-2mm roots; moist when sampled; clear to
B21	.4 to .8	Grey (2.5Y61) moist; many 20-50% fine <5mm distinct orange mottles; clay loam; granular weak <2mm structure; common 10-20% fine <2mm ferruginous root linings; common 1-2mm roots; moist when sampled; abrupt to
B22	.8 to 1.15	Greenish grey (10Y51) moist; many 20-50% fine <5mm prominent yellow jarosite (from pyrite) mottles, common 10-20% fine <5mm distinct brown jarosite (from pyrite) mottles; silty light clay; massive structure; common 1-2mm roots; wet when sampled; abrupt to
2B23u	1.15 to 2	Dark grey (N40) moist; fibric light clay; massive structure; wet when sampled; diffuse to
2C1	2 to 4.3	Greenish grey (10Y51) moist; sand; few 2-10% subrounded quartz small pebbles 2-6 mm; very few <2% angular platy other medium pebbles 6-20 mm; single grain structure; wet when sampled
3C2	4.3 to 4.8	Greenish grey (10Y51) moist; light coarse sand; common 10-20% subrounded quartz small pebbles 2-6 mm; very few <2% angular platy shell small pebbles 2-6 mm; single grain structure; wet when sampled
3C3	4.8 to 5.1	Dark greenish grey (10Y41) moist; clayey coarse sand; few 2-10% angular platy shell small pebbles 2-6 mm; wet when sampled
3C4	5.1 to 6	Dark greenish grey (10Y41) moist; fine sandy clay loam; very few <2% angular platy shell medium pebbles 6-20 mm; few 2-10% angular platy shell small pebbles 2-6 mm; massive structure; wet when sampled

Field Tests:

Depth	H2O2-	PH-2	PH-3	Depth	H2O2-	PH-2	PH-3
.1	2	5.2	3.6	3.25	1	6.2	4.2
.3	1	5.0	3.4	3.5	1	6.2	4.6
.6	1	4.5	3.4	3.75	1	6.6	5.3
.8	1	4.4	3.0	4	1	6.5	5.2
1	2	4.3	2.4	4.25	1	6.6	5.3
1.25	2	4.1	2.7	4.5	1	6.5	5.4
1.5	4	4.7	1.4	4.75	2	6.9	4.5
1.75	4	5.1	1.5	5	2	6.9	5.6
2	4	6.0	1.6	5.25	1	7.2	5.8
2.25	4	6.2	1.5	5.5	2	7.8	5.8
2.5	1	6.1	3.5	5.75	2	8.0	5.9
2.75	1	6.3	3.8	6	1	7.5	6.3
3	1	6.3	2.1				

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Observation Notes:

Horizon Iron stip 2.4 to 3.6m- 100mg/L Fe2+; 3.6 to 4.8m- 25mg/L Fe2+

Horizon Notes:

Horizon 2C1 Organics @ 3.0m

Project: IAS **Site:** 104

Location: GDA 94 ZONE 55 426477mE 7948154mN Lat: -18.55602 Long: 146.30328

Described By: Lauren OBrien (OBRL) **Date:** 06/AUG/08

Landscape:

Landform Pattern: alluvial plain **Element:** drainage depression

Depth to Water: 1.2

Classifications:

ASC: SULFIDIC, REDOXIC, Hydrosol

Profile Morphology:

Horizon	Depth (m)	Description
A1	0 to .1	Dark grey (10YR41) moist; heavy clay loam; massive structure; few >5mm roots; moist when sampled; gradual to
B22	.1 to .3	Dark grey (10YR41) moist; few 2-10% fine <5mm faint brown mottles; light clay; massive structure; moist when sampled; gradual to
B22	.3 to .85	Yellowish brown (10YR58) moist; common 10-20% medium 5-15mm distinct gley mottles; medium clay; massive structure; moist when sampled; clear to
B3	.85 to 1.15	Dark grey (N40) moist; medium clay; massive structure; common 1-2mm roots; moist when sampled; gradual to
2C1u	1.15 to 1.9	Grey (N60) moist; sand; few 2-10% subrounded quartz small pebbles 2-6 mm; massive structure; wet when sampled; clear to
2C2u	1.9 to 2.7	Dark grey (N40) moist; clayey sand; few 2-10% subrounded quartz small pebbles 2-6 mm; massive structure; uncemented continuous massive organic pan; wet when sampled
2C3u	2.7 to 4.1	Very dark grey (N30) moist; loamy sand; single grain structure; wet when sampled
3C4	4.1 to 6	Dark grey (N40) moist; fine sandy loam; very few <2% angular platy shell medium pebbles 6-20 mm; few 2-10% angular platy shell small pebbles 2-6 mm; massive structure; wet when sampled

Field Tests:

Depth	H2O2-	PH-2	PH-3	Depth	H2O2-	PH-2	PH-3
.1	2	5.0	2.2	3.25	4	6.4	1.4
.3	2	5.8	3.7	3.5	4	6.5	1.2
.6	2	6.0	4.0	3.75	4	6.3	1.4
.8	2	6.2	4.3	4	4	6.5	1.3
1	2	6.1	4.5	4.25	4	6.9	5.9
1.25	2	6.1	3.4	4.5	4	7.2	3.0
1.5	1	6.4	1.5	4.75	3	7.4	5.8
1.75	4	6.5	1.3	5	2	7.4	
2	4	6.6	1.5	5.25	3	7.6	5.6
2.25	4	6.3	1.6	5.5	3	7.7	5.7
2.5	4	6.5	1.3	5.75	3	7.7	5.9
2.75	4	6.4	1.3	6	3	7.9	5.6
3	1	6.5	3.6				

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Observation Notes:

Location	Near upper reaches of small creek - salt flats and mangroves
Vegetation	Poorly performing cane adjacent to tidally influenced drainage
Vegetation	Salt couch in drain

Horizon Notes:

Horizon		Iron stip result 25mg/L Fe2+ at 3.9m. pH of adacent drain - 3.3 no iron
Horizon	B3	Horizon has some organics
Horizon	2C1u	Clay lens present
Horizon	2C2u	Clay lens segments

Project: IAS **Site:** 105

Location: GDA 94 ZONE 55 426222mE 7948130mN Lat: -18.55623 Long: 146.30086

Described By: Lauren OBrien (OBRL) **Date:** 06/AUG/08

Landscape:

Landform Pattern: alluvial plain **Element:** prior stream

Classifications:

ASC: KUROSOLIC, REDOXIC, Hydrosol

Profile Morphology:

Horizon	Depth (m)	Description
A1	0 to .3	Brown (10YR43) moist; fine sandy clay loam; massive structure; moderately moist when sampled; clear to
A2	.3 to .95	Yellowish brown (10YR54) moist; fine sandy; clay; single grain structure; moderately moist when sampled; clear to
B21	.95 to 1.25	Light olive brown (2.5Y54) moist; common 10-20% fine <5mm distinct gley mottles; clay loam, fine sandy; massive structure; moist when sampled; clear to
B22	1.25 to 1.6	Light olive brown (2.5Y54) moist; many 20-50% coarse 15-30mm distinct gley mottles; clay loam; massive structure; moist when sampled; clear to
B3	1.6 to 2.1	Grey (5Y51) moist; fine sandy clay loam; massive structure; moist when sampled; abrupt to
2C1u	2.1 to 2.7	Grey (5Y51) moist; loamy sand; few 2-10% subrounded quartz small pebbles 2-6 mm; single grain structure; wet when sampled
2C2u	2.7 to 4.7	Grey (5Y51) moist; loamy coarse sand; common 10-20% subrounded quartz small pebbles 2-6 mm; single grain structure; wet when sampled
3C3u	4.7 to 5.4	Dark grey (N40) moist; sandy loam; few 2-10% angular platy shell small pebbles 2-6 mm; few 2-10% subrounded quartz small pebbles 2-6 mm; very few <2% angular platy shell medium pebbles 6-20 mm; single grain structure; wet when sampled
4C4	5.4 to 6	Dark grey (N40) moist; sandy clay loam; few 2-10% angular platy shell small pebbles 2-6 mm; very few <2% angular platy shell medium pebbles 6-20 mm; massive structure; wet when sampled

Field Tests:

Depth	H2O2-	PH-2	PH-3	Depth	H2O2-	PH-2	PH-3
.1	2	4.4	2.4	3.25	4	6.4	1.5
.3	2	4.5	2.5	3.5	4	6.4	1.4
.6	1	5.1	3.7	3.75		6.3	4.0
.8	1	5.3	3.8	4		6.3	4.1
1		5.4	3.8	4.25		6.6	3.3
1.25		5.3	3.8	4.5		6.9	3.8
1.5		5.1	3.2	4.75	4	7.2	1.8
1.75		5.1	3.4	5	4	7.1	3.7
2		5.7	2.7	5.25	1	7.2	5.3
2.25		5.9	2.7	5.5	4	7.7	5.9
2.5	3	6.0	1.4	5.75	4	8.0	5.9
2.75	4	6.1	1.5	6	4	8.1	6.1
3	4	6.1	1.4				

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Horizon Notes:

Horizon 2C2u Horizon has fine organics

Project: IAS **Site:** 106

Location: GDA 94 ZONE 55 425912mE 7949384mN Lat: -18.54488 Long: 146.29797

Described By: Lauren OBrien (OBRL) **Date:** 07/AUG/08

Landscape:

Landform Pattern: alluvial plain **Element:** intertidal flat

Depth to Water: .2

Classifications:

ASC: SULFIDIC, REDOXIC, Hydrosol

Profile Morphology:

Horizon	Depth (m)	Description
A1	0 to .2	Dark grey (2.5Y41) moist; clay loam; massive structure; few 2-10% fine <2mm ferruginous root linings; few 2-5mm roots; wet when sampled; clear to
B2	.2 to .45	Dark grey (5Y41) moist; common 10-20% medium 5-15mm faint brown mottles; light medium clay; subangular blocky weak 2-5mm structure; few 2-10% fine <2mm ferruginous root linings; wet when sampled; abrupt to
2C1u	.45 to 1.45	Very dark grey (N30) moist; fibric light clay; massive structure; wet when sampled; clear to
2C2u	1.45 to 2.15	Greenish grey (10Y51) moist; fibric fine sandy loam; single grain structure; wet when sampled; gradual to
3C3u	2.15 to 3.3	Grey (N50) moist; loamy sand; very few <2% subrounded quartz small pebbles 2-6 mm; single grain structure; wet when sampled; clear to
3C4u	3.3 to 3.6	Dark grey (N40) moist; fine sandy loam; single grain structure; wet when sampled

Field Tests:

Depth	H2O2-	PH-2	PH-3
.1	3	5.9	3.6
.3	1	6.0	4.4
.6	1	6.4	1.2
.8	4	6.8	1.2
1	4	6.9	1.2
1.25	4	6.9	1.7
1.45	4	7.6	1.4
1.75	4	6.9	1.2
2	4	7.3	1.2
2.25	4	7.3	1.8
2.5	4	6.9	1.3
2.75	4	6.8	1.3
3	4	6.7	1.2
3.25	4	5.9	1.6
3.5	4	6.3	1.3

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Observation Notes:

Location modified by bund wall

Horizon Notes:

Horizon	A1	A1 Horizon has organics
Horizon	B2	Organic layer @ 0.4m
Horizon	2C1u	Sandy lens at 0.6m

Project: IAS **Site:** 107

Location: GDA 94 ZONE 55 425369mE 7949243mN Lat: -18.54614 Long: 146.29282

Described By: Lauren OBrien (OBRL) **Date:** 07/AUG/08

Landscape:

Landform Pattern: alluvial plain **Element:** plain

Classifications:

ASC: SULFIDIC, REDOXIC, Hydrosol

Profile Morphology:

Horizon	Depth (m)	Description
A2	0 to .3	Very dark greyish brown (10YR32) moist; very few <2% fine <5mm faint orange mottles; heavy clay loam; massive structure; moist when sampled; clear to
B21	.3 to .6	Dark grey (2.5Y41) moist; few 2-10% fine <5mm faint orange mottles; light clay; massive structure; few 2-10% fine <2mm ferruginous root linings; moist when sampled; clear to
B22	.6 to 1.3	Grey (5Y61) moist; common 10-20% medium 5-15mm distinct orange mottles; light clay; massive structure; few 2-10% fine <2mm ferruginous root linings; few 2-10% medium 2-6mm ferruginous root linings; wet when sampled
B23	1.3 to 1.6	Very dark grey (2.5Y31) moist; light light clay; massive structure; wet when sampled
B3	1.6 to 1.85	Very dark grey (5Y31) moist; fibric light clay; massive structure; wet when sampled
C1u	1.85 to 3.1	Very dark grey (N30) moist; fibric sandy light clay; massive structure; wet when sampled
C2u	3.1 to 3.35	Very dark grey (N30) moist; fine sandy light clay; massive structure; wet when sampled
C3u	3.35 to 3.75	Very dark grey (N30) moist; sandy light clay; massive structure; wet when sampled
C4u	3.75 to 4.4	Very dark grey (N30) moist; silty light clay; massive structure; wet when sampled
C5u	4.4 to 4.75	Very dark grey (N30) moist; silty light clay; massive structure; wet when sampled
C6	4.75 to 4.8	Very dark grey (N30) moist; sandy clay loam; few 2-10% angular platy shell small pebbles 2-6 mm; massive structure; wet when sampled

Field Tests:

Depth	H2O2-	PH-2	PH-3	Depth	H2O2-	PH-2	PH-3
.1	1	5.2	2.5	2.5	4	5.7	1.4
.3	1	5.5	2.8	2.75	4	5.8	1.6
.6		5.4	3.3	3	4	5.9	1.5
.8		5.2	2.8	3.25	4	6.0	1.6
1		5.3	2.8	3.5	4	6.3	1.7
1.25	2	5.3	2.4	3.75	4	6.3	1.8
1.5	4	4.9	1.4	4	4	6.6	1.7
1.75	4	5.0	1.5	4.25	4	7.0	1.6
2	4	4.7	1.1	4.5	4	6.8	2.1
2.25	4	5.5	1.2	4.8	4	7.3	4.5

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Horizon Notes:

Horizon	B23	Sandy lens
Horizon	B3	Horizon has organics
Horizon	C1u	Horizon contains organics

Project: IAS **Site:** 108

Location: GDA 94 ZONE 56 525814mE 7948549mN Lat: -18.55358 Long: 153.24461

Described By: Lauren OBrien (OBRL) **Date:** 29/OCT/08

Landscape:

Landform Pattern: alluvial plain **Element:** plain

Disturbances: Cultivation - Rainfed

Classifications:

ASC: REDOXIC, Hydrosol

Profile Morphology:

Horizon	Depth (m)	Description
A2p	0 to .35	Greyish brown (10YR52) moist; clay loam; subangular blocky weak 5-10mm structure; common 10-20% fine <2mm manganiferous nodules; dry when sampled; sharp to
B21	.35 to 1.05	Dark yellowish brown (10YR44) moist; common 10-20% fine <5mm faint orange mottles; clay loam; subangular blocky weak 2-5mm structure; moderately moist when sampled; gradual to
B3	1.05 to 1.5	Greenish grey (10Y61) moist; common 10-20% coarse 15-30mm prominent orange mottles; clay loam, fine sandy; massive structure; few 2-10% fine <2mm ferruginous root linings; moist when sampled; clear to
C1	1.5 to 1.85	Greyish brown (2.5Y52) moist; fine sandy light clay; massive structure; few <1mm roots; moist when sampled; clear to
C2	1.85 to 2.2	Dark greenish grey (10Y31) moist; fibric fine sandy clay loam; massive structure; wet when sampled; clear to
2C3	2.2 to 6	Grey (5Y51) moist; coarse sand; few 2-10% subrounded charcoal medium pebbles 6-20 mm; few 2-10% subrounded charcoal small pebbles 2-6 mm; common 10-20% subangular quartz small pebbles 2-6 mm; very few <2% subrounded conglomerate medium pebbles 6-20 mm; single grain structure; wet when sampled

Field Tests:

Depth	H2O2-	PH-2	PH-3	Depth	H2O2-	PH-2	PH-3
.1	3	5.0	2.7	3.25	4	5.7	2.1
.3	3	5.1	3.0	3.5	4	5.6	2.0
.6	2	5.6	3.5	3.75	4	5.7	2.1
.8	3	5.5	3.4	4	4	5.6	2.1
1	1	5.3	3.4	4.25	4	5.6	2.2
1.25		4.9	3.3	4.5	4	5.6	2.2
1.5		5.0	3.4	4.75	4	5.8	2.2
1.75		5.3	2.9	5	4	6.1	1.7
2	4	5.5	1.6	5.25	3	5.9	2.0
2.25	4	5.6	1.4	5.5	3	6.3	2.0
2.5	4	5.6	1.7	5.75	4	6.1	1.9
2.75	4	5.6	1.8	6	3	6.3	1.7
3	4	5.7	2.0				

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Horizon Notes:

Horizon C2 Organics and smell

Project: IAS **Site:** 109

Location: GDA 94 ZONE 55 425378mE 7948596mN Lat: -18.55199 Long: 146.29288

Described By: Lauren OBrien (OBRL) **Date:** 29/OCT/08

Landscape:

Landform Pattern: alluvial plain **Element:** plain

Disturbances: Cultivation - Rainfed

Classifications:

ASC: SULFURIC, REDOXIC, Hydrosol

Profile Morphology:

Horizon	Depth (m)	Description
A2p	0 to .3	Brown (10YR43) moist; heavy clay loam; subangular blocky weak 2-5mm structure; few 2-10% fine <2mm manganiferous nodules; common 1-2mm roots; moderately moist when sampled; clear to
B21	.3 to .5	Light brownish grey (2.5Y62) moist; few 2-10% medium 5-15mm distinct orange mottles; clay loam, sandy; massive structure; moderately moist when sampled; clear to
B22	.5 to .7	Light brownish grey (2.5Y62) moist; very few <2% coarse 15-30mm faint orange mottles; clayey sand; massive structure; moist when sampled; abrupt to
B3	.7 to 1	Greyish brown (2.5Y53) moist; loamy sand; massive structure; very few <2% fine <2mm ferruginous root linings; wet when sampled; gradual to
C1	1 to 1.35	Olive grey (5Y42) moist; clayey sand; single grain structure; common <1mm roots; few 1-2mm roots; wet when sampled; abrupt to
C2	1.35 to 2.1	Dark grey (N40) moist; loamy sand; single grain structure; few 1-2mm roots; common <1mm roots; wet when sampled; diffuse to
2C3	2.1 to 2.7	Dark grey (N40) moist; sand; few 2-10% subrounded charcoal small pebbles 2-6 mm; few 2-10% subrounded quartz small pebbles 2-6 mm; single grain structure; wet when sampled
2C4	2.7 to 3.1	Greenish grey (10Y51) moist; sand; common 10-20% subrounded quartz small pebbles 2-6 mm; single grain structure; wet when sampled
2C5	3.1 to 3.8	Very dark grey (N30) moist; loamy sand; few 2-10% subrounded quartz small pebbles 2-6 mm; single grain structure; wet when sampled
2C6	3.8 to 4.1	Dark grey (N40) moist; loamy fine sand; few 2-10% subrounded quartz small pebbles 2-6 mm; single grain structure; wet when sampled
3C7	4.1 to 5.2	Very dark grey (N30) moist; fine sandy loam; very few <2% angular platy shell medium pebbles 6-20 mm; few 2-10% angular platy shell small pebbles 2-6 mm; massive structure; wet when sampled
3C8	5.2 to 6	Very dark grey (N30) moist; fine sandy clay loam; few 2-10% angular platy shell small pebbles 2-6 mm; massive structure; wet when sampled

Field Tests:

Depth	H2O2-	PH-2	PH-3	Depth	H2O2-	PH-2	PH-3
.1	1	5.1	3.0	3	4	6.6	1.8
.3	1	5.5	3.1	3.25	4	6.5	1.5
.4		5.6	4.0	3.5	4	7.0	2.1
.6		5.7	4.3	3.75	4	6.9	2.3
.8		4.3	3.1	4	4	7.3	2.2
1		3.4	2.1	4.25	4	7.5	1.7
1.25		4.0	1.9	4.5	4	7.6	5.9
1.5	4	4.2	1.4	4.75	4	7.9	6.4
1.75	4	4.2	1.6	5	4	7.8	5.3
2	4	4.7	1.7	5.25	4	7.7	5.3
2.25	4	5.3	1.5	5.5	4	7.8	6.0
2.5	4	6.2	2.2	5.75	4	8.4	6.1
2.75	4	6.3	1.9	6	4	8.1	6.1

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Horizon Notes:

Horizon	C2	Many organics, incl pneumatophores
Horizon	2C6	Clay lenses @ 4.1 and 4.25
Horizon	3C7	Shells mostly in a band @ 4.4m

Project: IAS **Site:** 110

Location: GDA 94 ZONE 55 425561mE 7948934mN Lat: -18.54894 Long: 146.29463

Described By: Lauren OBrien (OBRL) **Date:** 29/OCT/08

Landscape:

Landform Pattern: alluvial plain **Element:** plain

Classifications:

ASC: SULFIDIC, REDOXIC, Hydrosol

Profile Morphology:

Horizon	Depth (m)	Description
A1p	0 to .2	Dark greyish brown (10YR42) moist; clay loam; subangular blocky weak 2-5mm structure; few 2-5mm roots; dry when sampled; clear to
B21	.2 to .8	Dark greyish brown (10YR42) moist; few 2-10% fine <5mm faint orange mottles; clay loam; massive structure; few <1mm roots; moderately moist when sampled; gradual to
B22	.8 to 1.4	Grey (5Y61) moist; few 2-10% medium 5-15mm distinct orange mottles; light medium clay; massive structure; very few <2% fine <2mm ferruginous root linings; moist when sampled; clear to
C1	1.4 to 2.3	Very dark grey (N30) moist; fibric silty light clay; massive structure; few 1-2mm roots; wet when sampled; abrupt to
2C2	2.3 to 3.6	Grey (N50) moist; coarse sand; single grain structure; wet when sampled

Field Tests:

Depth	H2O2-	PH-2	PH-3
.1	1	5.2	2.5
.3	2	5.7	2.8
.6	2	6.2	4.3
.8	4	6.3	4.7
1	4	6.2	4.7
1.25		4.9	2.7
1.5	4	5.5	1.9
1.75	4	5.3	1.7
2	4	5.8	1.8
2.25	4	5.9	1.8
2.5	4	5.7	1.5
2.75	4	5.9	1.8
3	4	6.1	1.6
3.25	4	5.9	1.4
3.5	4	5.9	1.6

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Observation Notes:

Location bare patch in young cane, ~30m from creek/mangroves

Horizon Notes:

Horizon	C1	Organics
Horizon	2C2	Organics. charcoal? , Clay lens at 2.75m

Project: IAS **Site:** 111

Location: GDA 94 ZONE 55 425547mE 7948383mN Lat: -18.55392 Long: 146.29448

Described By: Lauren OBrien (OBRL) **Date:** 30/OCT/08

Landscape:

Landform Pattern: alluvial plain **Element:** plain

Classifications:

ASC: REDOXIC, Hydrosol

Profile Morphology:

Horizon	Depth (m)	Description
A2p	0 to .35	Dark greyish brown (10YR42) moist; clay loam; very few <2% subrounded quartz small pebbles 2-6 mm; weak structure; very few <2% fine <2mm manganiferous nodules; common 2-5mm roots; moderately moist when sampled; clear to
B2	.35 to .75	Light brownish grey (2.5Y62) moist; few 2-10% medium 5-15mm faint orange mottles; sandy light clay; very few <2% subrounded quartz small pebbles 2-6 mm; massive structure; few 2-10% medium 2-6mm manganiferous nodules; few 1-2mm roots; moderately moist when sampled; abrupt to
2B2	.75 to 1	Brown (10YR43) moist; few 2-10% coarse 15-30mm faint orange mottles; clayey coarse sand; common 10-20% subrounded quartz small pebbles 2-6 mm; massive structure; few 2-10% coarse 6-20mm manganiferous nodules; moist when sampled; clear to
B3	1 to 1.5	Grey (5Y51) moist; loamy sand; few 2-10% subrounded quartz small pebbles 2-6 mm; single grain structure; wet when sampled; diffuse to
C1	1.5 to 2.3	Very dark grey (N30) moist; sand; few 2-10% subrounded quartz small pebbles 2-6 mm; single grain structure; wet when sampled; diffuse to
C2	2.3 to 3.9	Very dark grey (N30) moist; coarse sand; many 20-50% subrounded quartz small pebbles 2-6 mm; very few <2% subrounded quartz medium pebbles 6-20 mm; very few <2% subrounded metamorphic rock (unidentified) medium pebbles 6-20 mm; single grain structure; wet when sampled; gradual to
C3	3.9 to 4.7	Greenish grey (10Y51) moist; coarse sand; many 20-50% subrounded quartz small pebbles 2-6 mm; single grain structure; wet when sampled; sharp to
2C4	4.7 to 6	Dark grey (N40) moist; fine sandy loam; few 2-10% subrounded quartz small pebbles 2-6 mm; few 2-10% angular platy shell small pebbles 2-6 mm; few 2-10% angular platy shell medium pebbles 6-20 mm; massive structure; wet when sampled

Field Tests:

Depth	H2O2-	PH-2	PH-3	Depth	H2O2-	PH-2	PH-3
.1	2	5.1	2.8	3.25	4	6.2	1.8
.3	3	5.8	3.7	3.5	4	6.2	2.0
.6	1	7.4	7.0	3.75		6.8	2.1
.8	1	7.1	6.6	4		7.3	2.1
1	1	6.7	3.1	4.25		7.5	2.1
1.25	1	7.0	2.8	4.5		7.7	2.4
1.5	4	7.1	2.1	4.75	4	7.6	2.1
1.75	4	7.0	1.9	5	3	8.5	6.3
2	4	6.3	1.7	5.25	3	8.6	5.7
2.25	4	6.0	1.4	5.5	3	7.8	6.1
2.5	4	6.4	1.5	5.75	4	8.6	6.7
2.75	4	6.2	1.5	6	4	8.4	6.4
3	4	6.3	1.6				

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Horizon Notes:

Horizon	C1	Tree root at 2.0m
Horizon	C2	Tree root at 2.6m
Horizon	2C4	Quartz coarse fragments mostly in thin lenses.

Project: IAS **Site:** 112

Location: GDA 94 ZONE 55 425719mE 7948587mN Lat: -18.55208 Long: 146.29611

Described By: Lauren OBrien (OBRL) **Date:** 30/OCT/08

Landscape:

Landform Pattern: alluvial plain **Element:** plain

Classifications:

ASC: SULFIDIC, OXYAQUIC, Hydrosol

Profile Morphology:

Horizon	Depth (m)	Description
B2	0 to .2	Olive grey (5Y42) moist; common 10-20% medium 5-15mm distinct orange mottles; medium clay; massive structure; few 2-10% fine <2mm ferruginous root linings; moist when sampled
C1	.2 to .45	Dark grey (N40) moist; light clay; massive structure; moist when sampled
C2	.45 to 1.05	Dark grey (N40) moist; fibric light clay; massive structure; few >5mm roots; abundant 1-2mm roots; wet when sampled
2C3	1.05 to 1.8	Dark grey (N40) moist; fibric sandy clay loam; massive structure; few >5mm roots; wet when sampled
2C4	1.8 to 3.1	Dark grey (N40) moist; loamy coarse sand; many 20-50% subrounded quartz small pebbles 2-6 mm; very few <2% subrounded metamorphic rock (unidentified) medium pebbles 6-20 mm; very few <2% angular platy charcoal medium pebbles 6-20 mm; single grain structure; few 1-2mm roots; wet when sampled
3C5	3.1 to 3.75	Dark grey (N40) moist; silty clay loam; wet when sampled
3C6	3.75 to 4.8	Dark grey (N40) moist; fine sandy loam; common 10-20% angular platy shell small pebbles 2-6 mm; very few <2% angular platy shell medium pebbles 6-20 mm; massive structure; wet when sampled

Field Tests:

Depth	H2O2-	PH-2	PH-3
.1	2	4.4	2.7
.3	2	5.5	3.0
.6	4	5.2	1.5
.8	4	5.1	2.2
1	4	6.0	1.8
1.25	4	6.0	1.5
1.5	4	6.5	1.7
1.75	4	6.6	1.7
2	4	7.2	1.4
2.25	4	7.1	1.8
2.5	4	6.8	1.6
2.75	4	6.9	1.5
3	4	7.1	1.4
3.25	4	7.1	1.8
3.5	4	7.2	1.6
3.75	4	7.1	3.1
4	4	8.4	5.5
4.25	4	8.1	5.2
4.5	4	8.0	5.2
4.75	4	8.6	6.2

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Horizon Notes:

Horizon	C1	Organics
Horizon	C2	Much organics
Horizon	3C5	Sand lenses throughout

Project: IAS **Site:** 113

Location: GDA 94 ZONE 55 426039mE 7948813mN Lat: -18.55005 Long: 146.29915

Described By: Lauren OBrien (OBRL) **Date:** 30/OCT/08

Landscape:

Landform Pattern: alluvial plain **Element:** plain

Disturbances: Cultivation - Rainfed

Classifications:

ASC: SULFIDIC, REDOXIC, Hydrosol

Profile Morphology:

Horizon	Depth (m)	Description
A1p	0 to .1	Dark greyish brown (2.5Y42) moist; clay loam, sandy; massive structure; very few <2% fine <2mm ferruginous root linings; dry when sampled; clear to
B2	.1 to .4	Grey (2.5Y51) moist; few 2-10% coarse 15-30mm faint orange mottles; sandy light clay; massive structure; moderately moist when sampled; gradual to
B3	.4 to .7	Greyish brown (2.5Y52) moist; sandy clay loam; massive structure; moderately moist when sampled; clear to
2C1	.7 to 1	Light olive grey (5Y62) moist; sand; single grain structure; moderately moist when sampled; clear to
2C2	1 to 2.2	Greenish grey (10Y51) moist; coarse sand; few 2-10% angular platy charcoal small pebbles 2-6 mm; common 10-20% subrounded quartz small pebbles 2-6 mm; very few <2% subrounded quartz medium pebbles 6-20 mm; single grain structure; wet when sampled; gradual to
2C3	2.2 to 3	Olive grey (5Y42) moist; coarse sand; common 10-20% subrounded quartz small pebbles 2-6 mm; common 10-20% subrounded metamorphic rock (unidentified) small pebbles 2-6 mm; very few <2% subrounded quartz medium pebbles 6-20 mm; very few <2% subrounded metamorphic rock (unidentified) medium pebbles 6-20 mm; single grain structure; wet when sampled; clear to
3C4	3 to 3.3	Dark grey (N40) moist; loamy fine sand; few 2-10% subrounded quartz small pebbles 2-6 mm; few 2-10% subrounded metamorphic rock (unidentified) small pebbles 2-6 mm; massive structure; wet when sampled; clear to
3C5	3.3 to 4.8	Dark grey (N40) moist; loamy fine sand; common 10-20% angular platy shell small pebbles 2-6 mm; massive structure; wet when sampled

Field Tests:

Depth	H2O2-	PH-2	PH-3	Depth	H2O2-	PH-2	PH-3
.1	1	4.5	2.6	2.5	1	6.6	3.0
.3	1	5.4	3.8	2.75	1	6.9	3.2
.6	1	6.5	3.8	3	4	6.8	1.8
.8	1	6.6	3.5	3.25	4	7.3	4.6
1	4	6.5	1.7	3.5	1	7.3	6.5
1.25	1	6.2	1.8	3.75	4	7.2	5.1
1.5	1	6.3	1.8	4	4	7.6	4.5
1.75	1	6.5	2.0	4.25	2	7.1	5.5
2	1	6.5	2.7	4.5	2	7.1	6.4
2.25	1	6.6	3.7	4.75	4	7.5	6.1

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Observation Notes:

Location E.C's. Low area next to bund. Table drains, poor growth, scalds.

Horizon Notes:

Horizon	2C3	Preserved wood at 2.8m
Horizon	3C4	Coarse fragments in lenses

Project: IAS **Site:** 114

Location: GDA 94 ZONE 55 426440mE 7948388mN Lat: -18.5539 Long: 146.30294

Described By: Lauren OBrien (OBRL) **Date:** 31/OCT/08

Landscape:

Landform Pattern: alluvial plain **Element:** plain

Disturbances: Cultivation - Rainfed

Classifications:

ASC: SULFIDIC, OXYAQUIC, Hydrosol

Profile Morphology:

Horizon	Depth (m)	Description
A2p	0 to .25	Very dark grey (10YR31) moist; very few <2% fine <5mm faint orange mottles; clay loam; massive structure; very few <2% fine <2mm ferruginous root linings; few 2-5mm roots; dry when sampled; clear to
B21	.25 to .6	Dark grey (2.5Y41) moist; common 10-20% medium 5-15mm distinct orange mottles; clay loam, sandy; massive structure; few <1mm roots; moderately moist when sampled; abrupt to
B22	.6 to .9	Light brownish grey (2.5Y62) moist; loamy sand; very few <2% subrounded quartz small pebbles 2-6 mm; massive structure; very few <2% fine <2mm ferruginous root linings; moist when sampled; abrupt to
B23	.9 to 1.2	Light brownish grey (2.5Y62) moist; coarse sand; few 2-10% subrounded quartz small pebbles 2-6 mm; single grain structure; wet when sampled; clear to
2C1	1.2 to 2.8	Dark greenish grey (10Y41) moist; loamy coarse sand; few 2-10% subrounded quartz small pebbles 2-6 mm; single grain structure; few 2-10% coarse 6-20mm argillaceous soft segregations; wet when sampled; diffuse to
2C2	2.8 to 3.4	Dark grey (N40) moist; sand; single grain structure; few 2-10% very coarse 20-60mm organic (humified) soft segregations; wet when sampled; gradual to
3C3	3.4 to 3.7	Dark grey (N40) moist; fine sand; single grain structure; wet when sampled
4C4	3.7 to 4.35	Dark grey (N40) moist; fine sand; single grain structure; few 2-10% very coarse 20-60mm argillaceous soft segregations; wet when sampled
5C5	4.35 to 4.55	Dark grey (N40) moist; clayey sand; common 10-20% subrounded quartz small pebbles 2-6 mm; wet when sampled
6C6	4.55 to 4.8	Dark grey (N40) moist; loamy fine sand; many 20-50% angular platy shell small pebbles 2-6 mm; very few <2% angular platy shell medium pebbles 6-20 mm; massive structure; wet when sampled

Field Tests:

Depth	H2O2-	PH-2	PH-3	Depth	H2O2-	PH-2	PH-3
.1	1	4.6	2.6	2.5	4	6.6	1.7
.3		4.8	3.0	2.75	4	7.0	1.8
.6		5.6	4.0	3	4	7.2	1.8
.8		6.1	4.8	3.25	4	6.7	1.6
1		6.5	5.5	3.5	4	7.3	1.9
1.25	4	6.8	1.7	3.75	3	6.7	2.0
1.5	4	7.2	2.0	4	4	7.2	1.7
1.75	3	7.3	1.7	4.25	4	7.2	1.9
2	4	7.0	2.0	4.5	4	7.6	3.9
2.25	4	6.9	1.8	4.75	2	7.1	4.9

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Horizon Notes:

Horizon	2C1	Organics present; mostly fine roots
Horizon	2C2	Segregation lens at 3.25m
Horizon	4C4	Much organics present. segregations @ 3.9m and 4.2m

Project: IAS **Site:** 115

Location: GDA 94 ZONE 55 426337mE 7948751mN Lat: -18.55062 Long: 146.30197

Described By: Lauren OBrien (OBRL) **Date:** 31/OCT/08

Landscape:

Landform Pattern: alluvial plain **Element:** plain

Disturbances: Cultivation - Rainfed

Classifications:

ASC: SULFIDIC, SUPRATIDAL, Hydrosol

Profile Morphology:

Horizon	Depth (m)	Description
A2	0 to .25	Black (10YR21) moist; clay loam; massive structure; few 2-10% fine <2mm ferruginous root linings; few 2-5mm roots; dry when sampled; gradual to
B2	.25 to .75	Grey (5Y61) moist; very few <2% coarse 15-30mm distinct dark mottles, common 10-20% very coarse >30mm distinct orange mottles; sandy clay loam; massive structure; moderately moist when sampled; clear to
2C1	.75 to 1.1	Light olive grey (5Y62) moist; sand; very few <2% subrounded quartz small pebbles 2-6 mm; single grain structure; wet when sampled; clear to
2C2	1.1 to 2.85	Greenish grey (10Y51) moist; sand; common 10-20% subrounded quartz small pebbles 2-6 mm; common 10-20% subrounded metamorphic rock (unidentified) small pebbles 2-6 mm; single grain structure; wet when sampled
3C3	2.85 to 3.5	Dark grey (N40) moist; loamy fine sand; very few <2% subrounded quartz small pebbles 2-6 mm; common 10-20% angular platy shell small pebbles 2-6 mm; very few <2% angular platy shell medium pebbles 6-20 mm; massive structure; wet when sampled
3C4	3.5 to 3.75	Dark grey (N40) moist; sand; common 10-20% angular platy shell small pebbles 2-6 mm; few 2-10% subrounded quartz small pebbles 2-6 mm; single grain structure; wet when sampled
3C5	3.75 to 6	Dark grey (N40) moist; loamy fine sand; few 2-10% angular platy shell small pebbles 2-6 mm; very few <2% angular platy shell medium pebbles 6-20 mm; massive structure; wet when sampled

Field Tests:

Depth	H2O2-	PH-2	PH-3	Depth	H2O2-	PH-2	PH-3
.1	1	4.2	2.5	3.25	3	7.2	6.0
.3		4.4	3.2	3.5	2	7.7	3.9
.6		6.4	4.8	3.75	4	7.4	3.8
.8		7.0	4.9	4	4	7.0	5.9
1		7.1	5.2	4.25	2	7.2	6.1
1.25	1	6.9	2.0	4.5	2	7.2	6.2
1.5	4	7.0	1.9	4.75	3	7.5	6.2
1.75	1	7.1	2.2	5	3	7.5	5.6
2	1	7.0	2.5	5.25	4	8.0	6.1
2.25	1	6.9	4.1	5.5	4	7.6	5.9
2.5	1	6.9	3.0	5.75	3	8.1	6.1
2.75	4	7.0	2.6	6	3	7.6	6.1
3	4	7.0	3.1				

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Project: IAS **Site:** 116

Location: GDA 94 ZONE 55 426121mE 7948445mN Lat: -18.55338 Long: 146.29992

Described By: Lauren OBrien (OBRL) **Date:** 31/OCT/08

Landscape:

Landform Pattern: alluvial plain **Element:** plain

Classifications:

ASC: SULFURIC, REDOXIC, Hydrosol

Profile Morphology:

Horizon	Depth (m)	Description
A2p	0 to .25	Black (10YR21) moist; clay loam; massive structure; few 2-10% coarse 6-20mm ferruginous soft segregations; few 2-10% medium 2-6mm ferruginous root linings; many 2-5mm roots; moderately moist when sampled; clear to
B21	.25 to .9	Dark grey (5Y41) moist; very few <2% medium 5-15mm faint orange mottles; light clay; massive structure; few 2-10% fine <2mm ferruginous root linings; few 2-5mm roots; common 2-5mm roots; moderately moist when sampled; clear to
C1	.9 to 1.5	Very dark grey (N30) moist; fibric silty clay loam; massive structure; wet when sampled; clear to
2C2	1.5 to 3.2	Greenish grey (10Y51) moist; sand; many 20-50% subrounded quartz small pebbles 2-6 mm; many 20-50% subrounded metamorphic rock (unidentified) small pebbles 2-6 mm; very few <2% subrounded metamorphic rock (unidentified) medium pebbles 6-20 mm; very few <2% subrounded quartz medium pebbles 6-20 mm; wet when sampled; clear to
3C3	3.2 to 3.5	Dark grey (N40) moist; sandy clay loam; few 2-10% subrounded quartz small pebbles 2-6 mm; few 2-10% angular platy shell small pebbles 2-6 mm; very few <2% angular platy shell small pebbles 2-6 mm; single grain structure; wet when sampled; gradual to
4C4	3.5 to 4.8	Dark grey (N40) moist; loamy fine sand; few 2-10% angular platy shell small pebbles 2-6 mm; massive structure; wet when sampled

Field Tests:

Depth	H2O2-	PH-2	PH-3
.1		4.1	2.4
.3		4.2	2.9
.6		4.3	2.6
.8	3	4.4	2.0
1	4	4.5	2.1
1.25	4	5.5	1.9
1.5	4	5.7	1.7
1.75	4	6.3	2.0
2	4	6.6	2.8
2.25	4	7.1	2.0
2.5	4	7.5	1.7
2.75	4	7.2	1.8
3	1	7.4	2.8
3.25	1	7.8	5.3
3.5	4	7.8	3.6
3.75	2	8.1	5.2
4	2	8.2	5.9
4.25	4	8.0	4.7
4.5	4	7.6	5.5
4.75	3	7.8	5.6

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Horizon Notes:

Horizon	C1	Organics
Horizon	2C2	Clayey lens @ 2.1-2.2m
Horizon	4C4	Sandy lens @ 3.7-3.8m. Plant material at 4.25m

Project: IAS **Site:** 117

Location: GDA 94 ZONE 55 425139mE 7948181mN Lat: -18.55573 Long: 146.2906

Described By: Lauren OBrien (OBRL) **Date:** 31/OCT/08

Landscape:

Landform Pattern: alluvial plain **Element:** plain

Disturbances: Cultivation - Rainfed

Classifications:

ASC: REDOXIC, Hydrosol

Profile Morphology:

Horizon	Depth (m)	Description
A2p	0 to .2	Dark greyish brown (2.5Y42) moist; clay loam; granular weak 2-5mm structure; few 2-5mm roots; dry when sampled; clear to
B21	.2 to .55	Light brownish grey (2.5Y62) moist; few 2-10% medium 5-15mm faint brown mottles; clay loam, sandy; few 2-10% subrounded quartz small pebbles 2-6 mm; massive structure; dry when sampled; diffuse to
B22	.55 to 1.3	Olive grey (5Y52) moist; common 10-20% coarse 15-30mm distinct orange mottles; sandy light clay; very few <2% subrounded quartz small pebbles 2-6 mm; massive structure; few 1-2mm roots; moderately moist when sampled; clear to
B23	1.3 to 1.7	Yellowish brown (10YR56) moist; common 10-20% medium 5-15mm distinct gley mottles; clayey sand; very few <2% subrounded quartz small pebbles 2-6 mm; single grain structure; wet when sampled; clear to
C1	1.7 to 3.7	Greenish grey (10Y51) moist; sand; few 2-10% subrounded quartz small pebbles 2-6 mm; very few <2% angular charcoal medium pebbles 6-20 mm; single grain structure; wet when sampled
C2	3.7 to 4.6	Grey (N60) moist; coarse sand; common 10-20% subrounded quartz small pebbles 2-6 mm; single grain structure; wet when sampled
2C3	4.6 to 6	Dark grey (N40) moist; loamy fine sand; few 2-10% angular platy shell small pebbles 2-6 mm; very few <2% angular platy shell medium pebbles 6-20 mm; massive structure; wet when sampled

Field Tests:

Depth	H2O2-	PH-2	PH-3	Depth	H2O2-	PH-2	PH-3
.1	3	5.6	3.3	3.25	4	6.1	2.0
.3	3	5.8	4.3	3.5	3	6.0	1.9
.6		5.9	4.0	3.75	4	6.2	1.6
.8		5.8	3.9	4	4	6.5	2.1
1		5.9	3.6	4.25	4	6.5	2.4
1.25		5.7	3.6	4.5	4	6.6	2.3
1.5		5.6	3.1	4.75	4	7.2	2.2
1.75	1	5.9	2.9	5	3	8.0	5.1
2	1	6.1	1.6	5.25	2	8.4	6.6
2.25	4	6.0	1.8	5.5	2	8.1	7.1
2.5	3	6.0	2.1	5.75	2	8.9	6.4
2.75	3	6.0	2.0	6	2	8.9	5.8
3	4	6.2	1.7				

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Horizon Notes:

Horizon C1 Scattered organics, thin layers of same. loamy lens @ 2.6m

Project: IAS **Site:** 118

Location: GDA 94 ZONE 55 425214mE 7950207mN Lat: -18.53742 Long: 146.29139

Described By: Lauren OBrien (OBRL) **Date:** 01/NOV/08

Landscape:

Landform Pattern: alluvial plain **Element:** plain

Disturbances: Cultivation - Rainfed

Classifications:

ASC: REDOXIC, Hydrosol

Profile Morphology:

Horizon	Depth (m)	Description
A2p	0 to .25	Very dark greyish brown (10YR32) moist; fine sandy clay loam; massive structure; few 2-5mm roots; dry when sampled; clear to
B21	.25 to .55	Yellowish brown (10YR56) moist; common 10-20% medium 5-15mm faint orange mottles; loamy fine sand; few <1mm roots; wet when sampled; clear to
B22	.55 to .9	Greyish brown (2.5Y53) moist; very few <2% fine <5mm faint orange mottles, few 2-10% coarse 15-30mm distinct gley mottles; clayey fine sand; massive structure; few 2-10% fine <2mm manganiferous nodules; moist when sampled; clear to
2C1	.9 to 1.4	Dark grey (N40) moist; clay loam, fine sandy; massive structure; few 2-10% medium 2-6mm ferruginous root linings; wet when sampled; clear to
3C2	1.4 to 1.65	Dark grey (N40) moist; light medium clay; massive structure; wet when sampled; clear to
4C3	1.65 to 2.35	Very dark grey (N30) moist; fibric light clay; massive structure; wet when sampled; clear to
5C4	2.35 to 6	Dark greenish grey (10Y41) moist; sand; many 20-50% subrounded quartz small pebbles 2-6 mm; few 2-10% subrounded quartz medium pebbles 6-20 mm; few 2-10% angular platy shell small pebbles 2-6 mm; single grain structure; wet when sampled

Field Tests:

Depth	H2O2-	PH-2	PH-3	Depth	H2O2-	PH-2	PH-3
.1	2	6.2	4.3	3.25		7.2	1.7
.3	1	6.0	4.0	3.5		7.1	1.9
.6	2	6.0	4.0	3.75		7.3	2.0
.8		6.1	4.0	4		7.2	2.0
1		6.4	3.1	4.25		7.1	2.1
1.25		6.5	2.8	4.5		7.1	2.5
1.5	4	6.9	3.5	4.75		7.0	2.5
1.75	4	6.8	1.9	5		7.4	2.5
2	4	6.8	2.0	5.25		7.6	2.2
2.25	4	6.8	1.8	5.5		7.6	2.0
2.5	2	6.6	1.7	5.75		7.3	2.5
2.75	2	6.9	1.6	6	1	7.3	1.4
3		7.4	1.9				

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Horizon Notes:

Horizon 4C3 Much organics

Project: IAS **Site:** 119

Location: GDA 94 ZONE 55 425977mE 7949957mN Lat: -18.53971 Long: 146.29861

Described By: Lauren OBrien (OBRL) **Date:** 01/NOV/08

Landscape:

Landform Pattern: alluvial plain **Element:** plain

Disturbances: Cultivation - Rainfed

Classifications:

ASC: SULFURIC, OXYAQUIC, Hydrosol

Profile Morphology:

Horizon	Depth (m)	Description
A2p	0 to .3	Dark grey (10YR41) moist; clay loam; granular weak 2-5mm structure; dry when sampled; clear to
B2	.3 to .5	Dark greyish brown (10YR42) moist; very few <2% fine <5mm distinct pale mottles, very few <2% fine <5mm faint orange mottles; clay loam, sandy; very few <2% subrounded quartz small pebbles 2-6 mm; platy moderate <2mm structure; dry when sampled; gradual to
C1	.5 to .7	Very dark greyish brown (10YR32) moist; fibric clay loam; massive structure; wet when sampled; gradual to
C2	.7 to 1.05	Very dark grey (N30) moist; fibric silty clay loam; massive structure; wet when sampled; clear to
2C3	1.05 to 1.6	Dark grey (N40) moist; clayey sand; single grain structure; wet when sampled; gradual to
2C4	1.6 to 2.8	Grey (N50) moist; loamy sand; common 10-20% subrounded quartz small pebbles 2-6 mm; single grain structure; wet when sampled; gradual to
2C5	2.8 to 4.8	Grey (N50) moist; loamy fine sand; massive structure; wet when sampled

Field Tests:

Depth	H2O2-	PH-2	PH-3
.1	1	4.8	2.2
.3	1	3.8	2.2
.5	2	4.6	1.6
.7	4	5.3	1.4
1	4	5.5	2.0
1.25	4	5.5	2.4
1.5	4	5.3	1.9
1.75	4	5.4	1.3
2	4	5.5	1.5
2.25	4	5.7	1.6
2.5	4	6.0	1.8
2.75	4	6.4	1.9
3	4	6.5	1.7
3.25	4	6.4	1.4
3.5	4	6.5	1.4
3.75	4	6.5	1.8
4	4	6.8	1.7
4.25	4	6.7	1.8
4.5	4	6.7	1.7
4.75	4	6.9	1.9

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Horizon Notes:

Horizon	2C3	Organics
Horizon	2C5	Clay and sand lenses throughout

Project: IAS **Site:** 120

Location: GDA 94 ZONE 55 425614mE 7949469mN Lat: -18.54411 Long: 146.29515

Described By: Lauren OBrien (OBRL) **Date:** 01/NOV/08

Landscape:

Landform Pattern: alluvial plain **Element:** plain

Disturbances: Cultivation - Rainfed

Classifications:

ASC: SULFIDIC, REDOXIC, Hydrosol

Profile Morphology:

Horizon	Depth (m)	Description
A2p	0 to .2	Greyish brown (2.5Y52) moist; clay loam; granular weak <2mm structure; few 1-2mm roots; dry when sampled; clear to
B2	.2 to 1.05	Light brownish grey (2.5Y62) moist; very few <2% fine <5mm distinct orange mottles, few 2-10% very coarse >30mm prominent pale mottles; sandy clay loam; massive structure; very few <2% fine <2mm ferruginous root linings; moist when sampled; clear to
2C1	1.05 to 1.4	Very dark grey (N30) moist; sandy loam; massive structure; few >5mm roots; wet when sampled; gradual to
2C2	1.4 to 2.6	Dark grey (N40) moist; loamy sand; single grain structure; wet when sampled; clear to
3C3	2.6 to 2.85	Dark grey (N40) moist; silty clay loam; massive structure; wet when sampled; clear to
4C4	2.85 to 3.1	Dark grey (N40) moist; loamy fine sand; single grain structure; wet when sampled; clear to
4C5	3.1 to 3.7	Dark grey (N40) moist; sand; few 2-10% subrounded quartz small pebbles 2-6 mm; single grain structure; wet when sampled; abrupt to
4C6	3.7 to 4.05	Dark grey (N40) moist; fine sand; massive structure; wet when sampled; clear to
5C7	4.05 to 4.8	Dark grey (N40) moist; clayey fine sand; very few <2% angular platy shell medium pebbles 6-20 mm; few 2-10% angular platy shell small pebbles 2-6 mm; massive structure; wet when sampled

Field Tests:

Depth	H2O2-	PH-2	PH-3
.1	2	6.1	3.8
.3	1	6.9	4.8
.6		7.3	5.4
.8		6.9	5.3
1		6.0	3.8
1.25	4	6.2	1.7
1.5	4	6.6	1.7
1.75	4	6.4	1.8
2	4	6.5	1.9
2.25	4	6.5	1.8
2.5	4	6.9	1.7
2.75	4	6.8	2.0
3	4	6.7	1.8
3.25	3	6.9	1.6
3.5	4	6.8	1.9
3.75	4	7.2	1.8
4	4	7.5	3.4
4.25	2	7.4	4.8
4.5	2	7.5	5.0
4.75	4	7.6	5.4

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Horizon Notes:

Horizon	2C1	Organics
Horizon	2C2	Organics

Project: IAS **Site:** 121

Location: GDA 94 ZONE 55 426406mE 7945105mN Lat: -18.58357 Long: 146.30249

Described By: Lauren OBrien (OBRL) **Date:** 03/NOV/08

Landscape:

Landform Pattern: alluvial plain **Element:** plain

Disturbances: Cultivation - Rainfed

Classifications:

ASC: SULFIDIC, INTERTIDAL, Hydrosol

Profile Morphology:

Horizon	Depth (m)	Description
A2p	0 to .3	Very dark greyish brown (10YR32) moist; very few <2% fine <5mm faint orange mottles; clay loam; subangular blocky weak 5-10mm structure; moderately moist when sampled; sharp to
B2	.3 to .65	Greenish grey (10Y61) moist; very few <2% fine <5mm distinct orange mottles; sandy clay loam; massive structure; moist when sampled; clear to
B3	.65 to 1.1	Greenish grey (10Y61) moist; sandy clay loam; massive structure; wet when sampled; abrupt to
C1u	1.1 to 2	Dark grey (N40) moist; loamy sand; single grain structure; wet when sampled
2C2u	2 to 2.5	Dark grey (N40) moist; sand; few 2-10% subrounded quartz small pebbles 2-6 mm; single grain structure; wet when sampled
2C3u	2.5 to 3.5	Dark grey (N40) moist; coarse sand; common 10-20% subrounded quartz small pebbles 2-6 mm; common 10-20% subrounded metamorphic rock (unidentified) small pebbles 2-6 mm; very few <2% subrounded quartz medium pebbles 6-20 mm; very few <2% subrounded metamorphic rock (unidentified) medium pebbles 6-20 mm; very few <2% angular platy shell small pebbles 2-6 mm; very few <2% angular platy charcoal medium pebbles 6-20 mm; single grain structure; very few <2% medium 2-6mm argillaceous soft segregations; wet when sampled
3C4u	3.5 to 4.8	Very dark grey (N30) moist; loamy fine sand; few 2-10% angular platy shell small pebbles 2-6 mm; massive structure; very few <2% very coarse 20-60mm argillaceous soft segregations; wet when sampled

Field Tests:

Depth	H2O2-	PH-2	PH-3
.1	1	4.8	3.1
.3		4.8	2.8
.6		4.6	3.3
.8		4.7	3.2
1		4.9	2.6
1.25	4	6.0	1.6
1.5	4	6.3	1.5
1.75	4	6.6	2.2
2	4	6.6	1.6
2.25	3	6.8	1.7
2.5	1	6.7	2.0
2.75	1	7.0	1.6
3	1	7.0	3.2
3.25	1	7.1	1.7
3.5	1	7.5	5.5
3.75	3	7.1	6.3
4	3	7.2	6.2
4.25	4	7.8	6.1
4.5	3	7.7	5.7
4.75	3	7.3	6.2

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Horizon Notes:

Horizon	C1u	Organics
Horizon	2C3u	Shells in lens at 3.35m, Charcoal in lens at 2.8m, Clay segregations in lens at 3.2m
Horizon	3C4u	Segregations @ 4.7m

Project: IAS **Site:** 122

Location: GDA 94 ZONE 55 425945mE 7945087mN Lat: -18.58372 Long: 146.29812

Described By: Lauren OBrien (OBRL) **Date:** 03/NOV/08

Landscape:

Landform Pattern: alluvial plain **Element:** plain

Disturbances: Extensive clearing

Classifications:

ASC: SULFIDIC, REDOXIC, Hydrosol

Profile Morphology:

Horizon	Depth (m)	Description
A2	0 to .35	Black (2.5Y2.5/1) moist; very few <2% fine <5mm faint gley mottles; light clay; massive structure; few >5mm roots; moist when sampled; clear to
B2	.35 to .8	Olive grey (5Y42) moist; common 10-20% coarse 15-30mm distinct orange mottles; light clay; massive structure; few <1mm roots; wet when sampled; gradual to
C1	.8 to 1.1	Olive grey (5Y42) moist; silty light clay; massive structure; wet when sampled; clear to
2C2u	1.1 to 1.55	Dark grey (N40) moist; fibric sandy light clay; massive structure; common 10-20% very coarse 20-60mm argillaceous soft segregations; wet when sampled
3C3u	1.55 to 1.9	Greenish grey (10Y51) moist; loamy sand; few 2-10% subrounded quartz small pebbles 2-6 mm; single grain structure; few 2-10% medium 2-6mm argillaceous soft segregations; wet when sampled
3C4u	1.9 to 4.15	Greenish grey (10Y51) moist; loamy coarse sand; common 10-20% subrounded quartz small pebbles 2-6 mm; common 10-20% subrounded metamorphic rock (unidentified) small pebbles 2-6 mm; wet when sampled
4C5u	4.15 to 4.8	Dark grey (N40) moist; loamy fine sand; few 2-10% angular platy shell small pebbles 2-6 mm; very few <2% angular platy shell medium pebbles 6-20 mm; massive structure; wet when sampled

Field Tests:

Depth	H2O2-	PH-2	PH-3
.1	2	5.8	4.3
.3		5.7	4.5
.6		5.6	3.7
.8	1	6.2	4.5
1	1	5.6	3.8
1.25	4	5.8	1.5
1.5	4	5.5	1.6
1.75	4	5.9	1.4
2	4	6.0	1.8
2.25	3	6.6	1.8
2.5	1	6.1	1.7
2.75	1	6.0	1.8
3	1	6.3	3.1
3.25	1	6.2	2.2
3.5	4	6.2	1.7
3.75	1	6.3	2.6
4	4	6.7	1.6
4.25	4	7.0	5.0
4.5	4	7.7	5.8
4.75	4	7.6	6.1

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Observation Notes:

Location creek adjacent

Horizon Notes:

Horizon A2 Organics

Horizon 2C2u Organics

Project: IAS **Site:** 123

Location: GDA 94 ZONE 55 425465mE 7945064mN Lat: -18.58391 Long: 146.29357

Described By: Lauren OBrien (OBRL) **Date:** 03/NOV/08

Landscape:

Landform Pattern: alluvial plain **Element:** plain

Disturbances: Cultivation - Rainfed

Classifications:

ASC: TENOSOLIC, REDOXIC, Hydrosol

Profile Morphology:

Horizon	Depth (m)	Description
A3	0 to .25	Very dark grey (10YR31) moist; very few <2% fine <5mm faint orange mottles; clay loam; massive structure; few 1-2mm roots; dry when sampled; abrupt to
B2	.25 to .65	Dark greyish brown (2.5Y42) moist; few 2-10% medium 5-15mm faint orange mottles; clay loam; massive structure; few <1mm roots; weakly cemented continuous massive other pans; moderately moist when sampled; gradual to
B3	.65 to 1.3	Grey (5Y61) moist; few 2-10% coarse 15-30mm distinct orange mottles; fine sandy light clay; massive structure; moist when sampled; clear to
2C1u	1.3 to 3.9	Greenish grey (10Y51) moist; loamy sand; many 20-50% subrounded quartz small pebbles 2-6 mm; many 20-50% subrounded metamorphic rock (unidentified) small pebbles 2-6 mm; single grain structure; wet when sampled
3C2u	3.9 to 4.5	Dark greenish grey (10Y41) moist; loamy sand; few 2-10% angular platy charcoal small pebbles 2-6 mm; single grain structure; wet when sampled
4C3	4.5 to 5.1	Dark grey (N40) moist; fine sandy clay loam; massive structure; wet when sampled
4C4	5.1 to 6	Dark grey (N40) moist; fine sandy loam; few 2-10% angular platy shell small pebbles 2-6 mm; massive structure; wet when sampled

Field Tests:

Depth	H2O2-	PH-2	PH-3	Depth	H2O2-	PH-2	PH-3
.1	1	5.9	3.7	3.25	1	7.6	3.9
.3	1	6.4	4.6	3.5	1	7.7	2.5
.6		7.2	5.3	3.75	1	7.7	2.5
.8		7.2	5.8	4	1	7.6	2.4
1	1	7.2	5.4	4.25	1	7.5	1.9
1.25	3	7.9	3.9	4.5	4	7.8	2.5
1.5	2	8.1	3.1	4.75	4	8.2	4.3
1.75	2	7.8	3.1	5		8.2	3.7
2	4	7.7	1.9	5.25		8.2	5.8
2.25	2	7.7	1.9	5.5		8.1	5.7
2.5	1	7.4	1.8	5.75		8.6	4.8
2.75	1	7.4	2.1	6		8.6	5.5
3	1	7.4	2.1				

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Horizon Notes:

Horizon 4C3 Sand lenses

Project: IAS **Site:** 124

Location: GDA 94 ZONE 55 426090mE 7945381mN Lat: -18.58107 Long: 146.29951

Described By: Lauren OBrien (OBRL) **Date:** 03/NOV/08

Landscape:

Landform Pattern: alluvial plain **Element:** plain

Disturbances: Cultivation - Rainfed

Classifications:

ASC: REDOXIC, Hydrosol

Profile Morphology:

Horizon	Depth (m)	Description
A2p	0 to .5	Very dark greyish brown (10YR32) moist; very few <2% fine <5mm faint orange mottles; clay loam; massive structure; very few <2% fine <2mm ferruginous root linings; few 2-5mm roots; moderately moist when sampled; clear to
B21	.5 to .8	Dark grey (5Y41) moist; very few <2% fine <5mm faint orange mottles; light clay; very few <2% angular platy charcoal medium pebbles 6-20 mm; angular blocky weak 2-5mm structure; very few <2% fine <2mm ferruginous root linings; abundant <1mm roots; few 1-2mm roots; moist when sampled; clear to
B22	.8 to 1.2	Olive grey (5Y42) moist; very few <2% fine <5mm faint dark mottles, common 10-20% medium 5-15mm faint orange mottles; clay loam, fine sandy; massive structure; wet when sampled; clear to
2C1	1.2 to 1.55	Greenish grey (10Y51) moist; clay loam, fine sandy; massive structure; wet when sampled; gradual to
2C2	1.55 to 2.8	Dark grey (N40) moist; fibric fine sandy clay loam; massive structure; wet when sampled; diffuse to
3C3	2.8 to 3.6	Grey (N50) moist; coarse sand; common 10-20% subrounded quartz small pebbles 2-6 mm; very few <2% subrounded quartz medium pebbles 6-20 mm; single grain structure; wet when sampled

Field Tests:

Depth	H2O2-	PH-2	PH-3
.1	2	4.3	3.0
.3	2	4.6	3.2
.6	1	4.5	3.4
.8	1	4.4	3.2
1	1	5.5	3.2
1.25	2	5.4	3.5
1.5	2	5.7	4.1
1.75	4	5.9	1.5
2	4	5.9	1.6
2.25	4	6.2	1.5
2.5	4	6.3	1.5
2.75	4	6.4	1.4
3	4	6.9	1.3
3.25	1	7.1	4.0
3.5	1	7.0	3.1

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Observation Notes:

Location fallow field, creek adjacent. ploughed in - loose surface scraped away before sampling.

Horizon Notes:

Horizon 2C1 Organics

Horizon 2C2 Organics

Project: IAS **Site:** 125

Location: GDA 94 ZONE 55 425347mE 7945331mN Lat: -18.58149 Long: 146.29247

Described By: Lauren OBrien (OBRL) **Date:** 04/NOV/08

Landscape:

Landform Pattern: alluvial plain **Element:** plain

Disturbances: Cultivation - Rainfed

Classifications:

ASC: REDOXIC, Hydrosol

Profile Morphology:

Horizon	Depth (m)	Description
A2	0 to .3	Very dark grey (10YR31) moist; light clay; massive structure; few 2-5mm roots; common <1mm roots; moderately moist when sampled; gradual to
B21	.3 to .7	Grey (2.5Y51) moist; common 10-20% fine <5mm distinct orange mottles; fine sandy light clay; massive structure; few 2-10% fine <2mm ferruginous root linings; common 1-2mm roots; many <1mm roots; moist when sampled; gradual to
B22	.7 to 1.6	Grey (5Y61) moist; few 2-10% fine <5mm distinct orange mottles; silty light clay; massive structure; many <1mm roots; moist when sampled; clear to
B3	1.6 to 1.9	Dark greenish grey (10Y41) moist; silty light clay; massive structure; wet when sampled; sharp to
2C1	1.9 to 2.35	Light brownish grey (2.5Y62) moist; sand; single grain structure; wet when sampled; clear to
2C2	2.35 to 4.2	Grey (5Y61) moist; loamy coarse sand; many 20-50% subrounded quartz small pebbles 2-6 mm; many 20-50% subrounded metamorphic rock (unidentified) small pebbles 2-6 mm; very few <2% subrounded quartz medium pebbles 6-20 mm; very few <2% subrounded metamorphic rock (unidentified) medium pebbles 6-20 mm; few 2-10% angular platy charcoal small pebbles 2-6 mm; single grain structure; wet when sampled; abrupt to
3C3	4.2 to 5.1	Dark grey (N40) moist; fine sandy loam; very few <2% angular platy shell small pebbles 2-6 mm; massive structure; wet when sampled; gradual to
3C4	5.1 to 5.7	Dark grey (N40) moist; sandy loam; few 2-10% angular platy shell small pebbles 2-6 mm; massive structure; wet when sampled; gradual to
3C5	5.7 to 6	Dark grey (N40) moist; fine sandy loam; few 2-10% angular platy shell small pebbles 2-6 mm; massive structure; wet when sampled

Field Tests:

Depth	H2O2-	PH-2	PH-3	Depth	H2O2-	PH-2	PH-3
.1	2	5.2	3.1	3.25	1	6.6	4.5
.3	2	5.3	4.0	3.5	1	6.7	4.8
.6	2	5.4	4.0	3.75	1	6.6	4.5
.8	2	5.2	3.3	4	1	6.7	3.9
1	2	6.1	2.9	4.25	3	7.0	4.5
1.25	2	5.7	3.7	4.5	3	7.2	4.9
1.5	3	6.8	3.4	4.75	4	7.7	3.8
1.75	3	7.0	3.3	5	4	7.9	3.8
2	2	6.9	3.1	5.25	3	8.0	4.9
2.25	2	6.9	4.4	5.5	2	8.1	3.2
2.5	1	6.5	4.2	5.75	4	8.1	4.6
2.75	1	6.6	4.4	6	3	8.2	3.3
3	1	6.6	4.7				

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Observation Notes:

Location ~400m E of Halifax. Edge of isolated depression.

Project: IAS **Site:** 126

Location: GDA 94 ZONE 55 426459mE 7944784mN Lat: -18.58648 Long: 146.30298

Described By: Lauren OBrien (OBRL) **Date:** 04/NOV/08

Landscape:

Landform Pattern: alluvial plain **Element:** plain

Disturbances: Cultivation - Rainfed

Classifications:

ASC: SULFIDIC, EXTRATIDAL, Hydrosol

Profile Morphology:

Horizon	Depth (m)	Description
A1	0 to .3	Dark greyish brown (10YR42) moist; very few <2% fine <5mm faint orange mottles; heavy clay loam; subangular blocky weak 2-5mm structure; few >5mm roots; moderately moist when sampled
B2	.3 to .7	Light olive grey (5Y62) moist; few 2-10% coarse 15-30mm distinct orange mottles; clayey sand; massive structure; very few <2% medium 2-6mm argillaceous soft segregations; very few <2% fine <2mm ferruginous root linings; few 1-2mm roots; moist when sampled
B3	.7 to 1	Olive grey (5Y52) moist; loamy sand; very few <2% subrounded quartz small pebbles 2-6 mm; wet when sampled
C1	1 to 2.5	Dark grey (N40) moist; loamy sand; very few <2% subrounded quartz small pebbles 2-6 mm; single grain structure; wet when sampled
2C2	2.5 to 2.95	Dark greenish grey (10Y41) moist; sandy clay loam; massive structure; wet when sampled
3C3	2.95 to 3.5	Dark grey (5Y41) moist; sand; few 2-10% subrounded quartz small pebbles 2-6 mm; few 2-10% subrounded metamorphic rock (unidentified) small pebbles 2-6 mm; very few <2% coarse 6-20mm argillaceous soft segregations; wet when sampled
4C4	3.5 to 4.8	Dark grey (N40) moist; loamy fine sand; few 2-10% angular platy shell small pebbles 2-6 mm; very few <2% angular platy shell medium pebbles 6-20 mm; single grain structure; very few <2% coarse 6-20mm argillaceous soft segregations; wet when sampled

Field Tests:

Depth	H2O2-	PH-2	PH-3	Depth	H2O2-	PH-2	PH-3
.1	2	5.4	2.5	2.5	3	6.3	1.2
.3	2	5.0	3.7	2.75	3	6.6	1.4
.6	1	4.7	3.8	3	3	6.7	1.2
.8	1	5.3	4.2	3.25	1	7.0	5.3
1	1	5.6	3.7	3.5	4	7.0	1.6
1.25	3	5.4	1.3	3.75	4	6.5	3.6
1.5	2	5.7	1.1	4	2	6.7	4.0
1.75	4	6.1	1.4	4.25	2	6.8	4.7
2	4	6.3	1.3	4.5	3	6.9	4.7
2.25	4	6.5	1.1	4.75	3	7.1	4.4

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Observation Notes:

Location Old Rifle Range

Horizon Notes:

Horizon	B3	Organics at horizon boundary
Horizon	C1	Organics @ 1.6m, Fine sand lens beneath and scattered thru
Horizon	3C3	Segregations @ 3.35m
Horizon	4C4	Segregations at base of horizon

Project: IAS **Site:** 127

Location: GDA 94 ZONE 55 425603mE 7944898mN Lat: -18.58541 Long: 146.29488

Described By: Lauren OBrien (OBRL) **Date:** 04/NOV/08

Landscape:

Landform Pattern: alluvial plain **Element:** plain

Disturbances: Highly disturbed, urban

Classifications:

ASC: REDOXIC, Hydrosol

Profile Morphology:

Horizon	Depth (m)	Description
A2	0 to .2	Black (10YR21) moist; loam; subangular blocky weak <2mm structure; few 2-5mm roots; dry when sampled; gradual to
B1	.2 to .7	Dark greyish brown (10YR42) moist; very few <2% fine <5mm faint orange mottles; clay loam, sandy; massive structure; few 1-2mm roots; common <1mm roots; dry when sampled; gradual to
B22	.7 to 1.1	Light yellowish brown (2.5Y64) moist; very few <2% fine <5mm faint orange mottles; clayey sand; single grain structure; moderately moist when sampled; gradual to
B3	1.1 to 1.6	Light yellowish brown (2.5Y64) moist; sand; single grain structure; wet when sampled; clear to
C1u	1.6 to 2.2	Greenish grey (10Y61) moist; loamy fine sand; single grain structure; few 2-10% medium 2-6mm argillaceous soft segregations; wet when sampled; gradual to
C2u	2.2 to 3	Dark greenish grey (10Y41) moist; loamy fine sand; single grain structure; wet when sampled
2C3u	3 to 3.4	Dark grey (N40) moist; clayey sand; few 2-10% subrounded quartz small pebbles 2-6 mm; few 2-10% subrounded metamorphic rock (unidentified) small pebbles 2-6 mm; single grain structure; wet when sampled
2C4u	3.4 to 5	Dark grey (N40) moist; loamy coarse sand; many 20-50% subrounded quartz small pebbles 2-6 mm; many 20-50% subrounded metamorphic rock (unidentified) small pebbles 2-6 mm; very few <2% subrounded quartz medium pebbles 6-20 mm; very few <2% subrounded metamorphic rock (unidentified) medium pebbles 6-20 mm; single grain structure; wet when sampled
3C5	5 to 5.6	Dark grey (N40) moist; fine sandy clay loam; very few <2% angular platy shell small pebbles 2-6 mm; wet when sampled
3C6	5.6 to 6	Dark grey (N40) moist; fine sandy loam; very few <2% angular platy shell small pebbles 2-6 mm; massive structure; wet when sampled

Field Tests:

Depth	H2O2-	PH-2	PH-3	Depth	H2O2-	PH-2	PH-3
.1	3	5.5	2.8	3.25	4	6.5	1.4
.3	3	5.8	4.1	3.5	3	6.6	2.4
.6	2	5.4	3.8	3.75	3	6.6	1.5
.8	2	5.7	3.9	4	3	6.6	1.7
1	1	6.0	4.2	4.25	3	6.8	1.5
1.25	1	5.6	3.7	4.5	3	6.9	1.9
1.5	1	6.1	2.9	4.75	1	7.2	2.3
1.75	3	6.3	2.8	5	4	8.2	3.0
2	4	6.4	1.6	5.25	4	8.0	3.2
2.25	4	6.2	1.6	5.5	4	7.8	2.9
2.5	3	5.9	1.6	5.75	4	8.0	3.2
2.75	4	6.3	1.6	6	3	7.9	3.5
3	4	6.4	1.5				

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Observation Notes:

Location Old Rifle Range entrance, left of gate. Drain edge next to road reserve.

Horizon Notes:

Horizon 2C3u Coarse fragments in thin lenses

Project: IAS **Site:** 128

Location: GDA 94 ZONE 55 424986mE 7945188mN Lat: -18.58277 Long: 146.28904

Described By: Lauren OBrien (OBRL) **Date:** 04/NOV/08

Landscape:

Landform Pattern: alluvial plain **Element:** plain

Disturbances: Highly disturbed e.g. mining, urban

Classifications:

ASC: REDOXIC, Hydrosol

Profile Morphology:

Horizon	Depth (m)	Description
A2	0 to .3	Very dark greyish brown (10YR32) moist; sandy clay loam; massive structure; common 1-2mm roots; dry when sampled; gradual to
B21	.3 to .6	Yellowish brown (10YR54) moist; very few <2% fine <5mm faint dark mottles, very few <2% medium 5-15mm faint orange mottles; clay loam, fine sandy; massive structure; very few <2% fine <2mm manganiferous nodules; moderately moist when sampled; gradual to
B22	.6 to 1.4	Grey (10YR51) moist; few 2-10% medium 5-15mm faint orange mottles; light clay; massive structure; common 10-20% fine <2mm manganiferous nodules; moderately moist when sampled; diffuse to
B23	1.4 to 2.25	Grey (2.5Y61) moist; common 10-20% very coarse >30mm distinct orange mottles; clay loam, coarse sandy; few 2-10% subrounded metamorphic rock (unidentified) small pebbles 2-6 mm; few 2-10% subrounded quartz small pebbles 2-6 mm; massive structure; very few <2% fine <2mm manganiferous nodules; uncemented continuous massive manganiferous pan; moist when sampled; abrupt to
2C1	2.25 to 2.6	Light olive grey (5Y62) moist; clayey coarse sand; many 20-50% subrounded metamorphic rock (unidentified) small pebbles 2-6 mm; many 20-50% subrounded quartz small pebbles 2-6 mm; massive structure; few 2-5mm roots; wet when sampled; abrupt to
2C2	2.6 to 3.3	Light olive grey (5Y62) moist; loamy coarse sand; many 20-50% subrounded quartz small pebbles 2-6 mm; many 20-50% subrounded metamorphic rock (unidentified) small pebbles 2-6 mm; very few <2% subrounded metamorphic rock (unidentified) medium pebbles 6-20 mm; very few <2% subrounded quartz medium pebbles 6-20 mm; single grain structure; wet when sampled; clear to
2C3	3.3 to 7.2	Grey (N50) moist; loamy coarse sand; many 20-50% subrounded quartz small pebbles 2-6 mm; many 20-50% subrounded metamorphic rock (unidentified) small pebbles 2-6 mm; single grain structure; wet when sampled
3C4	7.2 to 8.15	Light olive grey (5Y62) moist; loamy sand; common 10-20% subrounded quartz small pebbles 2-6 mm; common 10-20% subrounded metamorphic rock (unidentified) small pebbles 2-6 mm; single grain structure; very few <2% medium 2-6mm argillaceous soft segregations; wet when sampled
4C5	8.15 to 8.35	Grey (N50) moist; silty clay loam; very few <2% subrounded quartz small pebbles 2-6 mm; very few <2% angular platy shell small pebbles 2-6 mm; very few <2% subrounded conglomerate medium pebbles 6-20 mm; massive structure; wet when sampled
5D1	8.35 to 8.8	Light greenish grey (10GY71) moist; fine sandy loam; very few <2% very coarse 20-60mm argillaceous soft segregations; wet when sampled
5D2	8.8 to 9.3	Light greenish grey (10GY71) moist; few 2-10% coarse 15-30mm distinct brown mottles; fine sandy clay loam; massive structure; moist when sampled

Field Tests:

Depth	H2O2-	PH-2	PH-3
.1	3	5.5	3.1
.3	4	5.8	4.5
.6	2	5.8	4.1
.8	2	6.1	4.4
1	3	5.9	3.8
1.25	1	5.7	3.8
1.5	1	5.6	4.8
1.75	3	5.6	5.6
2	2	5.7	5.0
2.25	1	5.7	4.7
2.5	1	6.3	5.0
2.75	1	5.9	4.0
3	1	6.3	4.0
3.25	1	6.2	4.1

(continued)

Project: IAS **Site:** 128

Field Tests:

Depth	H2O2-	PH-2	PH-3
3.5	1	6.3	4.1
3.75	1	5.9	4.4
4	1	6.1	4.3
4.25	1	6.1	4.5
4.5	1	6.1	3.9
4.75	1	6.3	4.5
5	1	6.3	4.5
5.5	1	6.4	4.6
6	1	6.3	3.9
6.5	1	6.1	1.9
7	2	6.3	1.6
7.5	1	6.4	4.8
8	1	6.5	4.8
8.25	3	7.8	3.9
8.5	2	8.6	7.0
8.75	1	8.5	6.6
9	2	8.4	7.0
9.25	2	7.8	6.8

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Observation Notes:

Location Halifax. Park next to community hall.

Horizon Notes:

Horizon	2C1	Organics
Horizon	2C3	Iron stip results >500mg/L Fe(II) @ 3.7m. Same at 4.8m.
Horizon	4C5	Conglomerate fragments in layer at base of horizon
Horizon	5D1	Segregations in layer at top of horizon

Project: IAS **Site:** 129

Location: GDA 94 ZONE 55 424420mE 7948061mN Lat: -18.55679 Long: 146.28378

Described By: Lauren OBrien (OBRL) **Date:** 05/NOV/08

Landscape:

Landform Pattern: alluvial plain **Element:** plain

Disturbances: Cultivation - Rainfed

Classifications:

ASC: REDOXIC, Hydrosol

Profile Morphology:

Horizon	Depth (m)	Description
A2p	0 to .35	Dark greyish brown (2.5Y42) moist; very few <2% fine <5mm faint orange mottles; clay loam; subangular blocky weak 2-5mm structure; very few <2% fine <2mm manganiferous nodules; few >5mm roots; dry when sampled; clear to
B21	.35 to .8	Grey (2.5Y51) moist; many 20-50% medium 5-15mm distinct orange mottles; clay loam; massive structure; few 2-10% fine <2mm ferruginous root linings; very few <2% fine <2mm manganiferous nodules; few 2-5mm roots; moderately moist when sampled; gradual to
B22	.8 to 1.2	Grey (5Y51) moist; many 20-50% medium 5-15mm distinct orange mottles; clay loam, fine sandy; massive structure; few 2-10% fine <2mm ferruginous root linings; few 1-2mm roots; moist when sampled; clear to
B3	1.2 to 1.7	Greenish grey (10Y51) moist; fine sandy clay loam; wet when sampled; clear to
C1u	1.7 to 4.8	Very dark grey (N30) moist; silty clay loam; massive structure; very few <2% medium 2-6mm argillaceous soft segregations; wet when sampled

Field Tests:

Depth	H2O2-	PH-2	PH-3
.1	2	5.2	2.4
.3	2	6.2	3.3
.6	2	6.6	4.9
.8	2	6.7	4.7
1	1	6.8	4.6
1.25	1	6.9	3.5
1.5	2	6.7	3.0
1.75	4	6.8	1.3
2	4	7.1	1.4
2.25	4	6.9	1.6
2.5	4	6.9	1.4
2.75	4	7.1	1.3
3	4	7.0	1.6
3.25	4	7.1	1.3
3.5	4	7.1	1.3
3.75	4	6.9	2.4
4	4	7.1	2.0
4.25	4	7.4	1.7
4.5	4	7.1	1.4
4.75	4	7.5	1.4

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Horizon Notes:

Horizon C1u Segregations @ 3.75m. Much organics, Tree @ 2.1m

Project: IAS **Site:** 130

Location: GDA 94 ZONE 55 424508mE 7947926mN Lat: -18.55801 Long: 146.28461

Described By: Lauren OBrien (OBRL) **Date:** 05/NOV/08

Landscape:

Landform Pattern: alluvial plain **Element:** plain

Disturbances: Cultivation - Rainfed

Classifications:

ASC: INCEPTIC, Brown-Orthic, Tenosol

Profile Morphology:

Horizon	Depth (m)	Description
A2p	0 to .35	Brown (10YR43) moist; clay loam; massive structure; dry when sampled
B2	.35 to .7	Dark yellowish brown (10YR46) moist; fine sandy loam; massive structure; dry when sampled
B3	.7 to 2.2	Yellowish brown (10YR56) moist; sand; very few <2% subrounded quartz small pebbles 2-6 mm; single grain structure; wet when sampled
C1	2.2 to 5	Pale yellow (2.5Y73) moist; sand; few 2-10% subrounded quartz small pebbles 2-6 mm; few 2-10% subrounded metamorphic rock (unidentified) small pebbles 2-6 mm; single grain structure; wet when sampled
2C2	5 to 6.2	Pale yellow (2.5Y73) moist; coarse sand; many 20-50% subrounded quartz small pebbles 2-6 mm; many 20-50% subrounded metamorphic rock (unidentified) small pebbles 2-6 mm; single grain structure; wet when sampled
2C3	6.2 to 6.8	Pale yellow (2.5Y74) moist; coarse sand; many 20-50% subrounded quartz small pebbles 2-6 mm; many 20-50% subrounded metamorphic rock (unidentified) small pebbles 2-6 mm; few 2-10% subrounded metamorphic rock (unidentified) medium pebbles 6-20 mm; wet when sampled
2C4	6.8 to 8.3	Pale yellow (2.5Y73) moist; coarse sand; common 10-20% subrounded quartz small pebbles 2-6 mm; common 10-20% subrounded metamorphic rock (unidentified) small pebbles 2-6 mm; very few <2% subrounded metamorphic rock (unidentified) medium pebbles 6-20 mm; single grain structure; wet when sampled
2C5	8.3 to 10.6	Light brownish grey (2.5Y63) moist; sand; few 2-10% subrounded quartz small pebbles 2-6 mm; few 2-10% subrounded metamorphic rock (unidentified) small pebbles 2-6 mm; single grain structure; wet when sampled
3C6	10.6 to 10.8	Grey (N60) moist; very few <2% fine <5mm faint orange mottles; fine sandy light clay; massive structure; wet when sampled
4C7	10.8 to 11.4	Pale yellow (2.5Y74) moist; few 2-10% medium 5-15mm distinct gley mottles; clay loam, fine sandy; massive structure; moist when sampled
4C8	11.4 to 12	Light greenish grey (10Y71) moist; few 2-10% medium 5-15mm distinct orange mottles; fine sandy clay loam; massive structure; moist when sampled

Field Tests:

Depth	H2O2-	PH-2	PH-3
.1	3	5.1	2.6
.3	3	4.9	2.6
.6	2	4.8	3.7
.8	1	5.4	4.2
1	1	5.4	4.7
1.25	1	5.5	4.6
1.5	1	5.4	4.6
1.75	1	5.7	4.6
2	1	5.7	5.2
2.25	1	5.5	4.6
2.5		5.6	5.2
2.75	1	5.6	5.3
3	1	5.7	5.3
3.25	1	5.6	5.2
3.5	1	5.6	5.1
3.75	1	5.8	5.4
4	1	6.0	5.5
4.25	1	5.9	5.4
4.5	1	5.7	5.3
4.75	1	5.8	5.3

(continued)

Project: IAS **Site:** 130

Field Tests:

Depth	H2O2-	PH-2	PH-3
5	1	6.1	5.2
5.25	1	6.1	5.3
5.5	1	6.0	5.6
5.75	1	6.0	5.4
6	1	6.1	5.2
6.25	1	6.1	5.3
6.5	1	5.7	5.4
6.75	1	5.6	5.4
7	1	5.8	5.3
7.25	1	6.4	5.4
7.5	1	6.9	5.4
7.75	1	6.8	5.5
8	1	6.7	5.5
8.25	1	6.5	5.3
8.5	1	6.8	5.7
8.75	1	6.9	5.6
9	1	7.2	5.5
9.25	1	7.1	5.6
9.5	1	6.8	5.6
9.75	1	7.4	5.7
10	1	7.5	5.7
10.25	1	7.5	5.6
10.5	1	7.8	5.6
10.75	3	8.1	7.1
11	1	7.0	5.7
11.25	1	6.9	5.6
11.5	1	7.0	5.9
12	1	6.7	5.5

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Horizon Notes:

Horizon	2C4	Iron strip 50-100mg/L Fe(II) @ 7m
Horizon	2C5	Iron strip 50-100mg/L Fe(II) @ 8.4m. 25 mg/L @ 9.5m
Horizon	4C8	Iron strip >500mg/L Fe(II) @ 11.5m

Project: IAS **Site:** 131

Location: GDA 94 ZONE 55 424749mE 7947251mN Lat: -18.56412 Long: 146.28687

Described By: Lauren OBrien (OBRL) **Date:** 05/NOV/08

Landscape:

Landform Pattern: alluvial plain **Element:** prior stream

Disturbances: Extensive clearing

Classifications:

ASC: SULFIDIC, REDOXIC, Hydrosol

Profile Morphology:

Horizon	Depth (m)	Description
O1	0 to .15	Dark greyish brown (10YR42) moist; fibric peat; single grain structure; moist when sampled; clear to
B2	.15 to .45	Greenish grey (10Y51) moist; common 10-20% medium 5-15mm distinct orange mottles; fibric silty light clay; massive structure; wet when sampled
C1u	.45 to 1.1	Dark grey (N40) moist; few 2-10% fine <5mm faint dark mottles; fibric silty light clay; massive structure; wet when sampled
2C2u	1.1 to 1.4	Grey (N50) moist; loamy sand; single grain structure; wet when sampled
3C3	1.4 to 1.9	Light yellowish brown (2.5Y64) moist; loamy sand; wet when sampled

Field Tests:

Depth	H2O2-	PH-2	PH-3
.1	2	5.5	2.0
.3	2	6.1	3.1
.6	4	6.7	1.5
.8	4	6.7	1.5
1	4	6.5	1.4
1.25	1	6.3	2.4
1.5	1	6.0	4.7
1.75	1	6.4	5.0

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Observation Notes:

Location swampy creekline. Behind harvester train loading bay

Horizon Notes:

Horizon	C1u	Sand lens @ 0.8m
Horizon	2C2u	Clay lens @ 1.1m

Project: IAS **Site:** 132

Location: GDA 94 ZONE 55 424780mE 7947263mN Lat: -18.56401 Long: 146.28717

Described By: Lauren OBrien (OBRL) **Date:** 05/NOV/08

Landscape:

Landform Pattern: alluvial plain **Element:** plain

Disturbances: Cultivation - Rainfed

Classifications:

ASC: STRATIC, Rudosol

Profile Morphology:

Horizon	Depth (m)	Description
A1p	0 to .35	Dark greyish brown (2.5Y42) moist; coarse sandy clay loam; few 2-10% subrounded quartz small pebbles 2-6 mm; few 2-10% subrounded metamorphic rock (unidentified) small pebbles 2-6 mm; very few <2% subrounded quartz medium pebbles 6-20 mm; very few <2% subrounded metamorphic rock (unidentified) medium pebbles 6-20 mm; single grain structure; dry when sampled; clear to
B2	.35 to .65	Brownish yellow (10YR66) moist; loamy sand; very few <2% subrounded quartz small pebbles 2-6 mm; very few <2% subrounded metamorphic rock (unidentified) small pebbles 2-6 mm; single grain structure; moderately moist when sampled; abrupt to
2C1	.65 to 1.2	Dark grey (N40) moist; silty light clay; massive structure; wet when sampled; clear to
2C2	1.2 to 1.4	Grey (N50) moist; loamy sand; few 2-10% subrounded quartz small pebbles 2-6 mm; few 2-10% subrounded metamorphic rock (unidentified) small pebbles 2-6 mm; single grain structure; wet when sampled; clear to
3C3	1.4 to 3.6	Pale yellow (2.5Y74) moist; sand; common 10-20% subrounded quartz small pebbles 2-6 mm; common 10-20% subrounded metamorphic rock (unidentified) small pebbles 2-6 mm; very few <2% subrounded quartz medium pebbles 6-20 mm; very few <2% subrounded metamorphic rock (unidentified) medium pebbles 6-20 mm; single grain structure; wet when sampled

Field Tests:

Depth	H2O2-	PH-2	PH-3
.1	1	5.1	2.5
.3	1	5.5	3.4
.6	2	6.3	3.0
.8	4	7.1	3.0
1	2	7.2	2.2
1.25	4	7.3	1.6
1.5	1	6.4	4.9
1.75	1	6.6	5.3
2	1	6.1	5.2
2.25	1	6.0	5.1

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Observation Notes:

Location higher ground ~40m from 131.

Project: IAS **Site:** 133

Location: GDA 94 ZONE 55 425367mE 7946992mN Lat: -18.56648 Long: 146.29272

Described By: Lauren OBrien (OBRL) **Date:** 05/NOV/08

Landscape:

Landform Pattern: alluvial plain **Element:** prior stream

Disturbances: Extensive clearing

Classifications:

ASC: SULFIDIC, REDOXIC

Profile Morphology:

Horizon	Depth (m)	Description
O1	0 to .15	Dark grey (10YR41) moist; light clay; massive structure; wet when sampled
B2	.15 to .45	Greenish grey (10Y51) moist; few 2-10% medium 5-15mm distinct orange mottles; silty light clay; massive structure; wet when sampled
C1	.45 to .65	Dark greenish grey (10Y41) moist; fine sandy clay loam; massive structure; wet when sampled
2C2u	.65 to 1.2	Dark greenish grey (10Y41) moist; sand; very few <2% subrounded quartz small pebbles 2-6 mm; single grain structure; wet when sampled
2C3u	1.2 to 2.4	Light yellowish brown (2.5Y64) moist; sand; very few <2% subrounded quartz small pebbles 2-6 mm; very few <2% subrounded metamorphic rock (unidentified) small pebbles 2-6 mm; single grain structure; wet when sampled

Field Tests:

Depth	H2O2-	PH-2	PH-3
.1	2	4.6	1.6
.3	2	5.7	2.2
.6	4	6.2	1.7
.8	4	6.2	1.6
1	3	6.3	1.8
1.25	4	6.2	2.0
1.5	1	6.2	1.6
1.75	1	6.1	5.2
2	1	6.3	5.2
2.25	1	6.4	5.1

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Project: IAS **Site:** 134

Location: GDA 94 ZONE 55 426824mE 7947020mN Lat: -18.56628 Long: 146.30653

Described By: Lauren OBrien (OBRL) **Date:** 06/NOV/08

Landscape:

Landform Pattern: alluvial plain **Element:** plain

Disturbances: Cultivation - Rainfed

Classifications:

ASC: REDOXIC, Hydrosol

Profile Morphology:

Horizon	Depth (m)	Description
A2p	0 to .35	Greyish brown (10YR52) moist; very few <2% fine <5mm faint orange mottles; clay loam; platy moderate 2-5mm structure; few 2-10% fine <2mm ferruginous root linings; few 2-5mm roots; dry when sampled
B21	.35 to .8	Greyish brown (2.5Y53) moist; common 10-20% medium 5-15mm distinct orange mottles; sandy clay loam; massive structure; very few <2% fine <2mm manganiferous nodules; few 2-5mm roots; dry when sampled
B22	.8 to 1.25	Grey (2.5Y51) moist; few 2-10% medium 5-15mm distinct orange mottles; clay loam, sandy; massive structure; few 1-2mm roots; moist when sampled
B23	1.25 to 1.5	Grey (N60) moist; few 2-10% very coarse >30mm distinct orange mottles; clayey sand; massive structure; very few <2% medium 2-6mm argillaceous soft segregations; wet when sampled
C1	1.5 to 1.9	Dark greenish grey (10Y41) moist; clayey sand; massive structure; wet when sampled
2C2	1.9 to 2.4	Grey (N50) moist; loamy sand; very few <2% subrounded quartz small pebbles 2-6 mm; very few <2% subrounded quartz medium pebbles 6-20 mm; single grain structure; wet when sampled
2C3	2.4 to 4.3	Greenish grey (10Y61) moist; loamy sand; few 2-10% subrounded quartz small pebbles 2-6 mm; wet when sampled
2C4	4.3 to 6	Greenish grey (10Y51) moist; loamy coarse sand; common 10-20% subrounded quartz small pebbles 2-6 mm; very few <2% subrounded quartz medium pebbles 6-20 mm; very few <2% subrounded quartz large pebbles 20-60 mm; single grain structure; wet when sampled

Field Tests:

Depth	H2O2-	PH-2	PH-3	Depth	H2O2-	PH-2	PH-3
.1	2	5.3	2.7	3.25	2	6.4	2.3
.3	2	6.3	5.0	3.5	2	6.4	1.9
.6	2	6.6	5.4	3.75	2	6.6	2.5
.8	2	7.4	5.6	4	4	6.5	1.4
1	2	7.4	5.6	4.25	4	6.6	1.3
1.25	2	7.3	5.7	4.5	4	6.6	1.9
1.5	4	6.8	1.6	4.75	4	6.6	1.8
1.75	4	6.5	1.3	5	2	6.6	4.5
2	4	7.4	1.8	5.25	2	6.5	4.1
2.25	3	6.4	2.0	5.5	1	6.7	4.8
2.5	1	6.5	2.1	5.75	1	6.5	4.2
2.75	1	6.5	1.5	6	2	6.6	4.3
3	1	6.5	2.1				

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Horizon Notes:

Horizon	B23	Segregation in lens @ 1.5m
Horizon	C1	Organics to 1.8m
Horizon	2C3	Organics

Project: IAS **Site:** 135

Location: GDA 94 ZONE 55 426097mE 7947605mN Lat: -18.56097 Long: 146.29966

Described By: Lauren OBrien (OBRL) **Date:** 06/NOV/08

Landscape:

Landform Pattern: alluvial plain **Element:** plain

Disturbances: Cultivation - Rainfed

Classifications:

ASC: REDOXIC, Hydrosol

Profile Morphology:

Horizon	Depth (m)	Description
A1p	0 to .3	Brown (10YR43) moist; very few <2% fine <5mm faint orange mottles; clay loam; subangular blocky weak 2-5mm structure; dry when sampled; clear to
A3	.3 to .6	Grey (5Y51) moist; very few <2% fine <5mm faint orange mottles; clay loam, fine sandy; single grain structure; very few <2% fine <2mm manganiferous nodules; few 1-2mm roots; dry when sampled; gradual to
B21	.6 to .8	Olive grey (5Y52) moist; few 2-10% medium 5-15mm distinct orange mottles; fine sandy clay loam; massive structure; very few <2% medium 2-6mm argillaceous soft segregations; moderately moist when sampled; clear to
B22	.8 to 1	Greenish grey (10Y51) moist; few 2-10% coarse 15-30mm distinct orange mottles; clayey sand; massive structure; moist when sampled; clear to
C1	1 to 1.5	Light olive brown (2.5Y56) moist; loamy sand; single grain structure; wet when sampled; gradual to
2C2	1.5 to 1.8	Olive grey (5Y52) moist; coarse sand; common 10-20% subrounded quartz small pebbles 2-6 mm; common 10-20% subrounded metamorphic rock (unidentified) small pebbles 2-6 mm; very few <2% subrounded metamorphic rock (unidentified) medium pebbles 6-20 mm; single grain structure; wet when sampled; gradual to
2C3	1.8 to 2.4	Olive grey (5Y52) moist; sand; few 2-10% subrounded quartz small pebbles 2-6 mm; few 2-10% subrounded metamorphic rock (unidentified) small pebbles 2-6 mm; single grain structure; wet when sampled; clear to
2C4	2.4 to 6.2	Light yellowish brown (2.5Y64) moist; sand; few 2-10% subrounded quartz small pebbles 2-6 mm; few 2-10% subrounded metamorphic rock (unidentified) small pebbles 2-6 mm; single grain structure; wet when sampled; gradual to
2C5	6.2 to 7.2	Light yellowish brown (2.5Y64) moist; coarse sand; many 20-50% subrounded quartz small pebbles 2-6 mm; many 20-50% subrounded metamorphic rock (unidentified) small pebbles 2-6 mm; very few <2% subrounded quartz medium pebbles 6-20 mm; very few <2% subrounded metamorphic rock (unidentified) medium pebbles 6-20 mm; single grain structure; wet when sampled; sharp to
3C6u	7.2 to 7.85	Dark grey (N40) moist; loamy fine sand; few 2-10% angular platy shell small pebbles 2-6 mm; very few <2% angular platy shell medium pebbles 6-20 mm; wet when sampled; clear to
3C7u	7.85 to 8.4	Dark grey (N40) moist; fine sandy clay loam; few 2-10% angular platy shell small pebbles 2-6 mm; massive structure; moist when sampled

Field Tests:

.1	2	5.0	3.1
.3	2	7.1	5.2
.6	3	7.3	5.3
.8	3	6.6	3.1
1	1	5.8	3.0
1.25	1	6.2	4.6
1.5	1	5.9	4.3
1.75	2	6.4	3.4
2	2	6.5	3.5
2.25	2	6.5	3.9
2.5	1	5.9	4.3
2.75	1	6.0	3.9
3	1	6.0	4.5
3.25	1	5.9	4.8
3.5	1	5.8	5.2
3.75	1	6.4	5.1
4	1	6.5	5.2
4.25	1	6.4	5.2

(continued)

Project: IAS **Site:** 135

Field Tests:

Depth	H2O2-	PH-2	PH-3
4.5	1	6.3	5.3
4.75	1	6.2	5.4
5	1	7.3	5.3
5.25	1	7.0	5.4
5.5	1	6.8	5.3
5.75	1	6.3	5.3
6	1	6.7	5.6
6.25	1	6.6	5.4
6.5	1	6.8	5.5
6.75	1	6.9	5.4
7	1	6.7	5.7
7.25	3	7.9	6.6
7.5	3	7.8	6.5
7.75	3	8.1	6.6
8	3	8.2	6.3
8.25	4	8.7	5.3
8.4	3	8.4	6.5

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Horizon Notes:

Horizon	B21	Segregations @ 0.8m
Horizon	2C3	Coarse sand lens at 2.15m
Horizon	3C6u	Shell layer at horizon boundary

Project: IAS **Site:** 136

Location: GDA 94 ZONE 55 426101mE 7947672mN Lat: -18.56036 Long: 146.2997

Described By: Lauren OBrien (OBRL) **Date:** 06/NOV/08

Landscape:

Landform Pattern: tidal flat **Element:** intertidal flat

Disturbances: No effective disturbance

Classifications:

ASC: SULFIDIC, INTERTIDAL, Hydrosol

Profile Morphology:

Horizon	Depth (m)	Description
A1	0 to .02	Black (N2.5/0) moist; silty loam; massive structure; wet when sampled; sharp to
B21	.02 to .2	Dark greenish grey (10Y41) moist; few 2-10% medium 5-15mm distinct orange mottles; sandy light medium clay; massive structure; wet when sampled
B22u	.2 to .45	Dark greenish grey (10Y41) moist; very few <2% fine <5mm faint orange mottles; sandy light clay; massive structure; wet when sampled
C1u	.45 to .7	Very dark grey (N30) moist; fibric silty light clay; massive structure; wet when sampled
2C2u	.7 to 1	Dark grey (N40) moist; loamy sand; single grain structure; wet when sampled

Field Tests:

Depth	H2O2-	PH-2	PH-3
.02	3	7.7	2.5
.1	2	7.3	5.0
.3	4	7.4	2.0
.6	4	7.0	1.4
.8	4	7.5	1.3
1	1	7.0	1.6

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Observation Notes:

Location Gouge auger used site located north of site 135.

Horizon Notes:

Horizon C1u Organics and sand lens @ 0.64m