

DATA SHEET FOR SOIL & REGOLITH CHARACTERISATION - Smap						SMap 1.0
Project/ident	1		Observer		Obsvsn type	Pit
Profile No			Date		NZMS 260 GR	2831310
Grid Ref.			<i>GPS ref</i>			6170510
Slope				Elevation		
Aspect (compass-23°)				Region		
Location	Gimblett Rd					
Soil Name	Omahu (1)					Representative
Management		Landuse				
Landscape		Landform	Uplifted floodplain	Landform adj		Land Elemt
Microtop		Parent material				
Vegetation	Grapes	Vege2				
Notes						
	1	2	3	4	5	6
Functional Horizon	tVAI	VAI				
Hor. Desig.	A	C				
Depth (base) cm	5	100+				
Moisture						
Matrix colour	2.5Y4/3	5Y6/2				
%						
Mottle 1						
Abund %						
Size						
Contrast						
Mottle2						
Abund2						
Size2						
Contrast2						
Texture	LS	S				
%clay	2	2				
%sand	75	92				
%stones	30	70				
Stone size						
Apedal/Pedal type	A - SG	A - SG				
Ped shape	Poly (10%)					
Size class <40mm						
Size range (mm)						
0-10 mm (vF & F)	√					
10-20 mm (M)						
20-60 mm (C)						
60-200 mm (vC&xC)						
>200 mm (G)						
Ssize method						
Soil strength	w	w				
Ped strength						
Failure						
Stickiness	non	non				
Coatings - kind	no	no				
Abundance						
Distinctness						
Particle Packing						
Root abund <2mm						
Root abund >2mm						
Permeability Est	vr	vr				
NaF test						
Soil material						
Notes						
Drainage	Well	Subgroup	WF	Soil depth class	vs	Texture
Dpth Slow	999	P Root Depth	90	Root Barrier	N	S
PM Class	Mr	Rok class	Hs	Rok cla - fines	Hs	Texture Gp60
Permeability	vr	PM Origin upper	Al	PM Origin lower	Al	S

DATA SHEET FOR SOIL & REGOLITH CHARACTERISATION - Smap						SMap 1.0
Project/ident					Observer	Pit
Profile No					Date	2828565
Grid Ref.					GPS ref	6171570
Slope					Elevation	
Aspect (compass-23°)					Region	
Location	Ohiti Road					
Soil Name	Flaxmere (2)					Representative
Management		Landuse				
Landscape		Landform	Low terrace	Landform adj	Tread	Land Elemt
Microtop		Parent material				
Vegetation	Grapes	Vege2	Grass			
Notes						
	1	2	3	4	5	6
Functional horizons	tLw	Lw	Lw	VAI		
Hor. Desig.	Ap	C	Cg	2C		
Depth (base) cm	15	40	90	100+		
Moisture						
Matrix colour	10YR4/2	2.5Y6/4	2.5Y6/2	5Y6/2		
%						
Mottle 1			2.5Y6/4			
Abund %			25			
Size						
Contrast						
Mottle2			7.5YR5/8			
Abund2			2-3			
Size2			5			
Contrast2						
Texture	SL	SL	SL	LS		
%clay	10	10	10	5		
%sand	60	60	60	70		
%stones	2	2	2	65		
Stone size						
Apedal/Pedal type	P	A - SG	A - SG	A - SG		
Ped shape	Poly (40%)	Prism (10%)				
Size class <40mm						
Size range (mm)						
0-10 mm (vF & F)	√					
10-20 mm (M)						
20-60 mm (C)		√				
60-200 mm (vC&xC)						
>200 mm (G)						
Ssize method						
Soil strength	w	w	w	w		
Ped strength						
Failure						
Stickiness						
Coatings - kind						
Abundance						
Distinctness						
Particle Packing				Loose		
Root abund <2mm						
Root abund >2mm						
Permeability Est	vr	m	m	vr		
NaF test						
Soil material						
Notes						
Drainage	Imp	Subgroup	RFM	Soil depth class	D	Texture
Dpth Slow	999	P Root Depth	90	Root Barrier	N	L
PM Class	Md	Rok class		Rok cla - fines	Hs	TextureGp60
Permeability	m/r	PM Origin upper	Al	PM Origin lower	Al	L

DATA SHEET FOR SOIL & REGOLITH CHARACTERISATION - Smap						SMap 1.0
Project/ident					Observer	
Profile No					Date	
Grid Ref.					GPS ref	
Slope					Elevation	
Aspect (compass-23°)					Region	
Location	Omarunui Road					
Soil Name	Esk (3)					Representative
Management					Landuse	
Landscape					Landform	Floodplain
Microtop					Parent material	
Vegetation	Grapes				Vege2	
Notes	Floodplain protected by stopbank					
	1	2	3	4	5	6
Functional Horizon	tAl	Al	VAI			
Hor. Desig.	Ap	C	2C			
Depth (base) cm	10	80	100+			
Moisture						
Matrix colour	10YR4/2	2.5Y5/3	5Y6/2			
%						
Mottle 1						
Abund %						
Size						
Contrast						
Mottle2						
Abund2						
Size2						
Contrast2						
Texture	SL	S	S			
%clay	10	2	2			
%sand	65	92	92			
%stones	0	0	65			
Stone size						
Apedal/Pedal type	P	A - SG	A - SG			
Ped shape	Poly (25%)					
Size class <40mm						
Size range (mm)						
0-10 mm (vF & F)	√					
10-20 mm (M)						
20-60 mm (C)						
60-200 mm (vC&xC)						
>200 mm (G)						
Ssize method						
Soil strength	w	w	w			
Ped strength						
Failure						
Stickiness	non	non	non			
Coatings - kind	no	no	no			
Abundance						
Distinctness						
Particle Packing						
Root abund <2mm						
Root abund >2mm						
Permeability Est	vr	r	vr			
NaF test						
Soil material						
Notes						
Drainage	Well	Subgroup	RFT	Soil depth class	MD	Texture
Dpth Slow	999	P Root Depth	90	Root Barrier	N	L/S
PM Class	Ms	Rok class		Rok cla - fines	Hs	TextureGp60
Permeability	r	PM Origin upper	Al	PM Origin lower	Al	L/S

DATA SHEET FOR SOIL & REGOLITH CHARACTERISATION - Smap							SMap 1.0	
Project/ident				Observer			Obsvsn type	Pit
Profile No				Date			NZMS 260 GR	2836270
Grid Ref.				GPS ref				6178330
Slope				Elevation				
Aspect (compass-23°)				Region				
Location	Omarunui Road							
Soil Name	Omarunui (4)						Representative	
Management		Landuse						
Landscape		Landform	Low terrace	Landform adj	Backplain	Land Elemt		
Microtop		Parent material						
Vegetation	Grapes	Vege2						
Notes								
	1	2	3	4	5	6		
Functional Horizons	tLw	Lw	Lw	Lw				
Hor. Desig.	Ap	C1	C2	bA				
Depth (base) cm	15	50	80	105+				
Moisture								
Matrix colour	10YR4/2	2.5Y6/4	10YR6/4	10YR4/2				
%								
Mottle 1								
Abund %								
Size								
Contrast								
Mottle2								
Abund2								
Size2								
Contrast2								
Texture	SL	SL	SL	SL				
%clay	17	17	10	17				
%sand	60	60	70	60				
%stones	0	0	0	0				
Stone size								
Apedal/Pedal type	P	A - SG	A - SG	P				
Ped shape				Blocky				
Size class <40mm								
Size range (mm)								
0-10 mm (vF & F)								
10-20 mm (M)	√							
20-60 mm (C)								
60-200 mm (vC&xC)								
>200 mm (G)								
Ssize method								
Soil strength	w	w	w	w				
Ped strength	w							
Failure								
Stickiness								
Coatings - kind	no	no	no	no				
Abundance								
Distinctness								
Particle Packing								
Root abund <2mm								
Root abund >2mm								
Permeability Est	vr	m	m	s				
NaF test								
Soil material								
Notes								
Drainage	Well	Subgroup	RFT	Soil depth class	D	Texture		
Dpth Slow	80	P Root Depth	90	Root Barrier	N	L		
PM Class	Md	Rok class		Rok cla - fines	Hs	TextureGp60		
Permeability	m/s	PM Origin upper	Al	PM Origin lower	Al	L		

DATA SHEET FOR SOIL & REGOLITH CHARACTERISATION - Smap							SMap 1.0
Project/ident		Observer		Obsvsn type	Pit		
Profile No		Date		NZMS 260 GR	2836250		
Grid Ref.		GPS ref			6178330		
Slope			Elevation				
Aspect (compass-23°)			Region				
Location	Omarunui Road						
Soil Name	Omarunui (4g)					Representative	
Management		Landuse					
Landscape		Landform	Low terrace	Landform adj	Levee	Land Elemt	
Microtop		Parent material					
Vegetation	Grapes	Vege2					
Notes							
	1	2	3	4	5	6	
Functional Horizons	tLw	AI	VAI				
Hor. Desig.	A	C	2C				
Depth (base) cm	5	50	100+				
Moisture							
Matrix colour	10YR4/2	10YR6/4	5Y6/2				
%							
Mottle 1							
Abund %							
Size							
Contrast							
Mottle2							
Abund2							
Size2							
Contrast2							
Texture	SL	LS	S				
%clay	15	4	2				
%sand	70	70	90				
%stones	0	0	65				
Stone size							
Apedal/Pedal type	P	A - SG	A - SG				
Ped shape	Blocky						
Size class <40mm							
Size range (mm)							
0-10 mm (vF & F)							
10-20 mm (M)	√						
20-60 mm (C)							
60-200 mm (vC&xC)							
>200 mm (G)							
Ssize method							
Soil strength	W	W	W				
Ped strength							
Failure							
Stickiness							
Coatings - kind							
Abundance							
Distinctness							
Particle Packing			Loose				
Root abund <2mm							
Root abund >2mm							
Permeability Est	vr	r	vr				
NaF test							
Soil material							
Notes							
Drainage	Well	Subgroup	WS	Soil depth class	md	Texture	
Dpth Slow	999	P Root Depth	90	Root Barrier	N	L/S	
PM Class	Mg	Rok class	Hs	Rok cla - fines	Hs	TextureGp60	
Permeability	m/r	PM Origin upper	AI	PM Origin lower	AI	L/S	

DATA SHEET FOR SOIL & REGOLITH CHARACTERISATION - Smap						SMap 1.0
Project/ident		Observer		Obsvsn type		Pit
Profile No		Date		NZMS 260 GR		2832910
Grid Ref.		<i>GPS ref</i>				6163215
Slope				Elevation		
Aspect (compass-23°)				Region		
Location	Rosser Road					
Soil Name	Te Awa (9)					Representative
Management		Landuse				
Landscape		Landform	Floodplain	Landform adj		Land Elemt
Microtop		Parent material				
Vegetation	Pasture	Vege2				
Notes						
	1	2	3	4	5	6
Functional Horizon	tLw	Lw	Lw	Al		
Hor. Desig.	Ap	Ap/Bgp	Bgp	2C		
Depth (base) cm	15	35	55	100+		
Moisture						
Matrix colour	10YR5/2	10YR5/2	2.5Y6/3	5Y6/2		
%						
Mottle 1		5Y6/2	7.5YR5/8	7.5YR5/8		
Abund %		25	10	10		
Size		2-8	5-10	5-10		
Contrast						
Mottle2			2.5Y5/4			
Abund2			35			
Size2			5-20			
Contrast2						
Texture	ZL	ZL	ZL	S		
%clay	22	22	22	5		
%sand	8	8	8	95		
%stones	0	0	0	2		
Stone size				10mm		
Apedal/Pedal type	P (75%)	P (70%)	P (55%)			
Ped shape	Poly	Poly & blocky	Prism & block			
Size class <40mm						
Size range (mm)						
0-10 mm (vF & F)	√	√ (60%)				
10-20 mm (M)		√ (40%)	√ (70%)			
20-60 mm (C)			√ (30%)			
60-200 mm (vC&xC)						
>200 mm (G)						
Ssize method						
Soil strength	w	w	w	w		
Ped strength						
Failure						
Stickiness	non	slight	slight	non		
Coatings - kind	no	no	no	no		
Abundance						
Distinctness						
Particle Packing						
Root abund <2mm						
Root abund >2mm						
Permeability Est	vr	m	m	s		
NaF test						
Soil material						
Notes						
Drainage	Poor (perched)	Subgroup	GOT	Soil depth class	D	Texture
Dpth Slow	55	P Root Depth	90	Root Barrier	N	L/S
PM Class	Ms	Rok class		Rok cla - fines	Hs	TextureGp60
Permeability	m/s	PM Origin upper	Al	PM Origin lower	Rh	L/S

DATA SHEET FOR SOIL & REGOLITH CHARACTERISATION - Smap							SMap 1.0	
Project/ident				Observer			Obsvsn type	Cutting
Profile No				Date			NZMS 260 GR	2833415
Grid Ref.				<i>GPS ref</i>				6176095
Slope						Elevation		
Aspect (compass-23°)						Region		
Location	Swamp Road							
Soil Name	Moteo (18p)						Representative	
Management			Landuse					
Landscape			Landform	Floodplain	Landform adj	Back basin	Land Elemt	
Microtop			Parent material					
Vegetation	Grass	Vege2	Some arable					
Notes								
	1	2	3	4	5	6		
Functional Horizons	Lw		LEw					
Hor. Desig.	Cg	OA	Cr					
Depth (base) cm	60	75	120+					
Moisture								
Matrix colour	5Y6/2	7.5YR3/2	7.5YR7/1					
%								
Mottle 1	7.5YR5/8		7.5YR5/8					
Abund %	15		1					
Size	2-4		2-4					
Contrast								
Mottle2								
Abund2								
Size2								
Contrast2								
Texture	CL	TI	CL					
%clay	20		20					
%sand	50		50					
%stones	0	0	0					
Stone size								
Apedal/Pedal type	P	P	A - massive					
Ped shape	Prism (25%)	Poly (80%)	Prism (10%)					
Size class <40mm								
Size range (mm)								
0-10 mm (vF & F)		√						
10-20 mm (M)		√						
20-60 mm (C)	√							
60-200 mm (vC&xC)			√					
>200 mm (G)								
Ssize method								
Soil strength	w	w	w					
Ped strength								
Failure	semi	semi	semi					
Stickiness	slight	non	slight					
Coatings - kind								
Abundance								
Distinctness								
Particle Packing								
Root abund <2mm								
Root abund >2mm								
Permeability Est	m	m	m					
NaF test								
Soil material								
Notes								
Drainage	Very poor	Subgroup	GRT	Soil depth class	D	Texture		
Dpth Slow	999	P Root Depth	90	Root Barrier	N		L	
PM Class	Md	Rok class		Rok cla - fines	Hs+Sm	TextureGp60		
Permeability	m	PM Origin upper	Al	PM Origin lower	Pt		L	

DATA SHEET FOR SOIL & REGOLITH CHARACTERISATION - Smap						SMap 1.0
Project/ident		Observer		Obsvsn type		Pit
Profile No		Date		NZMS 260 GR		2831710
Grid Ref.		GPS ref				6182780
Slope			Elevation			
Aspect (compass-23°)			Region			
Location	Dartmoor Road					
Soil Name	Irongate (20s)					Representative
Management		Landuse				
Landscape		Landform	Floodplain	Landform adj	Basin	Land Elemt
Microtop		Parent material				
Vegetation	Grapes	Vege2	<i>Sequoia sempivirens</i>			
Notes	Beside a drain. Cr horizon below drain level. Behind a stopbank.					
	1	2	3	4	5	6
Functional Horizons	tLw	Lw	Lw	Al	Al	VAI
Hor. Desig.	Ap	Cg1	Cg2	Cg3	Cr	2C
Depth (base) cm	15	30	50	80	105	120+
Moisture						
Matrix colour	10YR4/2	5Y7/2	5Y6/2	5Y6/2	5B4/1	
%						
Mottle 1		7.5YR5/8	7.5YR5/8	7.5YR5/8		
Abund %		15	15	5		
Size		2-6	2-6	2-4		
Contrast						
Mottle2						
Abund2						
Size2						
Contrast2						
Texture	ZL	ZL	SL	LS	LS	LS
%clay	18	18	15	2	2	2
%sand	30	30	55	70	70	92
%stones	0	0	0	0	0	65
Stone size						
Apedal/Pedal type	P (70%)	A - SG	A - SG	A - SG	A - SG	A - SG
Ped shape	Poly					
Size class <40mm						
Size range (mm)						
0-10 mm (vF & F)	√					
10-20 mm (M)						
20-60 mm (C)						
60-200 mm (vC&xC)						
>200 mm (G)						
Ssize method						
Soil strength	w	w	w	w	w	
Ped strength						
Failure						
Stickiness						
Coatings - kind						
Abundance						
Distinctness						
Particle Packing						Loose
Root abund <2mm						
Root abund >2mm						
Permeability Est	vr	m	m	r	r	vr
NaF test						
Soil material						
Notes						
Drainage	Poor	Subgroup	GRT	Soil depth class	D	Texture
Dpth Slow	999	P Root Depth	15	Root Barrier	A	L/S
PM Class	Md	Rok class		Rok cla - fines	Hs	TextureGp60
Permeability	m/r	PM Origin upper	Al	PM Origin lower	Al	L/S

DATA SHEET FOR SOIL & REGOLITH CHARACTERISATION - Smap						SMap 1.0
Project/ident		Observer		Obsvsn type		Pit
Profile No		Date		NZMS 260 GR		2832470
Grid Ref.		GPS ref				6161955
Slope			Elevation			
Aspect (compass-23°)			Region			
Location	Near end of Turamoe Road					
Soil Name	Turamoe (22)					Representative
Management		Landuse				
Landscape		Landform	Bog	Landform adj	Flood-basin	Land Elemt
Microtop		Parent material				
Vegetation	Market gardens	Vege2				
Notes						
	1	2	3	4	5	6
Functional Horizons		Al				
Hor. Desig.	OhA	2Cr				
Depth (base) cm	25	100+				
Moisture						
Matrix colour	7.5YR4/3	5Y6/2				
%						
Mottle 1		7.5YR5/8				
Abund %		2				
Size		2-4				
Contrast						
Mottle2						
Abund2						
Size2						
Contrast2						
Texture	Tl	S				
%clay		2				
%sand		92				
%stones	0	0				
Stone size						
Apedal/Pedal type	P (60%)	A - SG				
Ped shape	nutty					
Size class <40mm						
Size range (mm)						
0-10 mm (vF & F)	√					
10-20 mm (M)						
20-60 mm (C)						
60-200 mm (vC&xC)						
>200 mm (G)						
SSize method						
Soil strength	w	w				
Ped strength						
Failure						
Stickiness	non	non				
Coatings - kind	no	no				
Abundance						
Distinctness						
Particle Packing						
Root abund <2mm						
Root abund >2mm						
Permeability Est	vr	vr				
NaF test						
Soil material						
Notes						
Drainage	Very Poor	Subgroup	OHM	Soil depth class	D	Texture
Dpth Slow	999	P Root Depth	α : drain depth	Root Barrier	A	Tl
PM Class	Sh	Rok class	Hm	Rok cla - fines	Hs	TextureGp60
Permeability	r	PM Origin upper	Pt	PM Origin lower	Al	Tl

DATA SHEET FOR SOIL & REGOLITH CHARACTERISATION - Smap							SMap 1.0	
Project/ident				Observer			Obsvsn type	Cutting
Profile No				Date			NZMS 260 GR	2833990
Grid Ref.				GPS ref				6161585
Slope						Elevation		
Aspect (compass-23°)						Region		
Location	Corner on Turamoe Road							
Soil Name	Turamoe (22a)						Representative	
Management			Landuse					
Landscape			Landform	Bog	Landform adj	Flood basin	Land Elemt	
Microtop			Parent material					
Vegetation	Market gardens	Vege2						
Notes								
	1	2	3	4	5	6		
Functional Horizons		Al						
Hor. Desig.	Oh	2Cr						
Depth (base) cm	60	100+						
Moisture								
Matrix colour	7.5YR3/2	7.5Y7/1						
%								
Mottle 1								
Abund %								
Size								
Contrast								
Mottle2								
Abund2								
Size2								
Contrast2								
Texture	Tl	S						
%clay		2						
%sand		92						
%stones	0	0						
Stone size								
Apedal/Pedal type	P (85%)	A - SG						
Ped shape	nutty							
Size class <40mm								
Size range (mm)								
0-10 mm (vF & F)	√							
10-20 mm (M)								
20-60 mm (C)								
60-200 mm (vC&xC)								
>200 mm (G)								
SSize method								
Soil strength	w	w						
Ped strength								
Failure								
Stickiness	non	non						
Coatings - kind	no	no						
Abundance								
Distinctness								
Particle Packing								
Root abund <2mm								
Root abund >2mm								
Permeability Est	vr	vr						
NaF test								
Soil material								
Notes								
Drainage	Very Poor	Subgroup	OHM	Soil depth class	D	Texture		
Dpth Slow	999	P Root Depth	α : drain depth	Root Barrier	A	TI		
PM Class	Sd	Rok class	Hm	Rok cla - fines	Hs	TextureGp60		
Permeability	r	PM Origin upper	Pt	PM Origin lower	Al	TI		

DATA SHEET FOR SOIL & REGOLITH CHARACTERISATION - Smap							SMap 1.0	
Project/ident				Observer			Obsvsn type	Pit
Profile No				Date			NZMS 260 GR	2833925
Grid Ref.				GPS ref				6177595
Slope						Elevation		
Aspect (compass-23°)						Region		
Location	Swamp Road							
Soil Name	Rotoatara (67)						Representative	
Management				Landuse				
Landscape				Landform	Flood basin	Landform adj	Bog	Land Elemt
Microtop				Parent material				
Vegetation	Orchards			Vege2				
Notes								
Functional Horizons	1	2	3	4	5	6		
Hor. Desig.	Om	2Crg						
Depth (base) cm	50	100+						
Moisture								
Matrix colour	7.5YR3/2	7.5Y7/1						
%								
Mottle 1		7.5YR5/8						
Abund %		5						
Size		2-4						
Contrast								
Mottle2								
Abund2								
Size2								
Contrast2								
Texture	Tp	ZL						
%clay		25						
%sand		10						
%stones	0	0						
Stone size								
Apedal/Pedal type	P (85%)	A - SG						
Ped shape	nutty							
Size class <40mm								
Size range (mm)								
0-10 mm (vF & F)	√							
10-20 mm (M)								
20-60 mm (C)								
60-200 mm (vC&xC)								
>200 mm (G)								
Ssize method								
Soil strength	w	w						
Ped strength								
Failure								
Stickiness	non	slight						
Coatings - kind								
Abundance								
Distinctness								
Particle Packing								
Root abund <2mm								
Root abund >2mm								
Permeability Est	vr	m						
NaF test								
Soil material								
Notes								
Drainage	Very Poor	Subgroup	OMM	Soil depth class	D	Texture		
Dpth Slow	999	P Root Depth	α drain depth	Root Barrier	A	Texture	Tp	
PM Class	Sd	Rok class	Fx	Rok cla - fines	Hs	TextureGp60		
Permeability	r/m	PM Origin upper	Pt	PM Origin lower	Al	Texture	Tp	

DATA SHEET FOR SOIL & REGOLITH CHARACTERISATION - Smap							SMap 1.0
Project/ident			Observer		Obsvn type		Auger
Grid Ref.			<i>GPS ref</i>	2840887 6187608	Projection		NZMG
Slope				Elevation			
Aspect (compass-23°)				Region			
Location							
Soil Name	Ahuriri, 69a						Representative
Management		Landuse					
Landscape		Landform	Old lagoon	Landform adj	Basin		Land Elemt
Microtop		Parent material	Lacustrine sediments				
Vegetation	Pasture grass	Vege2					
Notes							
	1	2	3	4	5	6	
Functional horizon	tLw	LFs	SAI				
Hor. Desig.	App	BCr	2Cr				
Depth (base) cm	10	30	100+				
Moisture							
Matrix colour	10YR5/2	7.5GY5/1	N4/6				
%							
Mottle 1							
Abund %							
Size							
Contrast							
Mottle2							
Abund2							
Size2							
Contrast2							
Texture	CL	CL	S				
%clay	22	22	2				
%sand	40	50	92				
%stones	0	0	65				
Stone size							
Apedal/Pedal type	P - 30%	P - 30%	A - SG				
Ped shape	Blocky	Prism					
Size class <40mm							
Size range (mm)							
0-10 mm (vF & F)							
10-20 mm (M)	√						
20-60 mm (C)		√					
60-200 mm (vC&xC)							
>200 mm (G)							
SSize method							
Soil strength	w	w					
Ped strength							
Failure							
Stickiness							
Coatings - kind							
Abundance							
Distinctness							
Particle Packing			Loose				
Root abund <2mm							
Root abund >2mm							
Permeability Est	vr	m	vr				
NaF test							
Soil material							
Notes	SAI (Horizon 3) consists of shelly sand						
Drainage	Poor	Subgroup	GRQ	Soil depth class	s	Texture	
Dpth Slow	999	P Root Depth	999	Root Barrier	N		L/S
PM Class	Mr	Rok class	Hs	Rok cla - fines			TextureGp60
Permeability	m	PM Origin upper	AI	PM Origin lower	AI		L/S

DATA SHEET FOR SOIL & REGOLITH CHARACTERISATION - Smap						SMap 1.0
Project/ident			Observer		Obsvsn type	Auger
Grid Ref.			<i>GPS ref</i>	2841004 6187989	Projection	NZMG <i>GPS/Map/Alti meter</i>
Slope				Elevation		
Aspect (compass-23°)				Region		
Location						
Soil Name	Ahuriri, 69d					Representative
Management		Landuse	Sheep & beef			
Landscape		Landform	Old lagoon	Landform adj	Large mound	Land Elemt
Microtop		Parent material	Lacustrine sediments			
Vegetation	Pasture grass	Vege2				
Notes						
	1	2	3	4	5	6
Sampled (tick)	tSAw	SAw	SAI			
Hor. Desig.	Apg	Cr	2Cr			
Depth (base) cm	10	30	100+			
Moisture						
Matrix colour	10YR5/2	7.5GY5/1	N4/6			
%						
Mottle 1						
Abund %						
Size						
Contrast						
Mottle2						
Abund2						
Size2						
Contrast2						
Texture	LS	S	S			
%clay	5	2	2			
%sand	65	92	92			
%stones	0	0	65			
Stone size						
Apedal/Pedal type	P - 30%	A - SG	A - SG			
Ped shape	Blocky					
Size class <40mm						
Size range (mm)						
0-10 mm (vF & F)						
10-20 mm (M)	√					
20-60 mm (C)						
60-200 mm (vC&xC)						
>200 mm (G)						
SSize method						
Soil strength	v. weak	weak				
Ped strength						
Failure						
Stickiness						
Coatings - kind						
Abundance						
Distinctness						
Particle Packing			loose			
Root abund <2mm						
Root abund >2mm						
Permeability Est	vr	r	r			
NaF test						
Soil material						
Notes						
Drainage	Poor	Subgroup	GST	Soil depth class	S	Texture
Dpth Slow	999	P Root Depth	999	Root Barrier	N	S
PM Class	Mr	Rok class	Hs	Rok cla - fines	Hs	TextureGp60
Permeability	r	PM Origin upper	Al	PM Origin lower	Al	S

DATA SHEET FOR SOIL & REGOLITH CHARACTERISATION - Smap							SMap 1.0
Project/ident			Observer			Obsvn type	Auger
Grid Ref.	2840917	6187736	<i>GPS ref</i>			Projection	NZMG
Slope					Elevation	GPS/Map/Alti meter	
Aspect (compass-23°)					Region		
Location							
Soil Name	Ahuriri, 69c						Representative
Management			Landuse	Sheep & beef			
Landscape			Landform	Old lagoon	Landform adj	Backplain	Land Elemt
Microtop			Parent material	Lacustrine sediments			
Vegetation	Pasture grass	Vege2					
Notes							
	1	2	3	4	5	6	
Sampled (tick)	tLw	LFs	SAI				
Hor. Desig.	App	BCr	2Cr				
Depth (base) cm	8	40	100+				
Moisture							
Matrix colour	10YR5/2	7.5Y7/1	5Y6/2				
%							
Mottle 1							
Abund %							
Size							
Contrast							
Mottle2							
Abund2							
Size2							
Contrast2							
Texture	ZL	ZL	S				
%clay	22	22	2				
%sand	40	50	92				
%stones	0	0	65				
Stone size							
Apedal/Pedal type	P - 30%	P - 30%	A - SG				
Ped shape	Poly	Prism					
Size class <40mm							
Size range (mm)							
0-10 mm (vF & F)							
10-20 mm (M)	√						
20-60 mm (C)		√					
60-200 mm (vC&xC)							
>200 mm (G)							
SSize method							
Soil strength	w	w					
Ped strength							
Failure							
Stickiness							
Coatings - kind							
Abundance							
Distinctness							
Particle Packing			Loose				
Root abund <2mm							
Root abund >2mm							
Permeability Est	vr	m	vr				
NaF test							
Soil material							
Notes							
Drainage	Poor	Subgroup	GRQ	Soil depth class	S	Texture	
Dpth Slow	999	P Root Depth	999	Root Barrier	N	Z/S	
PM Class	Mr	Rok class	Hs	Rok cla - fines	Hs	TextureGp60	
Permeability	m	PM Origin upper	Al	PM Origin lower	Al	Z/S	

DATA SHEET FOR SOIL & REGOLITH CHARACTERISATION - Smap							SMap 1.0	
Project/ident				Observer			Obsvsn type	Cutting
Profile No				Date			Map sheet	
Grid Ref.	2842838	6189247	GPS ref			Projection	NZMG	
Slope				Elevation				
Aspect (compass-23°)				Region				
Location	Onehunga Road							
Soil Name	Ahuriri, 69b						Representative	
Management			Landuse	Roadside				
Landscape			Landform	Old lagoon	Landform adj			Land Elemt
Microtop			Parent material	Lacustrine sediments				
Vegetation	Grass	Vege2						
Notes								
	1	2	3	4	5	6		
Sampled (tick)	tLw	Al						
Hor. Desig.	Ahg	2C						
Depth (base) cm	45	100+						
Moisture								
Matrix colour	10YR5/2	5Y6/2						
%								
Mottle 1								
Abund %								
Size								
Contrast								
Mottle2								
Abund2								
Size2								
Contrast2								
Texture	SL	S						
%clay	10	2						
%sand	65	92						
%stones	0	0						
Stone size								
Apedal/Pedal type	P - 30%	A - SG						
Ped shape	Blocky							
Size class <40mm								
Size range (mm)								
0-10 mm (vF & F)								
10-20 mm (M)	√							
20-60 mm (C)								
60-200 mm (vC&xC)								
>200 mm (G)								
Ssize method								
Soil strength	w	w						
Ped strength								
Failure								
Stickiness								
Coatings - kind								
Abundance								
Distinctness								
Particle Packing								
Root abund <2mm								
Root abund >2mm								
Permeability Est	vr	r						
NaF test								
Soil material								
Notes	2C (Horizon 2) consists of shelly sand							
Drainage	Poor	Subgroup	GRQ	Soil depth class	D	Texture		
Dpth Slow	999	P Root Depth		Root Barrier	N	L/S		
PM Class	Md	Rok class	Hs	Rok cla - fines	Hs	TextureGp60		
Permeability	r	PM Origin upper	Al	PM Origin lower	Al	L/S		

DATA SHEET FOR SOIL & REGOLITH CHARACTERISATION - Smap							SMap 1.0
Project/ident				Observer		Obsvsn type	Cutting
Profile No				Date		Map sheet	
Grid Ref.	2843447	6191447	GPS ref		Projection	NZMG	
Slope				Elevation			
Aspect (compass-23°)				Region			
Location							
Soil Name	Flaxmere, 2a						Representative
Management	Roadside. Amongst table grape vineyards and citrus orchards.						
Landscape		Landuse	Floodplain	Landform adj		Land Elemt	
Microtop		Parent material	Alluvium				
Vegetation	Grass	Vege2					
Notes							
	1	2	3	4	5	6	
Sampled (tick)	tLw	Lw	Lw				
Hor. Desig.	Ap	Bw(g)	BCg				
Depth (base) cm	15	40	100+				
Moisture							
Matrix colour	10YR4/2	2.5Y5/4	7.5Y7/1				
%							
Mottle 1		7.5YR5/8	5YR4/6				
Abund %		2	30				
Size							
Contrast							
Mottle2		2.5Y7/2					
Abund2		10					
Size2							
Contrast2							
Texture	SL	SL	SL				
%clay	15	15	15				
%sand	60	60	60				
%stones	0	0	0				
Stone size							
Apedal/Pedal type	P - 65%	A - mass	A - mass				
Ped shape	Blocky	Prism - 10%					
Size class <40mm							
Size range (mm)							
0-10 mm (vF & F)	√						
10-20 mm (M)							
20-60 mm (C)		√					
60-200 mm (vC&xC)							
>200 mm (G)							
Ssize method							
Soil strength	w	w	w				
Ped strength							
Failure							
Stickiness							
Coatings - kind							
Abundance							
Distinctness							
Particle Packing							
Root abund <2mm							
Root abund >2mm							
Permeability Est	vr	m	m				
NaF test							
Soil material							
Notes							
Drainage	Imp	Subgroup	BOM	Soil depth class	D	Texture	
Dpth Slow	999	P Root Depth	40	Root Barrier	A	L	
PM Class	Md	Rok class	NA	Rok cla - fines	Hs	TextureGp60	
Permeability	m	PM Origin upper	Al	PM Origin lower	Al	L	

DATA SHEET FOR SOIL & REGOLITH CHARACTERISATION - Smap							SMap 1.0	
Project/ident				Observer			Obsvsn type	Cutting
Profile No				Date			Map sheet	
Grid Ref.	2846341	6177901		GPS ref			Projection	NZMG
Slope						Elevation		
Aspect (compass-23°)						Region		
Location								
Soil Name	Meeanee, 26						Representative	
Management			Landuse					
Landscape			Landform		Landform adj		Land Elemt	
Microtop			Parent material					
Vegetation			Vege2					
Notes								
	1	2	3	4	5	6		
Sampled (tick)	tLw	Lw	Lw					
Hor. Desig.	Ap	Cg	2Cr					
Depth (base) cm	10	55	100+					
Moisture								
Matrix colour	10YR4/2	7.5Y7/1	7.5Y7/1					
%								
Mottle 1		7.5YR5/8						
Abund %		2-4						
Size		15						
Contrast								
Mottle2								
Abund2								
Size2								
Contrast2								
Texture	ZL	ZL	CL					
%clay	20	20	20					
%sand	15	15	45					
%stones	0	0	0					
Stone size								
Apedal/Pedal type	P - 20%	A - mass	A - mass					
Ped shape	Poly							
Size class <40mm								
Size range (mm)								
0-10 mm (vF & F)								
10-20 mm (M)	√							
20-60 mm (C)								
60-200 mm (vC&xC)								
>200 mm (G)								
Ssize method								
Soil strength	w	w	w					
Ped strength								
Failure	semi	semi	semi					
Stickiness								
Coatings - kind								
Abundance								
Distinctness								
Particle Packing								
Root abund <2mm								
Root abund >2mm								
Permeability Est	vr	m	m					
NaF test								
Soil material								
Notes								
Drainage	Poor	Subgroup	GRQ	Soil depth class	D	Texture		
Dpth Slow	999	P Root Depth	999	Root Barrier	NA	Z/L		
PM Class	Md	Rok class	NA	Rok cla - fines	Hs	TextureGp60		
Permeability	m	PM Origin upper	Al	PM Origin lower	Al	Z/L		

DATA SHEET FOR SOIL & REGOLITH CHARACTERISATION - Smap							SMap 1.0	
Project/ident				Observer			Obsvsn type	Cutting
Profile No				Date			Map sheet	
Grid Ref.	2844534	6176683	GPS ref				Projection	NZMG
Slope				Elevation				
Aspect (compass-23°)				Region				
Location	Brookfields Rd, Meeanee							
Soil Name	Farndon, 25						Representative	
Management			Landuse	Roadside				
Landscape			Landform	Landform adj				Land Elemt
Microtop			Parent material					
Vegetation			Vege2					
Notes								
	1	2	3	4	5	6		
Sampled (tick)	tLw	Lw	Lw	Al				
Hor. Desig.	Ap	Bg	2Cg	3Cr				
Depth (base) cm	15	30	45	100+				
Moisture								
Matrix colour	10YR4/2	5Y7/2	7.5Y7/1	7.5Y7/1				
%								
Mottle 1		7.5YR5/8	7.5YR5/8					
Abund %		15	10					
Size								
Contrast								
Mottle2								
Abund2								
Size2								
Contrast2								
Texture	SL	SL	CL	S				
%clay	10	10	20	2				
%sand	65	65	45	92				
%stones	0	0	0	0				
Stone size								
Apedal/Pedal type	P - 65%	P - 50%	A - mass	A - SG				
Ped shape	Poly	Prism						
Size class <40mm								
Size range (mm)								
0-10 mm (vF & F)	√							
10-20 mm (M)								
20-60 mm (C)		√						
60-200 mm (vC&xC)								
>200 mm (G)								
Ssize method								
Soil strength	w	w	w	w				
Ped strength								
Failure	semi	semi	semi	semi				
Stickiness								
Coatings - kind								
Abundance								
Distinctness								
Particle Packing								
Root abund <2mm								
Root abund >2mm								
Permeability Est	vr	m	m	r				
NaF test								
Soil material								
Notes								
Drainage	Poor	Subgroup	GOQ	Soil depth class	D	Texture		
Dpth Slow	999	P Root Depth	999	Root Barrier	NA	L/S		
PM Class	Md	Rok class	NA	Rok cla - fines	Hs	TextureGp60		
Permeability	m/r	PM Origin upper	Al	PM Origin lower	Al	L/S		

DATA SHEET FOR SOIL & REGOLITH CHARACTERISATION - Smap							SMap 1.0
Project/ident				Observer			<i>Auger</i>
Profile No				Date			Map sheet
Grid Ref.	2843972	6177741	GPS ref			Projection	NZMG
Slope				Elevation			
Aspect (compass-23°)				Region			
Location	Grassmere Road, Meeanee						
Soil Name	Farndon, 24						Representative
Management		Landuse	Arable				
Landscape		Landform		Landform adj			Land Elemt
Microtop		Parent material					
Vegetation		Vege2	Short-rotation Italian ryegrass				
Notes							
	1	2	3	4	5	6	
Sampled (tick)	tLw	Lw	Al				
Hor. Desig.	Ap	Bg	2Cr				
Depth (base) cm	15	80	100+				
Moisture							
Matrix colour	10YR4/2	5Y7/2	5Y6/2				
%							
Mottle 1		7.5YR5/8					
Abund %		10					
Size		2-4					
Contrast							
Mottle2							
Abund2							
Size2							
Contrast2							
Texture	LZ	LZ	S				
%clay	15	15	2				
%sand	30	30	92				
%stones	0	0	0				
Stone size							
Apedal/Pedal type	P - 75%	P - 40%	A - SG				
Ped shape	Poly	Prism					
Size class <40mm							
Size range (mm)							
0-10 mm (vF & F)	√						
10-20 mm (M)		√					
20-60 mm (C)							
60-200 mm (vC&xC)							
>200 mm (G)							
Ssize method							
Soil strength	w	w	w				
Ped strength							
Failure							
Stickiness							
Coatings - kind							
Abundance							
Distinctness							
Particle Packing							
Root abund <2mm							
Root abund >2mm							
Permeability Est	vr	m	r				
NaF test							
Soil material							
Notes							
Drainage	Poor	Subgroup	GOQ	Soil depth class	D	Texture	
Dpth Slow	999	P Root Depth	999	Root Barrier	NA	Z/S	
PM Class	Md	Rok class	NA	Rok cla - fines	Hs	TextureGp60	
Permeability	m/r	PM Origin upper	Al	PM Origin lower	Al	Z	

DATA SHEET FOR SOIL & REGOLITH CHARACTERISATION - Smap						SMap 1.0
Project/ident				Observer		Obsvsn type
Profile No				Date		<i>Cutting</i>
Grid Ref.	2842843	6177064	GPS ref		Projection	NZMG
Slope				Elevation		
Aspect (compass-23°)				Region		
Location	Pwdrrell Road					
Soil Name	Farndon, 23s					Representative
Management		Landuse	Drain			
Landscape		Landform		Landform adj		Land Elemt
Microtop		Parent material				
Vegetation		Vege2				
Notes						
	1	2	3	4	5	6
Sampled (tick)	tLw	Al	Lw			
Hor. Desig.	Ap	2Bg	3Cg			
Depth (base) cm	15	50	100+			
Moisture						
Matrix colour	10YR4/2	7.5YR7/1	7.5Y7/1			
%						
Mottle 1		2.5Y5/4	5YR4/6			
Abund %		40	35			
Size						
Contrast						
Mottle2						
Abund2						
Size2						
Contrast2						
Texture	SL	S	SL			
%clay	10	2	10			
%sand	60	92	60			
%stones	0	0	0			
Stone size						
Apedal/Pedal type	P - 75%	P - 65%				
Ped shape	Poly	Prism				
Size class <40mm						
Size range (mm)						
0-10 mm (vF & F)	√					
10-20 mm (M)	√					
20-60 mm (C)		√				
60-200 mm (vC&xC)						
>200 mm (G)						
Ssize method						
Soil strength	w	w	w			
Ped strength	semi	semi	semi			
Failure						
Stickiness						
Coatings - kind						
Abundance						
Distinctness						
Particle Packing						
Root abund <2mm						
Root abund >2mm						
Permeability Est	vr	r	m			
NaF test						
Soil material						
Notes						
Drainage	Poor	Subgroup	GOQ	Soil depth class	D	Texture
Dpth Slow	999	P Root Depth	999	Root Barrier	N	L/S
PM Class	Md	Rok class	NA	Rok cla - fines	Hs	TextureGp60
Permeability	r/m	PM Origin upper	Al	PM Origin lower	Al	L/S

DATA SHEET FOR SOIL & REGOLITH CHARACTERISATION - Smap							SMap 1.0	
Project/ident				Observer			Obsvsn type	Cutting
Profile No				Date			Map sheet	
Grid Ref.	2843412	6179409	GPS ref				Projection	NZMG
Slope				Elevation				
Aspect (compass-23°)				Region				
Location								
Soil Name	Meeanee, 27						Representative	
Management			Landuse	Roadside				
Landscape			Landform	Landform adj			Land Elemt	
Microtop			Parent material					
Vegetation			Vege2					
Notes								
	1	2	3	4	5	6		
Sampled (tick)	tLw	Lw	Al					
Hor. Desig.	Ap	Bg	2Cg					
Depth (base) cm	15	50	100+					
Moisture								
Matrix colour	10YR4/2	5Y7/2	7.5Y7/1					
%								
Mottle 1		7.5YR5/8	5YR4/6					
Abund %		15	40					
Size								
Contrast								
Mottle2								
Abund2								
Size2								
Contrast2								
Texture	CL	CL	S					
%clay	10	10	2					
%sand	45	45	92					
%stones	0	0	0					
Stone size								
Apedal/Pedal type	P - 75%	P - 60%	A - SG					
Ped shape	Poly	Block & prism						
Size class <40mm								
Size range (mm)								
0-10 mm (vF & F)	√							
10-20 mm (M)		√ - block (60%)						
20-60 mm (C)		√ - prism (40%)						
60-200 mm (vC&xC)								
>200 mm (G)								
Ssize method								
Soil strength	w	w	w					
Ped strength								
Failure								
Stickiness								
Coatings - kind								
Abundance								
Distinctness								
Particle Packing								
Root abund <2mm								
Root abund >2mm								
Permeability Est	vr	m	r					
NaF test								
Soil material								
Notes								
Drainage	Poor	Subgroup	GOQ	Soil depth class	D	Texture		
Dpth Slow	999	P Root Depth	999	Root Barrier	N	L/S		
PM Class	Md	Rok class	NA	Rok cla - fines	Hs	TextureGp60		
Permeability	m/r	PM Origin upper	Al	PM Origin lower	Al	L/S		

DATA SHEET FOR SOIL & REGOLITH CHARACTERISATION - Smap							SMap 1.0	
Project/ident				Observer			Obsvsn type	Cutting
Profile No				Date			Map sheet	
Grid Ref.	2846745	6171676		GPS ref			Projection	NZMG
Slope					Elevation			
Aspect (compass-23°)					Region			
Location	Richmond Road, north of Mill Road, Clive							
Soil Name	Mangateretere, 71						Representative	
Management		Landuse	Roadside					
Landscape		Landform		Landform adj			Land Elemt	
Microtop				Parent material				
Vegetation				Vege2	Pasture & apples			
Notes								
	1	2	3	4	5	6		
Sampled (tick)	tLw	Lw	YC					
Hor. Desig.	Ap	Bgp	BCtg(x)					
Depth (base) cm	15	40	100+					
Moisture								
Matrix colour	10YR3/2	5Y7/2	7.5Y7/1					
%								
Mottle 1		7.5YR5/8	7.5YR5/8					
Abund %		20	30					
Size		2-6	5-15					
Contrast								
Mottle2			5B6/1					
Abund2			10					
Size2								
Contrast2								
Texture	ZL	ZL	ZC					
%clay	24	24	38					
%sand	12	12	5					
%stones	0	0	0					
Stone size								
Apedal/Pedal type	P - 85%	P - 60%	A - mass					
Ped shape	Poly	Poly & prism						
Size class <40mm								
Size range (mm)								
0-10 mm (vF & F)	√							
10-20 mm (M)		√ - Poly (60%)						
20-60 mm (C)		√ - Prism (40%)						
60-200 mm (vC&xC)								
>200 mm (G)								
Ssize method								
Soil strength	W	W	SF					
Ped strength	semi	semi	brittle					
Failure								
Stickiness		slightly	moderately					
Coatings - kind		<1% MnFe SG						
Abundance								
Distinctness								
Particle Packing								
Root abund <2mm								
Root abund >2mm								
Permeability Est	vr	m	s					
NaF test								
Soil material								
Notes								
Drainage	Poor	Subgroup	PPJ	Soil depth class	S	Texture		
Dpth Slow	40	P Root Depth	40	Root Barrier	Pn	Z/C		
PM Class	Md	Rok class	NA	Rok cla - fines	Hs	TextureGp60		
Permeability	m/s	PM Origin upper	Al	PM Origin lower	Al	Z/C		

DATA SHEET FOR SOIL & REGOLITH CHARACTERISATION - Smap							SMap 1.0	
Project/ident				Observer			Obsvsn type	Cutting
Profile No				Date			Map sheet	
Grid Ref.	2847383	6164000	GPS ref			Projection	NZMG	
Slope				Elevation				
Aspect (compass-23°)				Region				
Location								
Soil Name	Waipukurau soil, 30						Representative	
Management		Landuse	Roadside					
Landscape		Landform	Terrace	Landform adj			Land Elemt	
Microtop		Parent material	Loess					
Vegetation	Grass & weeds	Vege2						
Notes								
	1	2	3	4	5	6		
Sampled (tick)	tLw	Lw	LCf	LCs				
Hor. Desig.	Ah	Bgp	BCx	C				
Depth (base) cm	15	45	65	100+				
Moisture								
Matrix colour	10YR3/2	2.5Y7/2	2.5Y5/4	2.5Y6/3				
%								
Mottle 1		7.5YR5/8						
Abund %		5						
Size								
Contrast								
Mottle2								
Abund2								
Size2								
Contrast2								
Texture	SL	SL	?	SL				
%clay	15	10	?	5				
%sand	55	65	?	70				
%stones	0	0	0	0				
Stone size								
Apedal/Pedal type	P - 85%	P - 65%	A - mass	A - mass				
Ped shape	Poly	Prism						
Size class <40mm								
Size range (mm)								
0-10 mm (vF & F)	√ - vF							
10-20 mm (M)								
20-60 mm (C)		√						
60-200 mm (vC&xC)								
>200 mm (G)				√				
Ssize method								
Soil strength	W	W	Very hard	SF				
Ped strength								
Failure	Semi	Semi	Ha ha!	Semi				
Stickiness								
Coatings - kind			cutans					
Abundance								
Distinctness								
Particle Packing								
Root abund <2mm								
Root abund >2mm								
Permeability Est	vr	m	s	s				
NaF test								
Soil material								
Notes	BCx contains a strongly developed duripan							
Drainage	Poor	Subgroup	PUT	Soil depth class	S	Texture		
Dpth Slow	45	P Root Depth	45	Root Barrier	Pn	L		
PM Class	Md	Rok class	NA	Rok cla - fines	Hs	TextureGp60		
Permeability	m/s	PM Origin upper	Lo	PM Origin lower	Lo	L		

DATA SHEET FOR SOIL & REGOLITH CHARACTERISATION - Smap							SMap 1.0	
Project/ident				Observer			Obsvsn type	Pit
Profile No				Date			Map sheet	
Grid Ref.	2841830	6162780	<i>GPS ref</i>			Projection	NZMG	
Slope				Elevation				
Aspect (compass-23°)				Region				
Location	Middle Road, near Havelock North urban rural interface							
Soil Name	Havelock, 12h						Representative	
Management			Landuse	Pastoral				
Landscape			Landform	Low terrace	Landform adj			Land Elemt
Microtop			Parent material	Limestone-rich alluvium over redistributed loess and pumice gravels				
Vegetation	Grass	Vege2						
Notes								
	1	2	3	4	5	6		
Sampled (tick)	tLw	Lw	LCs	LCs	VLI			
Hor. Desig.	Ap	Bw(g)	Bt(g)(h)	BC(x)	2C			
Depth (base) cm	21	43	67	95	100+			
Moisture								
Matrix colour	7.5YR3/1	2.5Y5/3	2.5Y5/3	2.5Y5/3	10YR8/3			
%			7.5YR5/6					
Mottle 1			2.5Y6/2					
Abund %			2	2				
Size								
Contrast								
Mottle2			2.5Y6/2					
Abund2			5					
Size2								
Contrast2								
Texture	ZL	ZL	ZL	ZL	SL			
%clay	24	24	30	24	8			
%sand	20	20	10	15	65			
%stones					65			
Stone size								
Apedal/Pedal type	P - 85%	P - 80%	P - 30%	A - massive	A - SG			
Ped shape	Blocky	Blocky	Prism					
Size class <40mm								
Size range (mm)								
0-10 mm (vF & F)								
10-20 mm (M)	√							
20-60 mm (C)			√					
60-200 mm (vC&xC)			√					
>200 mm (G)					√			
Ssize method								
Soil strength	Weak	Weak	Slightly firm	Slightly firm-firm				
Ped strength								
Failure					Brittle			
Stickiness								
Coatings - kind			Organic coats					
Abundance			lots					
Distinctness								
Particle Packing					Loose			
Root abund <2mm	Many	Common	Common	Few				
Root abund >2mm								
Permeability Est	vr	m	s	s	m			
NaF test								
pH			7.5	7.5				
Notes								
Drainage	Imperfect	Subgroup	EOC	Soil depth class	MD	Texture		
Dpth Slow	35	P Root Depth	67	Root Barrier	Ln	Z		
PM Class	Ms	Rok class		Rok cla - fines	Hs/Rh	TextureGp60		
Permeability	m/s	PM Origin upper	Al	PM Origin lower	Al	Z		

DATA SHEET FOR SOIL & REGOLITH CHARACTERISATION - Smap							SMap 1.0	
Project/ident				Observer			Obsvsn type	Pit
Profile No				Date			Map sheet	
Grid Ref.	NA	NA		GPS ref			Projection	NZMG
Slope						Elevation		
Aspect (compass-23°)						Region		
Location	NW side of Havelock North - Brookvale Road							
Soil Name	Otane, 11							Representative
Management			Landuse	Horse paddock				
Landscape			Landform		Landform adj			Land Elemt
Microtop			Parent material	Alluvium from mudstone				
Vegetation	Grass		Vege2					
Notes								
	1	2	3	4	5	6		
Sampled (tick)	tLw	Lw	LCf					
Hor. Desig.	Ap	Bt	BCx					
Depth (base) cm	26	52	100+					
Moisture								
Matrix colour	10YR4/2	10YR5/4	10YR6/4					
%								
Mottle 1								
Abund %								
Size								
Contrast								
Mottle2								
Abund2								
Size2								
Contrast2								
Texture	ZL	ZL	SCL					
%clay	22	28	22					
%sand	15	15	70					
%stones	0	0	0					
Stone size								
Apedal/Pedal type	P - 85%	P - 80%	A - massive					
Ped shape	Blocky	Blocky						
Size class <40mm								
Size range (mm)								
0-10 mm (vF & F)	√							
10-20 mm (M)		√						
20-60 mm (C)								
60-200 mm (vC&xC)								
>200 mm (G)								
Ssize method								
Soil strength	Slightly firm	Firm	Very hard					
Ped strength								
Failure								
Stickiness								
Coatings - kind		Clay coats	MnFe SG					
Abundance		80%	5%					
Distinctness								
Particle Packing								
Root abund <2mm	Many	Common	None					
Root abund >2mm								
Permeability Est	vr	m	s					
NaF test								
Soil material								
Notes								
Drainage	Well	Subgroup	BFC	Soil depth class	MD	Texture		
Dpth Slow	52	P Root Depth	52	Root Barrier	Pn	Z/L		
PM Class	Md	Rok class	NA	Rok cla - fines	NA	TextureGp60		
Permeability	m/s	PM Origin upper	Al	PM Origin lower	Al	Z/L		

DATA SHEET FOR SOIL & REGOLITH CHARACTERISATION - Smap						SMap 1.0
Project/ident					Observer	
Profile No					Date	
Grid Ref.	NA	NA	GPS ref		Obsvsn type	Pit
Slope					Elevation	
Aspect (compass-23°)					Region	
Location	Near the corner of Napier Road and Romanes Drive					
Soil Name	Karamu, 13					Representative
Management		Landuse	Orchard			
Landscape		Landform	Upper backplain			
Microtop		Parent material	Alluvium			
Vegetation	Apples	Vege2				
Notes						
	1	2	3	4	5	6
Sampled (tick)	tLw	Lw	Lw	Lw	Lw	
Hor. Desig.	Ap	Ap/Bw	Bg	BCg1	BCg2	
Depth (base) cm	15	25	43	80	100+	
Moisture						
Matrix colour	10YR4/2	2.5Y5/4	5Y7/2	5Y7/2	5Y7/2	
%						
Mottle 1		10YR4/2	7.5YR5/8	7.5YR5/8	7.5YR5/8	
Abund %		15	15	20	10	
Size			2-5	5-20	2-5	
Contrast						
Mottle2						
Abund2						
Size2						
Contrast2						
Texture	CL	CL	CL	SL	SL	
%clay	20	20	20	8	8	
%sand	45	45	45	65	65	
%stones	0	0	0	0	0	
Stone size						
Apedal/Pedal type	P - 40	P - 25	A - 15	A - SG	A - SG	
Ped shape	Poly	Poly	Poly			
Size class <40mm						
Size range (mm)						
0-10 mm (vF & F)	√	√				
10-20 mm (M)			√			
20-60 mm (C)						
60-200 mm (vC&xC)						
>200 mm (G)						
Ssize method						
Soil strength	W	W	W	W	W	
Ped strength						
Failure						
Stickiness						
Coatings - kind						
Abundance						
Distinctness						
Particle Packing						
Root abund <2mm						
Root abund >2mm						
Permeability Est	vr	m	m	m	m	
NaF test						
Soil material						
Notes						
Drainage	Imperfect	Subgroup	RFM	Soil depth class	D	Texture
Dpth Slow	999	P Root Depth	90	Root Barrier	N	L
PM Class	Md	Rok class	NA	Rok cla - fines	Hs	TextureGp60
Permeability	m	PM Origin upper	Al	PM Origin lower	Al	L

DATA SHEET FOR SOIL & REGOLITH CHARACTERISATION - Smap							SMap 1.0	
Project/ident				Observer			Obsvsn type	<i>Pit</i>
Profile No				Date			Map sheet	
Grid Ref.	NA	NA	<i>GPS ref</i>			Projection	NZMG	
Slope				Elevation				
Aspect (compass-23°)				Region				
Location	Near the corner of Napier Road and Romanes Drive							
Soil Name	Ormond, 16						Representative	
Management			Landuse	Orchard				
Landscape			Landform	Levee	Landform adj			
Microtop			Parent material	Alluvium				
Vegetation	Apples	Vege2						
Notes								
	1	2	3	4	5	6		
Sampled (tick)	tLw	Lw	Lw	Al	Al			
Hor. Desig.	Ap	Ap/Bw(f)	Bg	2Cg	3Cg			
Depth (base) cm	20	42	65	85	100+			
Moisture								
Matrix colour	10YR4/2	2.5Y5/4	5Y7/2	5Y7/2				
%								
Mottle 1		10YR4/2	7.5YR5/8	7.5YR5/8	7.5YR5/8			
Abund %		25	15	20	10			
Size			2-5	5-20	2-5			
Contrast								
Mottle2		7.5YR5/8						
Abund2		1						
Size2								
Contrast2								
Texture	CL	SL	SL	LS	LS			
%clay	20	5	5	2	2			
%sand	65	65	65	92	92			
%stones	0	0	0	0	0			
Stone size								
Apedal/Pedal type	P - 30%	P - 30%	A - SG	A - SG				
Ped shape	Poly	Poly						
Size class <40mm								
Size range (mm)								
0-10 mm (vF & F)	√	√						
10-20 mm (M)								
20-60 mm (C)								
60-200 mm (vC&xC)								
>200 mm (G)								
Ssize method								
Soil strength	W	W	W	W	W			
Ped strength								
Failure								
Stickiness								
Coatings - kind								
Abundance								
Distinctness								
Particle Packing								
Root abund <2mm								
Root abund >2mm								
Permeability Est	vr	m	m	r	r			
NaF test								
Soil material								
Notes								
Drainage	Imp	Subgroup	RFM	Soil depth class	D	Texture		
Dpth Slow	999	P Root Depth	90	Root Barrier	N	L/S		
PM Class	Md	Rok class	NA	Rok cla - fines	Hs	TextureGp60		
Permeability	m/r	PM Origin upper	Al	PM Origin lower	Al	L		

DATA SHEET FOR SOIL & REGOLITH CHARACTERISATION - Smap						SMap 1.0
Project/ident					Observer	
Profile No					Date	
Grid Ref.	NA	NA	<i>GPS ref</i>		Obsv type	<i>Pit</i>
Slope					Elevation	
Aspect (compass-23°)					Region	
Location	Adjacent to Cromby drain, near Romanes Drive					
Soil Name	Flaxmere, 2as					Representative
Management		Landuse	Orchard			
Landscape		Landform	Flood-plain	Landform adj		Land Elemt
Microtop		Parent material	Alluvium			
Vegetation	Apples	Vege2				
Notes						
	1	2	3	4	5	6
Sampled (tick)	tLw	Lw	Lw	Al	Al	
Hor. Desig.	Ap	Bw(g)	Bg	2Cg	3Cg	
Depth (base) cm	23	39	65	85	100+	
Moisture						
Matrix colour	10YR3/2	2.5Y5/4	5Y6/2	5Y6/2	5Y6/2	
%						
Mottle 1		5Y7/2	7.5YR5/8	7.5YR5/8	7.5YR5/8	
Abund %		35	15	15	15	
Size						
Contrast						
Mottle2		7.5YR5/8				
Abund2		10				
Size2						
Contrast2						
Texture	CL	SL	SL	LS	LS	
%clay	20	5	5	2	2	
%sand	65	65	65	92	92	
%stones	0	0	0	0	0	
Stone size						
Apedal/Pedal type	P - 85%	P - 80%	P - 70%	A - SG	A-SG	
Ped shape	Poly	Poly	Poly			
Size class <40mm						
Size range (mm)						
0-10 mm (vF & F)	√	√				
10-20 mm (M)			√			
20-60 mm (C)						
60-200 mm (vC&xC)						
>200 mm (G)						
Ssize method						
Soil strength	W	W	W	W	W	
Ped strength						
Failure						
Stickiness						
Coatings - kind						
Abundance						
Distinctness						
Particle Packing						
Root abund <2mm						
Root abund >2mm						
Permeability Est	vr	m	m	r	r	
NaF test						
Soil material						
Notes						
Drainage	Imp	Subgroup	RFM	Soil depth class	D	Texture
Dpth Slow	999	P Root Depth	90	Root Barrier	N	L/S
PM Class	Md	Rok class	NA	Rok cla - fines	Hs	TextureGp60
Permeability	m/r	PM Origin upper	Al	PM Origin lower	Al	L

DATA SHEET FOR SOIL & REGOLITH CHARACTERISATION - Smap						SMap 1.0
Project/ident					Observer	
Profile No					Date	
Grid Ref.	NA	NA	<i>GPS ref</i>		Obsvsn type	<i>Pit</i>
Slope					Elevation	
Aspect (compass-23°)					Region	
Location	Crombie Drain					
Soil Name	Moteo, 18					Representative
Management		Landuse	Orchard			
Landscape		Landform	Backplain	Landform adj		Land Elemt
Microtop		Parent material	Alluvium			
Vegetation	Apples	Vege2				
Notes						
	1	2	3	4	5	6
Sampled (tick)	tLw	Lw	Lw	Al	Al	
Hor. Desig.	Ap	Ap/Bg1	bA	bA/Bg2	Bg2	
Depth (base) cm	18	20	30	35	100+	
Moisture						
Matrix colour	10YR4/2	5Y7/2	10YR5/2	10YR5/2	5Y7/2	
%						
Mottle 1		10YR4/2		7.5YR5/8	7.5YR5/8	
Abund %		25		20	20	
Size				2-5	2-5	
Contrast						
Mottle2		7.5YR5/8		5Y7/2		
Abund2		15				
Size2						
Contrast2						
Texture	ZL	ZL	ZL	ZL	ZL	
%clay	22	20	22	20	20	
%sand	15	15	15	15	15	
%stones	0	0	0	0	0	
Stone size						
Apedal/Pedal type	P - 85%	P - 70%	P - 70%	A - massive	A - massive	
Ped shape	Poly	Poly	Poly			
Size class <40mm						
Size range (mm)						
0-10 mm (vF & F)	√					
10-20 mm (M)		√	√			
20-60 mm (C)						
60-200 mm (vC&xC)						
>200 mm (G)						
Ssize method						
Soil strength	W	W	W	W	W	
Ped strength						
Failure						
Stickiness						
Coatings - kind						
Abundance						
Distinctness						
Particle Packing						
Root abund <2mm						
Root abund >2mm						
Permeability Est	vr	m	ms	m	m	
NaF test						
Soil material						
Notes						
Drainage	Poor	Subgroup	GRT	Soil depth class	D	Texture
Dpth Slow	999	P Root Depth	55	Root Barrier	A	Z
PM Class	Md	Rok class	NA	Rok cla - fines	Hs	TextureGp60
Permeability	m	PM Origin upper	Al	PM Origin lower	Al	Z

DATA SHEET FOR SOIL & REGOLITH CHARACTERISATION - Smap							SMap 1.0	
Project/ident				Observer			Obsvsn type	<i>Pit</i>
Profile No				Date			Map sheet	
Grid Ref.	2832788	6180321	<i>GPS ref</i>			Projection	NZMG	
Slope				Elevation				
Aspect (compass-23°)				Region				
Location	Near Puketapu							
Soil Name	Moteo, 18s						Representative	
Management			Landuse	Orchard				
Landscape			Landform	Basin	Landform adj			Land Elemt
Microtop			Parent material	Alluvium & peat				
Vegetation	Apples	Vege2						
Notes								
	1	2	3	4	5	6		
Sampled (tick)	tLw	Al						
Hor. Desig.	Apg	Bg	O					
Depth (base) cm	23	67	100+					
Moisture								
Matrix colour	10YR5/2	5Y7/2	10YR5/2					
%								
Mottle 1		7.5YR5/8						
Abund %		5						
Size								
Contrast								
Mottle2								
Abund2								
Size2								
Contrast2								
Texture	SL	LS	TI					
%clay	15	8	20					
%sand	65	55	15					
%stones	0	0	0					
Stone size								
Apedal/Pedal type	P - 85%	P - 65%	P - 80%					
Ped shape	Poly	Poly	Poly					
Size class <40mm								
Size range (mm)								
0-10 mm (vF & F)	√							
10-20 mm (M)		√	√					
20-60 mm (C)								
60-200 mm (vC&xC)								
>200 mm (G)								
Ssize method								
Soil strength	W	W	W					
Ped strength								
Failure								
Stickiness								
Coatings - kind								
Abundance								
Distinctness								
Particle Packing								
Root abund <2mm								
Root abund >2mm								
Permeability Est	vr	r	s					
NaF test								
Soil material								
Notes								
Drainage	Poor	Subgroup	GRT	Soil depth class	D	Texture		
Dpth Slow	999	P Root Depth	90	Root Barrier	N	L/S		
PM Class	Md	Rok class	NA	Rok cla - fines	Hs	TextureGp60		
Permeability	m	PM Origin upper	Al	PM Origin lower	Al	L/S		

DATA SHEET FOR SOIL & REGOLITH CHARACTERISATION - Smap						SMap 1.0
Project/ident					Observer	
Profile No					Date	
Grid Ref.	2837147	6182222	<i>GPS ref</i>		Obsvn type	<i>Cutting</i>
Slope				Elevation		Projection
Location	Near Puketitiri in drain					
Soil Name	Okawa, 29					Representative
Management		Landuse	Sheep			
Landscape	Edge of valley	Landform	Fan on floodplain	Landform adj		Land Elemt
Microtop		Parent material	Alluvium			
Vegetation	Grass	Vege2				
Notes						
	1	2	3	4	5	6
Sampled (tick)	tLw	Lw	LCs	LCf	Lw	
Hor. Desig.	Ap	Bg	BCg1	BCx(g)	BCg2	
Depth (base) cm	15	45	75	90	100+	
Moisture						
Matrix colour	10YR4/2	5Y7/2	2.5Y7/2	10YR5/6	2.5Y7/2	
%						
Mottle 1		7.5YR5/8	7.5YR5/8	10YR8/3	7.5YR5/8	
Abund %		15	5	15	5	
Size						
Contrast						
Mottle2				5Y7/2		
Abund2				10		
Size2						
Contrast2						
Texture	ZL	ZL	SL	SL	SCL	
%clay	22	20	15	15	25	
%sand	15	15	65	65	65	
%stones	0	0	0	0	0	
Stone size						
Apedal/Pedal type	P - 85%	P - 80%	P - 30%	A - massive	A - SG	
Ped shape	Poly	Blocky	Blocky			
Size class <40mm						
Size range (mm)						
0-10 mm (vF & F)	√					
10-20 mm (M)		√				
20-60 mm (C)			√			
60-200 mm (vC&xC)						
>200 mm (G)						
Ssize method						
Soil strength	W	W	SF	H	W	
Ped strength						
Failure						
Stickiness						
Coatings - kind						
Abundance						
Distinctness						
Particle Packing						
Root abund <2mm						
Root abund >2mm						
Permeability Est	vr	m	s	vs	m	
NaF test						
Soil material						
Notes						
Drainage	Poor	Subgroup	PUT	Soil depth class	MD	Texture
Dpth Slow	45	P Root Depth	75	Root Barrier	Pn	Z/L
PM Class	Md	Rok class	NA	Rok cla - fines		TextureGp60
Permeability	m/s	PM Origin upper	AI	PM Origin lower	AI	Z

DATA SHEET FOR SOIL & REGOLITH CHARACTERISATION - Smap							SMap 1.0	
Project/ident				Observer			Obsvsn type	<i>Pit</i>
Profile No				Date			Map sheet	
Grid Ref.	2828230	6171038		<i>GPS ref</i>			Projection	NZMG
Slope						Elevation		
Aspect (compass-23°)						Region		
Location	Ohiti Road							
Soil Name	Flaxmere, 2g							Representative
Management			Landuse	Vineyard				
Landscape			Landform	Backplain	Landform adj			Land Elemt
Microtop			Parent material	Alluvium				
Vegetation	Grapes	Vege2						
Notes								
	1	2	3	4	5	6		
Sampled (tick)	tLw	Al	VAI	VAI				
Hor. Desig.	Ap	Bw	2C	2Cg				
Depth (base) cm	5	30	75	100+				
Moisture								
Matrix colour	10YR4/2	2.5Y5/4	2.5Y6/2	2.5Y6/2				
%								
Mottle 1				7.5YR5/8				
Abund %				10				
Size								
Contrast								
Mottle2								
Abund2								
Size2								
Contrast2								
Texture	SL	LS	LS	LS				
%clay	15	2	2	2				
%sand	65	92	92	92				
%stones	0	0	70	70				
Stone size								
Apedal/Pedal type	P - 80%	P - 20%	A - SG	A - SG				
Ped shape	Poly	Blocky						
Size class <40mm								
Size range (mm)								
0-10 mm (vF & F)	√	√						
10-20 mm (M)								
20-60 mm (C)								
60-200 mm (vC&xC)								
>200 mm (G)								
Ssize method								
Soil strength	W	W	W	W				
Ped strength								
Failure								
Stickiness								
Coatings - kind								
Abundance								
Distinctness								
Particle Packing			Loose	Loose				
Root abund <2mm								
Root abund >2mm								
Permeability Est	vr	r	r	r				
NaF test								
Soil material								
Notes								
Drainage	Moderately well	Subgroup	RST	Soil depth class	D	Texture		
Dpth Slow	999	P Root Depth	90	Root Barrier	N	L/S		
PM Class	Ms	Rok class	NA	Rok cla - fines	Hs	TextureGp60		
Permeability	r	PM Origin upper	Al	PM Origin lower	Al	L/S		

DATA SHEET FOR SOIL & REGOLITH CHARACTERISATION - Smap						SMap 1.0
Project/ident			Observer		Obsvsn type	<i>Pit</i>
Profile No			Date		Map sheet	
Grid Ref.	2835810	6165247	<i>GPS ref</i>		Projection	NZMG
Slope				Elevation		
Aspect (compass-23°)				Region		
Location	Just South of Hastings ITM & Recycling Yard					
Soil Name	Karamu, 13s					Representative
Management		Landuse	Organic Apple Orchard			
Landscape		Landform	Upper backplain			Land Elemt
Microtop		Parent material	Alluvium			
Vegetation	Apples & grass	Vege2				
Notes						
	1	2	3	4	5	6
Sampled (tick)	tLw	Lw	Al	Al		
Hor. Desig.	Ap	Bw	2Bg	2BC(g)		
Depth (base) cm	5	15	55	100+		
Moisture						
Matrix colour	10YR4/2	7.5YR5/4	5Y7/2	7.5Y7/1		
%						
Mottle 1			7.5YR5/8	7.5YR5/8		
Abund %			10	40		
Size						
Contrast						
Mottle2						
Abund2						
Size2						
Contrast2						
Texture	ZL	ZL	LS	LS		
%clay	22	19	2	2		
%sand	15	20	92	92		
%stones	0	0	0	0		
Stone size						
Apedal/Pedal type	P - 80%	P - 70%	A - SG	A - SG		
Ped shape	Poly	Blocky				
Size class <40mm						
Size range (mm)						
0-10 mm (vF & F)	√					
10-20 mm (M)		√				
20-60 mm (C)						
60-200 mm (vC&xC)						
>200 mm (G)						
Ssize method						
Soil strength	W	W	W	W		
Ped strength						
Failure						
Stickiness						
Coatings - kind						
Abundance						
Distinctness						
Particle Packing						
Root abund <2mm						
Root abund >2mm						
Permeability Est	vr	m	r	r		
NaF test						
Soil material						
Notes						
Drainage	Imperfect	Subgroup	BOT	Soil depth class	D	Texture
Dpth Slow	999	P Root Depth	90	Root Barrier	N	Z/S
PM Class	Md	Rok class	NA	Rok cla - fines	Hs	TextureGp60
Permeability	m/r	PM Origin upper	Al	PM Origin lower	Al	Z/S

DATA SHEET FOR SOIL & REGOLITH CHARACTERISATION - Smap						SMap 1.0	
Project/ident			Observer			Obsvsn type	<i>Pit</i>
Profile No			Date			Map sheet	
Grid Ref.	2835808	6165246	<i>GPS ref</i>			Projection	NZMG
Slope					Elevation		
Aspect (compass-23°)					Region		
Location	Just South of Hastings ITM & Recycling Yard						
Soil Name	Irongate, 21					Representative	
Management			Landuse	Orchard			
Landscape			Landform	Backplain	Landform adj	Hollow	Land Elemt
Microtop			Parent material	Alluvium			
Vegetation	Apples	Vege2					
Notes							
	1	2	3	4	5	6	
Sampled (tick)	tLw	Lw	Al	Al			
Hor. Desig.	Ap	Bg	2Bg	2Cg			
Depth (base) cm	5	20	60	100+			
Moisture							
Matrix colour	10YR5/2	5Y7/2	5Y7/2	7.5YR7/1			
%							
Mottle 1		7.5YR5/8	7.5YR5/8	7.5YR5/8			
Abund %		10	25	45			
Size							
Contrast							
Mottle2							
Abund2							
Size2							
Contrast2							
Texture	ZL	SL	LS	LS			
%clay	20	15	2	2			
%sand	15	65	92	92			
%stones	0	0	0	0			
Stone size							
Apedal/Pedal type	P - 85%	P - 80%	A - SG	A - SG			
Ped shape	Poly	Blocky					
Size class <40mm							
Size range (mm)							
0-10 mm (vF & F)	√						
10-20 mm (M)		√					
20-60 mm (C)							
60-200 mm (vC&xC)							
>200 mm (G)							
Ssize method							
Soil strength	W	W	W	W			
Ped strength							
Failure							
Stickiness							
Coatings - kind							
Abundance							
Distinctness							
Particle Packing							
Root abund <2mm							
Root abund >2mm							
Permeability Est	vr	m	r	r			
NaF test							
Soil material							
Notes							
Drainage	Poor	Subgroup	GOT	Soil depth class	D	Texture	
Dpth Slow	999	P Root Depth	90	Root Barrier	N	L/S	
PM Class	Md	Rok class	NA	Rok cla - fines	Hs	TextureGp60	
Permeability	m/r	PM Origin upper	Al	PM Origin lower	Al	L/S	

