So	Soil Profile Log														
Pro	oject N	lame:	Sur	ntop Solar Fa	arm -	EIS								Borehole No:	
Pro	oject N	lo:	SY1	17235					Date):		2	2/11/2017	GPS Coord:	
Lo	cation	:			P	it 1			Log	ged l	by:	DP		Zone:	
Ма	ximun	n Depth:	500	mm			Meti	hod:		Test	Pit			Angle:	90 degrees
										≿		띪			
DEPTH (m)		lorizon, Fie Mo	eld Te	SCRIPTION exture, Stru g, Coarse fr	cture	, Colour,	GRAIN SIZE	PLASTICITY	DENSITY	CONSISTENCY	MOISTURE	GROUNDWATER	SAMPLES	COLOUR	FORMATION / COMMENTS
0.0		y Loam									SM	N/A	TP1/1	Grey-Brown	Roots present
		•											TP1/2	-	<5% Coarse fragments
															Weakly pedal
 0.1															
	Sand	y Loam									D	N/A		Yellowish-	Roots present
•														Brown	10% Coarse Fragment Weak structure
 0.2	2														vveak structure
 0.3	3														
•															
 0.4	l .														
															No Roots present
	Sand	y Loam Cla	ıy Loa	ım				М			D	N/A		Light yellowish- brown	0% coarse fragments
								101				14//		Siowii	Weak Structure
0.5	j							ļ	ļ			ļ			
•		nit to renie ot	a d a t	0.5m, layer											
	1681	pit terriiriati	eu ai	o.siii, iayei	COITUI	iues									
 0.6	6														
•															
 0.7															
•															
•															
 0.8	3														
•															
•															
•															
— 0.9)														
•															
1															
		TEYTURE	DI ^	STICITY	DEA	ISITY		CON	SIST	NCV		MOI	STUDE CO.	OUNDWATER	PID
		TEXTURE				ISITY			SISTE					OUNDWATEK	
		Sand Loamy sand	L M	Low Medium	VL L	Very Loose Loose		VS S	Very S Soft	ott		D SM	Dry Slightly moist	l	Measurements in (ppm)
	CS	Clayey sand	Н	High	MD	Moderately Dens		F	Firm			М	Moist		
		Sandy loam Loam			D VD	Dense Very Dense		St VSt	Stiff Very S	Stiff		W	Wet		
	SCL	Sandy clay loar	m					Н	Hard						
		Clay loam Light clay			GRA F	AIN SIZE Fine									
	MC	Medium clay			М	Medium									
	HC	Heavy clay			С	Coarse									

S	Soil Profile Log															
Pi	roje	ect Name:	Sur	ntop Solar Fa	rm -	EIS								Borehole No:		
Pi	roje	ect No:	SY1	17235					Date) :		2	2/11/2017	GPS Coord:		
Lo	оса	ation:			Р	it 2			Log	ged I	oy:	DP		Zone:		
L																
M	axi	imum Depth:	500	mm			Met	hod:		Test	Pit			Angle:	90 degrees	
DEPTH (m)		(Horizon, Fie	ld Te	SCRIPTION exture, Struc g, Coarse fra	cture	, Colour,	GRAIN SIZE	PLASTICITY	DENSITY	CONSISTENCY	MOISTURE	GROUNDWATER	CAMDI EC	COLOUR	FORMATION / COMMENTS	
0.	0	MO	ttiing	g, Coarse tra	igs)		9	┛	Δ	ပ	Σ	g	SAMPLES	COLOUR	FORMATION / COMMENTS	
0.		Sandy Loam									SM	N/A	TP2/1 TP2/2	Dark Reddish Brown	Roots present 0% Coarse fragments Structure: Massive Location: Edge of wheat Paddock	
0.	2 5	Sandy Loam									D	N/A		Reddish brown	Roots present 0% Coarse Fragment	
0.	3														Weak structure	
0.	4															
															Roots present 0% coarse fragments Weak Structure	
0.	5	Sandy Clay Loam	ı								D	N/A		Reddish Brown	weak Structure	
		Toot nit to recipate		O.Em. Javar a												
	ľ	Test pit terminate	au au	u.sm, layer c	onur	iues										
- 0.	6															
	ŀ															
	ŀ															
— 0.	7															
	-															
	_															
<u> </u>	8															
	-															
_ 0.	9															
	ŀ															
	1															
	F	FIELD TEXTURE PLASTICITY DENSITY		ISITY		CON	SISTE	NCY		MOIS	STURE GRO	DUNDWATER	PID			
		S Sand L Low VL Very Loose LS Loamy sand M Medium L Loose					VS S	Very S Soft	Soft			Dry Slightly moist		Measurements in (ppm)		
	CS Clayey sand H High MD Moderately Der			е	F	Firm			М	Moist						
	L	SL Sandy loam Loam			D VD	Dense Very Dense		St VSt	Stiff Very S	Stiff		W	Wet			
		SCL Sandy clay loam CL Clay loam	1		GR/	AIN SIZE		Н	Hard							
	LC Light clay F Fine															
		MC Medium clay HC Heavy clay			M C	Medium Coarse										

S	Soil Profile Log														
Р	rojec	t Name:	Sun	top Solar Fa	rm -	EIS								Borehole No:	
Р	rojec	t No:	SY1	7235					Date) :		2	2/11/2017	GPS Coord:	
L	ocati	on:			Р	it 3			Log	ged l	oy:	DP		Zone:	
Ļ															
М	axim	um Depth:	500	mm			Met	hod:		Test	Pit			Angle:	90 degrees
DEPTH (m)		(Horizon, Fi	eld Te	SCRIPTION exture, Struc	cture	, Colour,	GRAIN SIZE	PLASTICITY	DENSITY	CONSISTENCY	MOISTURE	GROUNDWATER	0.4451.50	0010115	
0.	.0	IVIC	ottiing	, Coarse fra	igs)		9	Ь	Δ	ပ	Σ	9	SAMPLES	COLOUR	FORMATION / COMMENTS
- - - - 0:		ndy Loam									SM	N/A	TP3/1 TP3/2	Reddish Brown	Roots present 0% Coarse fragments Structure: weak Location: Mid slope, undulating, sown paddock with grazed lucerne
- - - 0.	.2 Lig	ht Sandy Loa	m								D	N/A		Reddish brown	Roots present
-															0% Coarse Fragment Structure: Massive
- - - 0.	.3														
- - - - 0.	4														
- - -															
0. - - -		st pit terminat	ed at	0.5m, layer c	contin	ues									
- - - -	.6														
0.	7														
- - 0. -	.8														
- - 0.	.9														
· ·	1														
	FIE	LD TEXTURE	PLA	STICITY	DEN	SITY		CON	SISTE	NCY		MOIS	STURE GRO	DUNDWATER	PID
	S LS CS SL L	Sand Loamy sand Clayey sand Sandy loam Loam Sandy clay loar	L M H	Low Medium High	VL L MD D VD	Very Loose Loose Moderately Dens Dense Very Dense		S F St VSt	Very S Soft Firm Stiff Very S Hard			SM M	Dry Slightly moist Moist Wet		Measurements in (ppm)
	SCL Sandy clay loam CL Clay loam GRAIN SIZE LC Light clay F Fine MC Medium clay M Medium HC Heavy clay C Coarse				Fine Medium										

S	Soil Profile Log														
Pi	oje	ect Name:	Sur	top Solar Fa	rm -	EIS								Borehole No:	
Pı	oje	ect No:	SY	7235					Date	: :		2	2/11/2017	GPS Coord:	
Lo	са	tion:			Р	it 4			Log	ged l	oy:	DP		Zone:	
L						-									
M	axi	mum Depth:	500	mm			Meti	hod:		Test	Pit			Angle:	90 degrees
DEPTH (m)		(Horizon, Fie	ld Te			, Colour,	GRAIN SIZE	PLASTICITY	DENSITY	CONSISTENCY	MOISTURE	GROUNDWATER			
<u>ة</u> 0.	0	Mot	ttling	j, Coarse fra	ıgs)		5	础	ă	ၓ	ž	20	SAMPLES	COLOUR	FORMATION / COMMENTS
— 0.	S	Sandy Loam									SM	N/A	TP4/1 TP4/2	Reddish Brown	Roots present <5% Coarse fragments Structure: massive Location: western aspect, edge of flow line & low slope
0.	² s	Sandy Loam									D	N/A		Light Reddish brown	Roots present 10% Coarse Fragment Structure: Massive
0.	3														Structure: Massive
	4														
 0.		est pit terminate	ed at	0.5m, layer c	ontin	ues									
— 0.	6														
0.	7														
— 0.	8														
— 0.	9														
	s		L	STICITY Low	DEN	Very Loose		VS	SISTE Very S			D	Dry	ROUNDWATER	PID Measurements in (ppm)
	C S L S C	S Clayey sand L Sandy loam Loam CL Sandy clay loam L Clay loam	Н	Medium High	L MD D VD	Loose Moderately Dense Dense Very Dense IN SIZE Fine	e	F St VSt	Soft Firm Stiff Very S Hard	stiff		SM M W	Slightly moist Moist Wet		
	Н	IC Medium clay			М С	Medium Coarse									

Sc	Soil Profile Log													
Pro	ject Name:	EIS								Borehole No:				
Pro	ject No:	SY	17235					Date	e:		2	2/11/2017	GPS Coord:	
Loc	cation:			Р	it 5			Log	ged l	by:	DP		Zone:	
					7									
Ma	ximum Depth:	500	Omm]	Met	hod:		Test	Pit			Angle:	90 degrees
DEPTH (m)	(Horizon, Fi		SCRIPTION		, Colour,	GRAIN SIZE	PLASTICITY	DENSITY	CONSISTENCY	MOISTURE	GROUNDWATER			
	Me		g, Coarse fr			g.	7	핌	ខ	Mo	GR.	SAMPLES	COLOUR	FORMATION / COMMENTS
0.0	Sandy Loam									D	N/A	TP5/1 TP5/2	Light brown	Roots present 10% Coarse fragments
														Structure: weakly pedal
— 0.1	Medium Clay									SM	N/A		Light brown	Roots present Gritty
														Structure: weakly pedal
— 0.2														Location: Geology change - igneous
0.2														
- 0.3														
- 0.4														
0.4														
- 0.5														
-0.5			0.5											
	Test pit terminat	ed at	0.5m, layer	contin	iues									
- 0.6														
- 0.7														
- 0.7														
-0.8														
— 0.9														
0.9														
1	•													
	FIELD TEXTURE	PLA	ASTICITY		SITY			SISTE			MOIS	_	OUNDWATER	PID
	S Sand LS Loamy sand	L M	Low Medium	VL L	Very Loose Loose		VS S	Very S Soft	Soft		D SM	Dry Slightly moist	, 	Measurements in (ppm)
	CS Clayey sand	Н	High	MD	Moderately Dens	ie	F	Firm			М	Moist	•	
	SL Sandy loam L Loam			D VD	Dense Very Dense		St VSt	Stiff Very S	Stiff		W	Wet		
	SCL Sandy clay loa CL Clay loam	m		GRA	IN SIZE		Н	Hard						
	LC Light clay			F	Fine									
	MC Medium clay HC Heavy clay			M C	Medium Coarse									

Sc	Soil Profile Log													
Pro	ject Name:	Sur	ntop Solar Fa	arm -	EIS								Borehole No:	
Pro	ject No:	SY	17235					Date) :		2	2/11/2017	GPS Coord:	
Loc	cation:			Р	rit 6			Log	ged l	by:	DP		Zone:	
Ma	ximum Depth:	500)mm			Met	hod:		Test	Pit			Angle:	90 degrees
DEPTH (m)	(Horizon, Fi	eld To	SCRIPTION	cture	, Colour,	GRAIN SIZE	PLASTICITY	DENSITY	CONSISTENCY	MOISTURE	GROUNDWATER			
0.0		ottling	g, Coarse fr	ags)		9	PL	ä	ၓ	Ň	5	SAMPLES	COLOUR	FORMATION / COMMENTS
0.0	Sandy Loam									D	N/A	TP6/1 TP6/2	Light brown	Roots present 10% Coarse fragments
														Structure: weakley pedal
- 0.1	Medium Clay Lo	am								SM	N/A		Light brown	Roots present
	Modium oldy Lo	QIII								Oivi			Light blown	Gritty (quartz crystals)
														Structure: weakley pedal
 0.2														Location: Crest on cultivated paddock
- 0.3														
- 0.4														
0.5														
 0.5														
	Test pit terminat	ed at	0.5m, layer	contir	nues									
- 0.6														
- 0.7														
- 0.8														
— 0.9														
1														
	FIELD TEXTURE	PLA	STICITY	DEN	ISITY		CON	SISTE	NCY		MOIS	STURE G	ROUNDWATER	PID
	S Sand	L	Low	VL	Very Loose			Very S	Soft		D	Dry	L	Measurements in (ppm)
	LS Loamy sand CS Clayey sand	M H	Medium High	L MD	Loose Moderately Dens	e	S F	Soft Firm			SM M		.	
	SL Sandy loam	••		D	Dense Dens		St	Stiff			W	Wet	•	
	L Loam SCL Sandy clay loa	m		VD	Very Dense		VSt H	Very S Hard	Stiff					
CL Clay loam GRAIN SIZE						i iaiu								
	LC Light clay F Fine MC Medium clay M Medium													
	HC Heavy clay C Coarse													



Biosecurity Laboratory Operations Environmental Laboratory 1243 Bruxner Highway, WOLLONGBAR NSW 2477

Phone: 02 6626 1103 Email: wollongbar.csu@dpi.nsw.gov.au

Adam Bishop
Pitt & Sherry
PO Box 5487
WEST CHATSWOOD NSW 1515

Soil Analysis Report

12 Sample(s) received on 7/12/17. Tested as per the following methods.

Method	Method Description
S201	Soil pH in 1:5 water or 1:5 CaCl ₂ suspension
S202	Soil Electrical Conductivity
S266	Available Sulfur by KCl ₄₀ extraction
S260	Bray's Extractable Phosphorus by FIA
S236	Organic Carbon by Walkley & Black
M630	Total Carbon and/or Total Nitrogen by Dumas Combustion
S273	Gillman & Sumpter Exchangeable Cations

Notes: Site: Suntop

Results relate only to the items tested.

- When required, samples air dried at 40°C as per Soil Chemical Methods Australasia (Rayment and Lyons 2011).
- Results are expressed on an air-dry weight basis unless otherwise stated.
- This report should not be reproduced except in full.
- Samples will be retained for one calendar month from the date of the final report. Samples will then be discarded.
- Clients wishing to recover their samples must contact the laboratory within this period. This laboratory will return residual samples at client expense.

Date of issue 15/12/17



Accredited for compliance with ISO/IEC 17025 – Testing Accreditation No. 14173

ASPAC

Approved for Release by: Crain Hunt

Craig Hunt Technical Officer

Laboratory No.	Units	Limit of	1	2	3	4	5
Client's ID		Reporting	TP1/1	TP1/2	TP2/1	TP2/2	TP3/1
Cropping Analysis							
pH (Water)	pH units	0.04	5.3	5.6	5.4	6.0	5.6
pH(CaCl ₂)	pH units	0.04	4.5	4.7	4.4	-	-
Electrical Conductivity	dS/m	0.0010	0.20	0.026	0.059	0.042	0.082
Sulfur (KCl ₄₀)	mg/kg	2.0	7.0	-2	2.4	-	-
Bray Phosphorus	mg/kg	0.060	40	1.1	6.4	-	-
Organic Carbon	%	0.050	1.0	0.28	1.0	-	-
Total Nitrogen	%	0.020	0.11	0.040	0.13	-	-
Exchangeable Cations							
Aluminium	cmol(+)/kg	0.10	0.32	<0.1	0.32	-	-
Calcium	cmol(+)/kg	0.030	4.3	3.2	3.5	-	-
Potassium	cmol(+)/kg	0.010	1.8	0.39	1.0	-	-
Magnesium	cmol(+)/kg	0.0070	0.58	0.40	0.50	-	-
Sodium	cmol(+)/kg	0.030	<0.03	< 0.03	< 0.03	-	-
CEC (effective)	cmol(+)/kg	0.20	7.0	4.0	5.3	-	-
Calcium/Magnesium			7.4	8.0	6.9	-	-
Percent Aluminium Saturation	% of ECEC		5	N/A	6.0	-	-
Exchangeable Calcium	% of ECEC		62	80	65	-	-
Exchangeable Potassium	% of ECEC		25	9.8	19	-	-
Exchangeable Magnesium	% of ECEC		8.4	10	9.4	-	-
Exchangeable Sodium	% of ECEC		N/A	N/A	N/A	-	-
Percentage							

Laboratory No.	Units	Limit of	6	7	8	9	10
Client's ID		Reporting	TP3/2	TP4/1	TP4/2	TP5/1	TP5/2
Cropping Analysis							
pH (Water)	pH units	0.04	5.8	5.5	6.2	6.8	6.1
pH(CaCl ₂)	pH units	0.04	-	4.7	-	6.0	5.3
Electrical Conductivity	dS/m	0.0010	0.021	0.054	0.028	0.068	0.064
Sulfur (KCl ₄₀)	mg/kg	2.0	=	2.5	-	11	3.8
Bray Phosphorus	mg/kg	0.060	=	12	-	4.5	140
Organic Carbon	%	0.050	=	1.1	-	0.43	1.1
Total Nitrogen	%	0.020	=	0.13	-	0.047	0.14
Exchangeable Cations							
Aluminium	cmol(+)/kg	0.10	=	0.14	-	<0.1	<0.1
Calcium	cmol(+)/kg	0.030	=	5.6	-	17	7.3
Potassium	cmol(+)/kg	0.010	=	0.67	-	0.80	1.0
Magnesium	cmol(+)/kg	0.0070	=	0.46	-	4.1	0.68
Sodium	cmol(+)/kg	0.030	=	0.038	-	0.070	< 0.03
CEC (effective)	cmol(+)/kg	0.20	=	6.9	-	22	9.0
Calcium/Magnesium			=	12	-	4.0	11
Percent Aluminium Saturation	% of ECEC		=	2	-	N/A	N/A
Exchangeable Calcium	% of ECEC		=	81	-	77	81
Exchangeable Potassium	% of ECEC		=	9.7	-	3.7	12
Exchangeable Magnesium	% of ECEC		-	6.7	-	19	7.6
Exchangeable Sodium	% of ECEC		=	0.54	-	0.32	N/A
Percentage							

DPI Environmental Laboratory Page 2 of 3

Laboratory No.	Units	Limit of	11	12
Client's ID		Reporting	TP6/1	TP6/2
Cropping Analysis				
pH (Water)	pH units	0.04	5.4	6.5
Electrical Conductivity	dS/m	0.0010	0.11	0.041
Exchangeable Cations				