

**Project Name:** Three Springs Latham land resources survey  
**Project Code:** TSL **Site ID:** 0327 **Observation ID:** 1  
**Agency Name:** Agriculture Western Australia

#### Site Information

<b>Desc. By:</b>	Cameron Weeks	<b>Locality:</b>	
<b>Date Desc.:</b>	10/08/93	<b>Elevation:</b>	280 metres
<b>Map Ref.:</b>		<b>Rainfall:</b>	No Data
<b>Northing/Long.:</b>	6715123 AMG zone: 50	<b>Runoff:</b>	No Data
<b>Easting/Lat.:</b>	391103 Datum: AGD84	<b>Drainage:</b>	Well drained

#### Geology

<b>ExposureType:</b>	Soil pit	<b>Conf. Sub. is Parent. Mat.:</b>	No Data
<b>Geol. Ref.:</b>	No Data	<b>Substrate Material:</b>	No Data

#### Landform

<b>Rel/Slope Class:</b>	Undulating rises 9-30m 3-10%	<b>Pattern Type:</b>	Hills
<b>Morph. Type:</b>	Crest	<b>Relief:</b>	No Data
<b>Elem. Type:</b>	Hillcrest	<b>Slope Category:</b>	No Data
<b>Slope:</b>	4 %	<b>Aspect:</b>	No Data

**Surface Soil Condition** Soft

#### Erosion

#### Soil Classification

<b>Australian Soil Classification:</b>		<b>Mapping Unit:</b>	N/A
Sodic Eutrophic Grey Chromosol		<b>Principal Profile Form:</b>	Dy5.13
<b>ASC Confidence:</b>		<b>Great Soil Group:</b>	N/A
Confidence level not specified			

**Site Disturbance** Cultivation. Rainfed

#### Vegetation

**Surface Coarse Fragments** ; 2-10%, , subangular, Quartz

#### Profile Morphology

A1	0 - 0.15 m	Brown (10YR4/3-Moist); ; Loamy sand; Single grain grade of structure; Moist; Very weak consistence;
		Field pH 6 (pH meter); Abrupt, Wavy change to -
A3	0.15 - 0.28 m	Yellowish brown (10YR5/4-Moist); ; Clayey coarse sand; Moist; Very weak consistence;
Field pH 6.8 (pH		meter); Clear, Wavy change to -
2B1	0.28 - 0.55 m	Yellowish brown (10YR5/6-Moist); ; Medium clay; Moderate grade of structure, 20-50 mm,
Angular		blocky; Moist; Firm consistence; Field pH 6.3 (pH meter); Gradual, Wavy change to -
2B21tg	0.55 - 0.75 m	Light brownish grey (2.5Y6/3-Moist); Mottles, 10YR56, 20-50% , 5-15mm, Distinct;
Medium heavy clay;		Moderate grade of structure, 50-100 mm, Columnar; Moist; Firm consistence; Field pH 9
(pH meter);		Gradual, Wavy change to -
2B22tg	0.75 - 0.95 m	Light olive brown (2.5Y5/4-Moist); Mottles, 2.5Y63, 2-10% , 5-15mm, Faint; Medium clay;
Strong grade		of structure, 10-20 mm, Angular blocky; Firm consistence; Field pH 9 (pH meter);
	0.95 - m	;

#### Morphological Notes

2B21tg	Organic coatings on ped faces. Almost has slickensides. Structure is coarse columnar but breaks down.
2B22tg	Shiny ped faces, similar to slickensides. Peds have clay skins.

#### Observation Notes

#### Site Notes

Very large granite boulders come to the surface near the pit. Pit filled with water which came in from 3rd and 4th layers. Roots as far as 3rd layer

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### Laboratory Test Results:

Depth	pH	1:5 EC	Ca	Exchangeable Mg	Cations K	Na	Exchangeable Acidity	CEC	ECEC	ESP
m		dS/m				Cmol (+)/kg				%
0 - 0.1	4.7B 5.6H	6B	0.91H	0.31	0.25	0.07	0.08J		1.54D	
0.15 - 0.25	4.5B 5.6H	3B	0.46H	0.3	0.17	0.08	0.09J		1.01D	
0.35 - 0.45	5B 5.7H	18B	2.21H	4.4	0.28	1.29	0.05J		8.18D	
0.6 - 0.7	6.8B 7.7H	43B	2.88A	7.95	0.78	3.57			15.18D	

Depth	CaCO3	Organic C Clay	Avail. P	Total P	Total N	Total K	Bulk Density	Particle Size Analysis
m	%	%	mg/kg	%	%	%	Mg/m3	GV CS FS Silt
0 - 0.1 4.3		0.5D		91B	0.036E			2.8
0.15 - 0.25 7.4		0.18D		54B	0.015E			3.3
0.35 - 0.45 55.5		0.22D		70B	0.028E			4.5
0.6 - 0.7 60.4		0.11D		36B	0.015E			5.6

### Laboratory Analyses Completed for this profile

15_NR_BSa	Exchangeable bases (Ca++) - meq per 100g of soil - Auto calculated from available
15_NR_CMV	Exchangeable bases (Ca/Mg ratio) - Not recorded
15A1_CA	Exchangeable bases (Ca2+,Mg2+,Na+,K+) - 1M ammonium chloride at pH 7.0, no pretreatment
for soluble salts	
15A1_CEC	Exchangeable bases (CEC) - 1M ammonium chloride at pH 7.0, no pretreatment for soluble salts
15A1_K	Exchangeable bases (Ca2+,Mg2+,Na+,K+) - 1M ammonium chloride at pH 7.0, no pretreatment
for soluble salts	
15A1_MG	Exchangeable bases (Ca2+,Mg2+,Na+,K+) - 1M ammonium chloride at pH 7.0, no pretreatment
for soluble salts	
15A1_NA	Exchangeable bases (Ca2+,Mg2+,Na+,K+) - 1M ammonium chloride at pH 7.0, no pretreatment
for soluble salts	
15E1_AL	Exchangeable Al - by compulsive exchange, no pretreatment for soluble salts
15E1_CA	Exchangeable bases (Ca2+,Mg2+,Na+,K+) by compulsive exchange, no pretreatment for soluble salts
15E1_K	Exchangeable bases, CEC and AEC by compulsive exchange, no pretreatment for soluble salts
15E1_MG	Exchangeable bases, CEC and AEC by compulsive exchange, no pretreatment for soluble salts
15E1_MN	Exchangeable bases (Mn2+) by compulsive exchange, no pretreatment for soluble salts
15E1_NA	Exchangeable bases, CEC and AEC by compulsive exchange, no pretreatment for soluble salts
15J_BASES	Sum of Bases
15L1_a	Exchangeable bases Base saturation percentage (BSP) - Auto calculated from available using
Sum of Cations	
	and measured clay
15N1_a	Exchangeable sodium percentage (ESP) - Auto calculated from available using CEC
15N1_b	Exchangeable sodium percentage (ESP) - Auto calculated from available using Sum of Cations
3_NR	Electrical conductivity or soluble salts - Not recorded
4_NR	pH of soil - Not recorded
4B_AL_NR	Aluminium in 1:5 soil/0.01M calcium chloride extract - method not recorded
4B1	pH of 1:5 soil/0.01M calcium chloride extract - direct
6A1_UC	Organic carbon (%) - Uncorrected Walkley and Black method
7A1	Total nitrogen - semimicro Kjeldahl, steam distillation
9A3	Total Phosphorus (ppm) - semimicro kjeldahl, automated colour
9H1	Anion storage capacity
P10_1m2m	1000 to 2000u particle size analysis, (method not recorded)
P10_20_75	20 to 75u particle size analysis, (method not recorded)
P10_75_106	75 to 106u particle size analysis, (method not recorded)



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P10_NR_C	Clay (%) - Not recorded
P10_NR_Saa	Sand (%) - Not recorded arithmetic difference, auto generated
P10_NR_Z	Silt (%) - Not recorded
P10106_150	106 to 150u particle size analysis, (method not recorded)
P10150_180	150 to 180u particle size analysis, (method not recorded)
P10180_300	180 to 300u particle size analysis, (method not recorded)
P10300_600	300 to 600u particle size analysis, (method not recorded)
P106001000	600 to 1000u particle size analysis, (method not recorded)