Project Name: **Tambellup Borden land resources survey**
Project Code: **TBO** **Site ID:** **1387** **Observation ID:** **1**
Agency Name: **Agriculture Western Australia**

Site Information

Desc. By:	Angela Stuart-Street	**Locality:**	
Date Desc.:	06/06/00	**Elevation:**	No Data
Map Ref.:		**Rainfall:**	No Data
Northing/Long.:	6231211 AMG zone: 50	**Runoff:**	No Data
Easting/Lat.:	584433 Datum: AGD84	**Drainage:**	Imperfectly drained

Geology

ExposureType:	Soil pit	**Conf. Sub. is Parent. Mat.:**	No Data
Geol. Ref.:	No Data	**Substrate Material:**	No Data

Landform

Rel/Slope Class: Gently undulating rises 9-30m 1-3% **Pattern Type:** Rises

Morph. Type:	Upper-slope	**Relief:**	No Data
Elem. Type:	Hillslope	**Slope Category:**	No Data
Slope:	2 %	**Aspect:**	90 degrees

Surface Soil Condition

Loose, Hardsetting

Erosion

(wind); (scald) (sheet) (wave) (rill) (mass) (gully) (stbank) (tunnel)

Soil Classification

Australian Soil Classification:
Mesotrophic Mesonatric Brown Sodosol
ASC Confidence:
Confidence level not specified

Mapping Unit: N/A
Principal Profile Form: N/A
Great Soil Group: N/A

Site Disturbance

Cultivation. Rainfed

Vegetation

Surface Coarse Fragments

10-20%, medium gravelly, 6-20mm, subrounded, Granite; No surface coarse fragments

Profile Morphology

A1p 0 - 0.1 m Dark greyish brown (10YR4/2-Moist); ; Loamy sand; Single grain grade of structure; Sandy (grains prominent) fabric; Dry; 20-50%, fine gravelly, 2-6mm, subrounded, Granite, coarse fragments; Strongly water repellent, "Field pH 4.7 (pH meter); Sharp, Smooth change to -

B21 0.1 - 0.15 m Yellowish red (5YR5/6-Moist); ; Light clay; Strong grade of structure, 100-200 mm, Columnar; Moderately moist; Field pH 6.2 (pH meter); Clear, Smooth change to -

B22k 0.15 - 0.3 m Strong brown (7.5YR5/6-Moist); ; Light clay; Weak grade of structure, 100-200 mm, Columnar; Moderately moist; Field pH 7 (pH meter); Gradual, Wavy change to -

B23k 0.3 - 0.7 m Strong brown (7.5YR5/6-Moist); Mottles, 2.5YR58, 10-20% , 5-15mm, Faint; Medium clay; Moderate grade of structure, 5-10 mm, Subangular blocky; Moist; Field pH 8.5 (pH meter); Clear, Wavy change to -

B31 0.7 - 1.1 m Brownish yellow (10YR6/6-Moist); Mottles, 2.5YR58, 10-20% , 5-15mm, Faint; Medium clay; Moderate grade of structure, 5-10 mm, Subangular blocky; Moist; Field pH 8.3 (pH meter); Gradual, Smooth change to -

B32 1.1 - 1.3 m Reddish yellow (5YR6/6-Moist); , 10YR64, 2-10% , 15-30mm, Distinct; Light clay; Weak grade of structure, 2-5 mm, Polyhedral; Moist; Field pH 7.9 (pH meter);

Morphological Notes

B21 Bleached crust on domes.

Observation Notes

Site Notes

Pit located where site #0844 done. Layer 2: domed clay - hard surface crust. Map Unit (final) - Up2

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Laboratory Test Results:

Depth	pH	1:5 EC	Exchangeable Cations Ca	Mg	K	Na	Exchangeable Acidity	CEC	ECEC	ESP
m		dS/m				Cmol (+)/kg				%
0 - 0.08	4.6B	12A	3.7H	0.96	0.11	0.56	0.23J		5.33D	
	5.5A									
0.08 - 0.2	4.7B	2A	1.22H	0.34	0.04	0.24	0.1J		1.84D	
	6A		1.22H	0.34	0.04	0.24	0.1J		1.84D	
	4.7B									
	6A									
0.08 - 0.2	4.7B	2A	1.22H	0.34	0.04	0.24	0.1J		1.84D	
	6A		1.22H	0.34	0.04	0.24	0.1J		1.84D	
	4.7B									
	6A									
0.2 - 0.65	6.4B	4A	4.6A	5.44	0.44	0.71			11.19D	
	7.6A									
0.65 - 1.05	7B	14A	1.72E	3.94	2.27	0.46		11B	8.39D	4.18
	8.4A									
1.05 - 1.5	7.2B	18A	0.92E	3.15	2.4	0.28		8B	6.75D	3.50
	8.5A									

Depth	CaCO3	Organic C	Avail. P	Total P	Total N	Total K	Bulk Density	Particle Size Analysis GV	CS	FS	Silt
		Clay									
m	%	%	mg/kg	%	%	%	Mg/m3			%	
0 - 0.08		2.38A									4.7
5.7											
0.08 - 0.2		0.41A									3
6.7											
		0.41A									3
		6.7									
0.08 - 0.2		0.41A									3
6.7											
		0.41A									3
		6.7									
0.2 - 0.65		0.29A									12.2
56											
0.65 - 1.05	<2C	0.08A									4.6
51.8											
1.05 - 1.5	<2C	0.05A									2.1
40											

Laboratory Analyses Completed for this profile

15_NR_BSa Exchangeable bases (Ca++) - meq per 100g of soil - Auto calculated from available
15_NR_CMR 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
15C1_CA Exchangeable bases (Ca2+,Mg2+,Na+,K+) - alcoholic 1M ammonium chloride at pH 8.5, pretreatment for

	soluble salts
15C1_CEC	CEC - alcoholic 1M ammonium chloride at pH 8.5, pretreatment for soluble salts
15C1_K	Exchangeable bases and CEC - alcoholic 1M ammonium chloride at pH 8.5, pretreatment for soluble salts
15C1_MG	Exchangeable bases and CEC - alcoholic 1M ammonium chloride at pH 8.5, pretreatment for soluble salts
15C1_NA	Exchangeable bases and CEC - alcoholic 1M ammonium chloride at pH 8.5, pretreatment for soluble salts
15E1_AL	Exchangeable Al - by compulsive exchange, no pretreatment for soluble salts

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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
19B_NR	Calcium Carbonate (CaCO3) - Not recorded
3A1	EC of 1:5 soil/water extract
4A1	pH of 1:5 soil/water suspension
4B_AL	Aluminium in 1:5 soil/0.01M calcium chloride extract - following Method 4A1
4B1	pH of 1:5 soil/0.01M calcium chloride extract - direct
6A1	Organic carbon - Walkley and Black
9A_S14	Total element - P(%) method S14 CCWA
9I1	Phosphate sorption index
P10_1m2m	1000 to 2000u particle size analysis, (method not recorded)
P10_20_75a	20 to 75u particle size analysis, (arithmetic difference)
P10_75_106	75 to 106u particle size analysis, (method not recorded)
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)