

**Project Name:** Tambellup Borden land resources survey  
**Project Code:** TBO **Site ID:** 1389 **Observation ID:** 1  
**Agency Name:** Agriculture Western Australia

#### Site Information

<b>Desc. By:</b>	Angela Stuart-Street	<b>Locality:</b>	
<b>Date Desc.:</b>	07/06/00	<b>Elevation:</b>	No Data
<b>Map Ref.:</b>		<b>Rainfall:</b>	No Data
<b>Northing/Long.:</b>	6215964 AMG zone: 50	<b>Runoff:</b>	No Data
<b>Easting/Lat.:</b>	620592 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>	Rises
<b>Morph. Type:</b>	Mid-slope	<b>Relief:</b>	No Data
<b>Elem. Type:</b>	Hillslope	<b>Slope Category:</b>	No Data
<b>Slope:</b>	4 %	<b>Aspect:</b>	0 degrees

#### Surface Soil Condition Loose

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

#### Soil Classification

<b>Australian Soil Classification:</b>		<b>Mapping Unit:</b>	N/A
Hypocalcic Mottled-Mesonatric Brown Sodosol		<b>Principal Profile Form:</b>	N/A
<b>ASC Confidence:</b>		<b>Great Soil Group:</b>	N/A
Confidence level not specified			

**Site Disturbance** Cultivation. Rainfed

#### Vegetation

**Surface Coarse Fragments** No surface coarse fragments; No surface coarse fragments

#### Profile Morphology

A1p	0 - 0.2 m	Dark greyish brown (10YR4/2-Moist); ; Loamy sand; Single grain grade of structure; Sandy (grains prominent) fabric; Moderately moist; Loose consistence; Strongly water repellent, "Field pH 5.8 (pH meter); Clear, Smooth change to -
A21e	0.2 - 0.3 m	Greyish brown (2.5Y5/2-Moist); ; Sand; Single grain grade of structure; Sandy (grains prominent) fabric; Moderately moist; Loose consistence; Field pH 6.4 (pH meter); Abrupt, Smooth change to -
B21	0.3 - 0.5 m	Brown (10YR4/3-Moist); , 2.5YR48, 20-50% , 5-15mm, Prominent; Medium clay; Massive grade of structure; Earthy fabric; Moist; Weak consistence; Field pH 7.1 (pH meter); Gradual, Smooth change to -
B22	0.5 - 0.7 m	Dark yellowish brown (10YR4/4-Moist); , 2.5YR48, 10-20% , 5-15mm, Distinct; Sandy medium clay; Massive grade of structure; Earthy fabric; Moist; Firm consistence; Field pH 8 (pH meter); Gradual, Wavy change to -
B31k	0.7 - 1.1 m	Olive yellow (5Y6/6-Moist); , 7.5YR58, 2-10% , 0-5mm, Faint; Medium clay; Weak grade of structure, 2-5 mm, Polyhedral; Earthy fabric; Moist; Field pH 8.6 (pH meter);
	1.25 - 1.6 m	;

#### Morphological Notes

B31k Calcium carbonate in this layer 5.

#### Observation Notes

#### Site Notes

Site midslope - rock outcrops; weathered granite 20m from site. Broad sand patch beyond that.

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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				Na Cmol (+)/kg				%
0 - 0.12	4.3B 5A	25A	2.67H	0.7	0.1	0.38	0.38J		3.85D	
0.12 - 0.5	5.4B 6.4A	2A	1.14H	0.27	0.06	0.06	0.02J		1.53D	
0.5 - 0.9	5.6B 6.9A 5.6B 6.9A	7A	3.14A 3.14A	3.27 3.27	0.93 0.93	0.36 0.36			7.7D 7.7D	
0.5 - 0.9	5.6B 6.9A 5.6B 6.9A	7A	3.14A 3.14A	3.27 3.27	0.93 0.93	0.36 0.36			7.7D 7.7D	
0.9 - 1.25	8.3B 9.4A	28A	3.29E	4.68	3.36	0.63		13B	11.96D	4.85
1.25 - 1.6	8.4B 9.6A	27A	2.66E	5.1	5.94	0.81		16B	14.51D	5.06

Depth	CaCO3	Organic C	Avail. P	Total P	Total N	Total K	Bulk Density	Particle Size	Analysis
m	%	Clay %	mg/kg	%	%	%	Mg/m3	GV CS FS	Silt
0 - 0.12		2.04A							3.1
4.8									
0.12 - 0.5		0.16A							1.8
3.5									
0.5 - 0.9		0.32A							2.6
35.3									
		0.32A							2.6
		35.3							
0.5 - 0.9		0.32A							2.6
35.3									
		0.32A							2.6
		35.3							
0.9 - 1.25	2.5C	0.05A							5.2
40.9									
1.25 - 1.6	<2C	0.04A							20.4
41.3									

#### Laboratory Analyses Completed for this profile

15_NR_BSa	Exchangeable bases (Ca++) - meq per 100g of soil - Auto calculated from available
15_NR_CMd	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  
soluble salts

Exchangeable bases and CEC - alcoholic 1M ammonium chloride at pH 8.5, pretreatment for

15C1\_NA  
soluble salts

Exchangeable bases and CEC - alcoholic 1M ammonium chloride at pH 8.5, pretreatment for

15E1\_AL

Exchangeable Al - by compulsive exchange, no pretreatment for soluble salts

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15E1_CA	Exchangeable bases (Ca <sup>2+</sup> ,Mg <sup>2+</sup> ,Na <sup>+</sup> ,K <sup>+</sup> ) 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 (Mn <sup>2+</sup> ) 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 (CaCO <sub>3</sub> ) - 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)