

**Project Name:** Tambellup Borden land resources survey  
**Project Code:** TBO **Site ID:** 1383 **Observation ID:** 1  
**Agency Name:** Agriculture Western Australia

**Site Information**

<b>Desc. By:</b>	Angela Stuart-Street	<b>Locality:</b>	
<b>Date Desc.:</b>	26/05/99	<b>Elevation:</b>	No Data
<b>Map Ref.:</b>		<b>Rainfall:</b>	No Data
<b>Northing/Long.:</b>	6218070 AMG zone: 50	<b>Runoff:</b>	No Data
<b>Easting/Lat.:</b>	570488 Datum: AGD84	<b>Drainage:</b>	Imperfectly 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**

**Rel/Slope Class:** Gently undulating rises 9-30m 1-3% **Pattern Type:** 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>	2 %	<b>Aspect:</b>	0 degrees

**Surface Soil Condition** Soft

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

**Soil Classification**

<b>Australian Soil Classification:</b>		<b>Mapping Unit:</b>	N/A
Mesotrophic Mottled-Mesonatric Grey 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** 10-20%, medium gravelly, 6-20mm, subrounded, Granite; 10-20%, medium gravelly, 6-20mm, subangular, Quartz; 2-10%, cobbly, 60-200mm, subrounded, Granite

**Profile Morphology**

A1p	0 - 0.1 m	Very dark greyish brown (10YR3/2-Moist); ; Coarse sandy loam; Single grain grade of structure; Sandy
		(grains prominent) fabric; Dry; Loose consistence; 10-20%, fine gravelly, 2-6mm, subrounded, Quartz,
		coarse fragments; 2-10%, medium gravelly, 6-20mm, subrounded, Granite, coarse fragments; Water
		repellent; Abrupt, Smooth change to -
A21e	0.1 - 0.2 m	Pale brown (10YR6/3-Moist); ; Coarse sand; Single grain grade of structure; Sandy
(grains prominent)		fabric; Moist; Loose consistence; 10-20%, medium gravelly, 6-20mm, subrounded,
Ironstone, coarse		fragments; Clear, Smooth change to -
B21	0.2 - 0.5 m	Light brownish grey (2.5Y6/3-Moist); Mottles, 10YR68, 10-20% , 5-15mm, Faint; Mottles,
2.5YR36, 10-		20% , 5-15mm, Distinct; Sandy medium clay; Weak grade of structure, 2-5 mm,
Subangular blocky; Moist;		Very weak consistence; Clear, Smooth change to -
B22t	0.5 - 0.9 m	Light brownish grey (2.5Y6/2-Moist); Mottles, 5YR46, 10-20% , 5-15mm, Prominent;
Mottles, 10YR66, 2-		10% , 15-30mm, Faint; Medium clay; Weak grade of structure, <2 mm, Subangular
blocky; Moist; Weak		consistence; Clear, Wavy change to -
B31	0.9 - 1.3 m	Light brownish grey (2.5Y6/2-Moist); Mottles, 2.5YR36, 10-20% , 15-30mm, Prominent;
Light clay;		Moderate grade of structure, <2 mm, Subangular blocky; Moist; Firm consistence;
Gradual, Wavy		change to -
B32	1.3 - 1.6 m	Light brownish grey (2.5Y6/2-Moist); Mottles, 2.5YR36, 10-20% , 30-mm, Prominent; Light
clay;		Moderate grade of structure, 2-5 mm, Polyhedral; Moist; Weak consistence; Gradual,
Wavy change to -		

## Morphological Notes

## Observation Notes

### Site Notes

Site mid slope on rise. Granite rocks scattered across paddock surface & larger piles of boulders clumped upslope.  
Suspect Calcium carbonate in layers 5 & 6, no response to acid. Pit done at site TBO #0915. Water level & EC (measured later)

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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	4.5B 5.2A	11A	2.97H	0.59	0.05	0.24	0.45J		3.85D	
0.1 - 0.2	5B 6.1A	2A	0.46H	0.18	0.04	0.06	0.07J		0.74D	
0.2 - 0.5	6B 7.2A	10A	1.55A	4.24	0.14	1.23			7.16D	
0.5 - 0.9	5.2B 6.2A	30A	0.7H	4.77	0.2	2.01	0.02J		7.68D	
0.9 - 1.3	4.3B 5A	55A	0.26H	4.58	0.24	2.6	0.13J		7.68D	
1.3 - 1.6	4.1B 4.7A	70A	0.18H	4.87	0.25	3.32	0.18J		8.62D	

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		1.73A						
6								4.4
0.1 - 0.2		0.17A						2.9
2.4								
0.2 - 0.5		0.17A						2.5
46.2								
0.5 - 0.9		0.2A						2.8
51.6								
0.9 - 1.3		0.11A						8.6
53.2								
1.3 - 1.6		0.14A						13.2
49.5								

### Laboratory Analyses Completed for this profile

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

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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)