

**Project Name:** Tambellup Borden land resources survey  
**Project Code:** TBO **Site ID:** 0191 **Observation ID:** 1  
**Agency Name:** Agriculture Western Australia

**Site Information**

<b>Desc. By:</b>	Rohan Marold	<b>Locality:</b>	
<b>Date Desc.:</b>	12/03/97	<b>Elevation:</b>	188 metres
<b>Map Ref.:</b>		<b>Rainfall:</b>	No Data
<b>Northing/Long.:</b>	6204415 AMG zone: 50	<b>Runoff:</b>	No Data
<b>Easting/Lat.:</b>	629749 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>	6 %	<b>Aspect:</b>	No Data

**Surface Soil Condition** Loose

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

**Soil Classification**

<b>Australian Soil Classification:</b>	<b>Mapping Unit:</b>	N/A
Hypocalcic Subnatric Brown Sodosol	<b>Principal Profile Form:</b>	Db3.23
<b>ASC Confidence:</b>	<b>Great Soil Group:</b>	N/A
Confidence level not specified		

**Site Disturbance** Complete clearing. Pasture, native or improved, cultivated at some stage

**Vegetation**

**Surface Coarse Fragments** 10-20%, , subangular, Quartz

**Profile Morphology**

Ap	0 - 0.1 m	Dark reddish brown (5YR2.5/2-Moist); ; Loamy sand; Single grain grade of structure; Sandy (grains prominent) fabric; Dry; Loose consistence; 2-10%, fine gravelly, 2-6mm, angular, Quartz, coarse fragments; Field pH 5 (pH meter); Clear change to -
A21	0.1 - 0.42 m	Brown (7.5YR4/3-Moist); ; Loamy sand; Single grain grade of structure; Sandy (grains prominent) fabric; Dry; 2-10%, fine gravelly, 2-6mm, angular, Quartz, coarse fragments; Field pH 6.6 (pH meter); Abrupt change to -
B21	0.42 - 0.62 m	Dark yellowish brown (10YR4/4-Moist); ; Light medium clay; Moderate grade of structure, Subangular blocky; Smooth-ped fabric; Dry; Very firm consistence; Field pH 8.4 (pH meter); Gradual change to -
C	0.62 - 1.7 m	Brown (7.5YR4/4-Moist); , 10YR78; , 5YR58; Sandy clay loam; Moderate grade of structure, Subangular blocky; Smooth-ped fabric; Dry; Firm consistence; Field pH 8 (pH meter);

**Morphological Notes**

**Observation Notes**

**Site Notes**

Alkaline red deep loamy duplex--Brown sandy loam/brown clay/weathering gneiss (lots of mica) [lab data suggests sandy duplex]

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**Laboratory Test Results:**

Depth	pH	1:5 EC	Ca	Exchangeable Mg	Cations K	Na	Exchangeable Acidity	CEC	ECEC	ESP
m										

0 - 0.1	4.7B 5.4H	16B	5.57H	0.74	0.36	0.21	0.19J		6.88D	
0 - 0.1	4.7B 5.4H	16B	5.57H	0.74	0.36	0.21	0.19J		6.88D	
0.1 - 0.25	5B 6.1H	4B	4.99H	0.61	0.17	0.19	0.09J		5.96D	
0.1 - 0.25	5B 6.1H	4B	4.99H	0.61	0.17	0.19	0.09J		5.96D	
0.25 - 0.4	6B 7.4H	4B	2.48A	1.02	0.1	0.36			3.96D	
0.25 - 0.4	6B 7.4H	4B	2.48A	1.02	0.1	0.36			3.96D	
0.4 - 0.65	7.4B 8.5H	31B	6.81E	8.22	0.47	4.69		23B	20.19D	20.39
0.4 - 0.65	7.4B 8.5H	31B	6.81E	8.22	0.47	4.69		23B	20.19D	20.39
0.65 - 1	8.4B 9.4H	57B	8.24E	10.42	0.57	9.15		30B	28.38D	30.50
0.65 - 1	8.4B 9.4H	57B	8.24E	10.42	0.57	9.15		30B	28.38D	30.50
1 - 1.4	7.8B 8.9H	39B	3.75E	5.25	0.32	5.78		16B	15.1D	36.13
1 - 1.4	7.8B 8.9H	39B	3.75E	5.25	0.32	5.78		16B	15.1D	36.13
1.4 - 1.8	5.4B 6.5H	27B	1.63A	2.6	0.17	2.76			7.16D	
1.4 - 1.8	5.4B 6.5H	27B	1.63A	2.6	0.17	2.76			7.16D	

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 - 0.1		1.69D		180B					9.5
5.2									
0 - 0.1		1.69D		180B					9.5
5.2									
0.1 - 0.25		0.66D		89B					12.4
6.8									
0.1 - 0.25		0.66D		89B					12.4
6.8									
0.25 - 0.4		0.3D		83B					8.9
8									
0.25 - 0.4		0.3D		83B					8.9
8									
0.4 - 0.65	<2C	0.28D		71B					8.6
49.4									
0.4 - 0.65	<2C	0.28D		71B					8.6
49.4									
0.65 - 1	<2C	0.11D		82B					8.5
43.8									
0.65 - 1	<2C	0.11D		82B					8.5
43.8									
1 - 1.4	<2C	0.08D		160B					5.9
23.2									
1 - 1.4	<2C	0.08D		160B					5.9
23.2									
1.4 - 1.8		0.11D		240B					4.2
10.6									
1.4 - 1.8		0.11D		240B					4.2
10.6									

#### Laboratory Analyses Completed for this profile

15\_NR\_BSa Exchangeable bases (Ca++) - meq per 100g of soil - Auto calculated from available

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15_NR_CMR	Exchangeable bases (Ca/Mg ratio) - Not recorded
15A1_CA for soluble	Exchangeable bases (Ca2+,Mg2+,Na+,K+) - 1M ammonium chloride at pH 7.0, no pretreatment
	salts
15A1_CEC	Exchangeable bases (CEC) - 1M ammonium chloride at pH 7.0, no pretreatment for soluble salts
15A1_K for soluble	Exchangeable bases (Ca2+,Mg2+,Na+,K+) - 1M ammonium chloride at pH 7.0, no pretreatment
	salts
15A1_MG for soluble	Exchangeable bases (Ca2+,Mg2+,Na+,K+) - 1M ammonium chloride at pH 7.0, no pretreatment
	salts
15A1_NA for soluble	Exchangeable bases (Ca2+,Mg2+,Na+,K+) - 1M ammonium chloride at pH 7.0, no pretreatment
	salts
15C1_CA pretreatment for	Exchangeable bases (Ca2+,Mg2+,Na+,K+) - alcoholic 1M ammonium chloride at pH 8.5,
	soluble salts
15C1_CEC	CEC - alcoholic 1M ammonium chloride at pH 8.5, pretreatment for soluble salts
15C1_K soluble salts	Exchangeable bases and CEC - alcoholic 1M ammonium chloride at pH 8.5, pretreatment for
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
15E1_CA salts	Exchangeable bases (Ca2+,Mg2+,Na+,K+) by compulsive exchange, no pretreatment for soluble
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 Sum of Cations	Exchangeable bases Base saturation percentage (BSP) - Auto calculated from available using
	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
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
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)
P10_gt2m	> 2mm 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)