

**Project Name:** Tambellup Borden land resources survey  
**Project Code:** TBO                   **Site ID:** 0160                   **Observation ID:** 1  
**Agency Name:** Agriculture Western Australia

#### Site Information

<b>Desc. By:</b>	Rohan Marold	<b>Locality:</b>	
<b>Date Desc.:</b>	11/03/97	<b>Elevation:</b>	204 metres
<b>Map Ref.:</b>		<b>Rainfall:</b>	No Data
<b>Northing/Long.:</b>	6213450 AMG zone: 50	<b>Runoff:</b>	No Data
<b>Easting/Lat.:</b>	624155 Datum: AGD84	<b>Drainage:</b>	Moderately 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>	Gently undulating rises 9-30m 1-3%	<b>Pattern Type:</b>	Rises
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<b>Morph. Type:</b>	Simple-slope	<b>Relief:</b>	No Data
<b>Elem. Type:</b>	Hillslope	<b>Slope Category:</b>	No Data
<b>Slope:</b>	1 %	<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
Bleached-Mottled Natic Red Kurosol		<b>Principal Profile Form:</b>	Dy5.21
<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%, medium gravelly, 6-20mm, subrounded, Gravel; No surface coarse fragments

#### Profile Morphology

Ap 0 - 0.12 m	Dark brown (7.5YR3/2-Moist); , 0-0% ; Loamy sand; Single grain grade of structure; prominent) fabric; Dry; Loose consistence; Water repellent; Field pH 5.6 (pH meter);
Sandy (grains	
Abrupt change to -	
A21e 0.12 - 0.14 m	Light brownish grey (10YR6/2-Moist); , 0-0% ; Sand; Single grain grade of structure; prominent) fabric; Dry; Very weak consistence; Field pH 5.3 (pH meter); Clear, Tongued
Sandy (grains	
change to -	
B21 0.14 - 0.35 m	Yellowish red (5YR5/8-Moist); Mottles, 10YR63, 20-50% , 30-mm, Distinct; Light medium clay; Strong
Very many (50	grade of structure, 50-100 mm, Prismatic; Smooth-ped fabric; Dry; Very firm consistence;
meter); Clear	- 100 %), Ferruginous, Very coarse (20 - 60 mm), Soft segregations; Field pH 6 (pH
	change to -
B22 0.35 - 0.7 m	Light brownish grey (2.5Y6/2-Moist); , 0-0% ; Massive grade of structure; Dry; Very strong
consistence;	Many (20 - 50 %), Ferruginous, Medium (2 - 6 mm), Soft segregations; Field pH 4.8 (pH
meter); Gradual	change to -
C 0.7 - 1.8 m	Pale yellow (2.5Y7/3-Moist); , 0-0% ; Light clay; Moderate grade of structure, 5-10 mm,
Polyhedral;	Smooth-ped fabric; Dry; Firm consistence; Many (20 - 50 %), Ferruginous, Medium (2 - 6
mm), Soft	seggregations; Field pH 4.5 (pH meter);

#### Morphological Notes

B21	Almost indurated--very hard
B22	Almost indurated--very hard

#### Observation Notes

**Site Notes**

Grey shallow sandy duplex

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**Laboratory Test Results:**

Depth m	pH	1:5 EC dS/m	Ca	Exchangeable Cations			Na Cmol (+)/kg	Exchangeable Acidity	CEC	ECEC	ESP %
				Mg	K						
0 - 0.1 5.5H	4.7B 5.5H	12B	3.91H	0.56	0.13	0.33	0.15J		4.93D		
0 - 0.1 5.5H	4.7B 5.5H	12B	3.91H	0.56	0.13	0.33	0.15J		4.93D		
0.1 - 0.25 6.1H	4.9B 6.1H	21B	2.01H	5.38	0.28	2.11	0.09J		9.78D		
0.1 - 0.25 6.1H	4.9B 6.1H	21B	2.01H	5.38	0.28	2.11	0.09J		9.78D		
0.25 - 0.55 5.4H	4.3B 5.4H	20B	0.32H	1.58	0.14	1.33	0.1J		3.37D		
0.25 - 0.55 5.4H	4.3B 5.4H	20B	0.32H	1.58	0.14	1.33	0.1J		3.37D		
0.55 - 0.85 5.2H	4.3B 5.2H	40B	0.72H	4.26	0.28	3.92	0.2J		9.18D		
0.55 - 0.85 5.2H	4.3B 5.2H	40B	0.72H	4.26	0.28	3.92	0.2J		9.18D		
0.55 - 0.85 5.2H	4.3B 5.2H	40B	0.72H	4.26	0.28	3.92	0.2J		9.18D		
0.55 - 0.85 5.2H	4.3B 5.2H	40B	0.72H	4.26	0.28	3.92	0.2J		9.18D		
0.55 - 0.85 5.2H	4.3B 5.2H	40B	0.72H	4.26	0.28	3.92	0.2J		9.18D		
0.85 - 1.15 4.7H	4B 4.7H	72B	0.39H	4.18	0.36	4.85	0.46J		9.78D		
0.85 - 1.15 4.7H	4B 4.7H	72B	0.39H	4.18	0.36	4.85	0.46J		9.78D		
1.15 - 1.65 4.4H	3.9B 4.4H	82B	0.24H	2.88	0.29	3.25	0.32J		6.66D		
1.15 - 1.65 4.4H	3.9B 4.4H	82B	0.24H	2.88	0.29	3.25	0.32J		6.66D		
1.65 - 1.9 4.4H	3.9B 4.4H	100B	0.18H	2.51	0.29	2.13	0.27J		5.11D		
1.65 - 1.9 4.4H	3.9B 4.4H	100B	0.18H	2.51	0.29	2.13	0.27J		5.11D		

Depth m	CaCO <sub>3</sub> %	Organic C Clay %	Avail. P mg/kg	Total P %	Total N %	Total K %	Bulk Density Mg/m <sup>3</sup>	Particle Size Analysis			
								GV	CS	FS	Silt
0 - 0.1 4.2		1.85D		140B							3.9
0 - 0.1 4.2		1.85D		140B							3.9
0.1 - 0.25 33.7		0.47D		42B							4.7
0.1 - 0.25 33.7		0.47D		42B							4.7
0.25 - 0.55 9.7		0.07D		27B							3.7
0.25 - 0.55		0.07D		27B							3.7

9.7

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0.55 - 0.85 21.8	0.17D	29B	2.8
	0.17D 21.8	29B	2.8
0.55 - 0.85 21.8	0.17D	29B	2.8
	0.17D 21.8	29B	2.8
0.55 - 0.85 21.8	0.17D	29B	2.8
	0.17D 21.8	29B	2.8
0.55 - 0.85 21.8	0.17D	29B	2.8
	0.17D 21.8	29B	2.8
0.85 - 1.15 35.4	0.17D	30B	8.4
0.85 - 1.15 35.4	0.17D	30B	8.4
1.15 - 1.65 42.4	0.12D	35B	8
1.15 - 1.65 42.4	0.12D	35B	8
1.65 - 1.9 32.4	0.11D	28B	8.7
1.65 - 1.9 32.4	0.11D	28B	8.7

#### 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
15_NR_MN	Exchangeable bases (Mn++) - meq per 100g of soil - Not recorded
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_NA	Exchangeable bases, CEC and AEC by compulsive exchange, no pretreatment for soluble salts
15J_BASES	Sum of Bases
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
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)