

Project Name: Tambellup Borden land resources survey
Project Code: TBO **Site ID:** 0471 **Observation ID:** 1
Agency Name: Agriculture Western Australia

Site Information

Desc. By:	Rohan Marold	Locality:	
Date Desc.:	12/03/97	Elevation:	200 metres
Map Ref.:		Rainfall:	No Data
Northing/Long.:	6227688 AMG zone: 50	Runoff:	No Data
Easting/Lat.:	615242 Datum: AGD84	Drainage:	Well drained

Geology

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

Landform

Rel/Slope Class:	Undulating rises 9-30m 3-10%	Pattern Type:	Rises
Morph. Type:	Crest	Relief:	No Data
Elem. Type:	Hillcrest	Slope Category:	No Data
Slope:	6 %	Aspect:	No Data

Surface Soil Condition Loose

Erosion

Soil Classification

Australian Soil Classification:		Mapping Unit:	N/A
Ferric Mottled-Mesonatric Yellow Sodosol		Principal Profile Form:	Dy5.42
ASC Confidence:		Great Soil Group:	N/A

No analytical data and little or no knowledge of this soil.

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

Vegetation

Surface Coarse Fragments 20-50%, medium gravelly, 6-20mm, subrounded, Gravel; No surface coarse fragments

Profile Morphology

Apc	0 - 0.11 m	Very dark greyish brown (10YR3/2-Moist); , 0-0% ; Loamy sand; Single grain grade of structure; Sandy
		(grains prominent) fabric; Dry; Very weak consistence; 2-10%, medium gravelly, 6-20mm, angular,
		Quartz, coarse fragments; Many (20 - 50 %), Ferruginous, Medium (2 -6 mm), Concretions; Water repellent; Field pH 5.4 (pH meter); Abrupt change to -
A21ec	0.11 - 0.2 m	White (10YR8/2-Moist); , 0-0% ; Sand; Single grain grade of structure; Sandy (grains prominent) fabric;
		Dry; Very weak consistence; 2-10%, medium gravelly, 6-20mm, angular, Quartz, coarse fragments; Few
		(2 - 10 %), Ferruginous, Medium (2 -6 mm), Concretions; Water repellent; Field pH 5.9 (pH meter);
		Abrupt, Tongued change to -
B21	0.13 - 0.35 m	Yellow (5Y7/8-Moist); , 5YR58, 10-20% , 0-5mm, Distinct; Medium clay; Strong grade of structure, 50-
		100 mm, Columnar; Smooth-ped fabric; Dry; Strong consistence; 0-2%, fine gravelly, 2-6mm, angular,
		Quartz, coarse fragments; Field pH 7 (pH meter); Gradual change to -
B3	0.35 - 0.8 m	Pale yellow (5Y8/3-Moist); , 5Y74, 20-50% , 15-30mm, Prominent; , 2.5YR48, 20-50% ,
		15-30mm,
		Prominent; Light medium clay; Massive grade of structure; Dry; Strong consistence; 2-10%, fine gravelly,
		2-6mm, angular, Quartz, coarse fragments; Field pH 7.6 (pH meter); Gradual change to -
C	0.8 - 1.8 m	Pale yellow (2.5Y7/3-Moist); , 10YR76, 10-20% , 15-30mm, Distinct; Light clay; Massive grade of
		structure; Dry; 2-10%, medium gravelly, 6-20mm, angular, Quartz, coarse fragments;
		Field pH 7.3 (pH meter);

Morphological Notes

Apc
 A21ec
 B21

B3
C

Observation Notes

Site Notes

On a high point in the landscape. Areas of shallow gravel and rock outcrop including an arch of dolerite rock outcrop and associated soils further downslope. Shallow sandy gravel/red-yellow domed clay.

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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	4.2B 5.3H	7B	2.42H	0.52	0.27	0.17	0.32J		3.38D	
0 - 0.1	4.2B 5.3H	7B	2.42H	0.52	0.27	0.17	0.32J		3.38D	
0.1 - 0.15	4.4B 5.4H	6B	0.95H	0.38	0.06	0.23	0.21J		1.62D	
0.1 - 0.15	4.4B 5.4H	6B	0.95H	0.38	0.06	0.23	0.21J		1.62D	
0.15 - 0.2	5.1B 6.4H 5.1B 6.4H	18B	1.52H 1.52H	4.54 4.54	0.13 0.13	2.34 2.34	0.07J 0.07J		8.53D 8.53D	
0.15 - 0.2	5.1B 6.4H 5.1B 6.4H	18B	1.52H 1.52H	4.54 4.54	0.13 0.13	2.34 2.34	0.07J 0.07J		8.53D 8.53D	
0.15 - 0.2	5.1B 6.4H 5.1B 6.4H	18B	1.52H 1.52H	4.54 4.54	0.13 0.13	2.34 2.34	0.07J 0.07J		8.53D 8.53D	
0.15 - 0.2	5.1B 6.4H 5.1B 6.4H	18B	1.52H 1.52H	4.54 4.54	0.13 0.13	2.34 2.34	0.07J 0.07J		8.53D 8.53D	
0.2 - 0.35	5.9B 7.1H	25B	1.17A	5.98	0.19	2.78			10.12D	
0.2 - 0.35	5.9B 7.1H	25B	1.17A	5.98	0.19	2.78			10.12D	
0.35 - 0.65	7.1B 8.2H	36B	0.63E	6.72	0.31	4.45		14B	12.11D	31.79
0.35 - 0.65	7.1B 8.2H	36B	0.63E	6.72	0.31	4.45		14B	12.11D	31.79
0.65 - 0.85	7.2B 8.3H	48B	0.4E	8.11	0.48	7.32		18B	16.31D	40.67
0.65 - 0.85	7.2B 8.3H	48B	0.4E	8.11	0.48	7.32		18B	16.31D	40.67
0.85 - 1.35	6.6B 7.4H	70B	0.21A	8.2	0.53	6.8			15.74D	
0.85 - 1.35	6.6B 7.4H	70B	0.21A	8.2	0.53	6.8			15.74D	
1.35 - 1.85	5.3B 6H	75B	0.07H	7.01	0.63	6.28	0.02J		13.99D	
1.35 - 1.85	5.3B 6H	75B	0.07H	7.01	0.63	6.28	0.02J		13.99D	

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 3		2.22D		140B				4.2

0 - 0.1
3

2.22D

140B

4.2

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0.1 - 0.15 3.8	0.69D	68B	4
0.1 - 0.15 3.8	0.69D	68B	4
0.15 - 0.2 38.1	0.74D	38B	4.7
	0.74D 38.1	38B	4.7
0.15 - 0.2 38.1	0.74D	38B	4.7
	0.74D 38.1	38B	4.7
0.15 - 0.2 38.1	0.74D	38B	4.7
	0.74D 38.1	38B	4.7
0.15 - 0.2 38.1	0.74D	38B	4.7
	0.74D 38.1	38B	4.7
0.2 - 0.35 44.8	0.39D	34B	5.7
0.2 - 0.35 44.8	0.39D	34B	5.7
0.35 - 0.65 49.9	<2C 0.15D	31B	4
0.35 - 0.65 49.9	<2C 0.15D	31B	4
0.65 - 0.85 54.6	<2C 0.07D	23B	7.7
0.65 - 0.85 54.6	<2C 0.07D	23B	7.7
0.85 - 1.35 58.6	0.09D	27B	6.6
0.85 - 1.35 58.6	0.09D	27B	6.6
1.35 - 1.85 51.7	0.19D	25B	6.4
1.35 - 1.85 51.7	0.19D	25B	6.4

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
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	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
15E1_CA	Exchangeable bases (Ca ²⁺ ,Mg ²⁺ ,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 (Mn ²⁺) 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 ₃) - 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

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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)