

Project Name: Tambellup Borden land resources survey
Project Code: TBO **Site ID:** 0173 **Observation ID:** 1
Agency Name: Agriculture Western Australia

Site Information

Desc. By:	Rohan Marold	Locality:	
Date Desc.:	12/03/97	Elevation:	169 metres
Map Ref.:		Rainfall:	No Data
Northing/Long.:	6206003 AMG zone: 50	Runoff:	No Data
Easting/Lat.:	627555 Datum: AGD84	Drainage:	Moderately 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:	Lower-slope	Relief:	No Data
Elem. Type:	Hillslope	Slope Category:	No Data
Slope:	10 %	Aspect:	No Data

Surface Soil Condition Firm

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

Soil Classification

Australian Soil Classification:		Mapping Unit:	N/A
Supracalcic Mesonatric Brown Sodosol		Principal Profile Form:	Db3.23
ASC Confidence:		Great Soil Group:	N/A
All necessary analytical data are available.			

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

Vegetation

Surface Coarse Fragments No surface coarse fragments; 0-2%, , rounded, Dolerite

Profile Morphology

Ap	0 - 0.11 m	Dark brown (7.5YR3/2-Moist); , 0-0% ; Fine sandy loam; Single grain grade of structure; Sandy (grains prominent) fabric; Dry; Very weak consistence; Field pH 5.1 (pH meter); Abrupt change to -
A21	0.11 - 0.18 m	Dark brown (7.5YR3/3-Moist); , 0-0% ; Sandy loam; Single grain grade of structure; Sandy (grains prominent) fabric; Dry; Very weak consistence; 20-50%, medium gravelly, 6-20mm, subangular, Quartz, coarse fragments; Field pH 6.6 (pH meter); Clear change to -
B21	0.18 - 0.54 m	Brown (7.5YR4/4-Moist); , 0-0% ; Light medium clay; Moderate grade of structure, 5-10 mm, Subangular blocky; Smooth-ped fabric; Moderately moist; Very firm consistence; Field pH 8.6 (pH meter); Abrupt change to -
B2k	0.54 - 0.64 m	Dark yellowish brown (10YR4/6-Moist); , 0-0% ; Light clay; Massive grade of structure; Dry; Firm consistence; Many (20 - 50 %), Calcareous, Very coarse (20 - 60 mm), Soft segregations; Field pH 9.5 (pH meter); Clear change to -
C	0.64 - 1 m	Yellowish brown (10YR5/6-Moist); , 5YR58, 10-20% , 5-15mm, Prominent; Clayey sand; Dry; Firm consistence; Field pH 9.5 (pH meter); Clear change to -
R	1 - m	Rock

Morphological Notes

Observation Notes

Site Notes

Alkaline red shallow loamy 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		dS/m				Cmol (+)/kg				%
0 - 0.1	4.5B 5.4H	13B	3.71H	0.96	0.18	0.57	0.3J		5.42D	
0 - 0.1	4.5B 5.4H	13B	3.71H	0.96	0.18	0.57	0.3J		5.42D	
0.1 - 0.25	5.4B 7.2H	3B	3.37A	1.39	0.07	0.58			5.41D	
	5.4B 7.2H		3.37A	1.39	0.07	0.58			5.41D	
0.1 - 0.25	5.4B 7.2H	3B	3.37A	1.39	0.07	0.58			5.41D	
	5.4B 7.2H		3.37A	1.39	0.07	0.58			5.41D	
0.1 - 0.25	5.4B 7.2H	3B	3.37A	1.39	0.07	0.58			5.41D	
	5.4B 7.2H		3.37A	1.39	0.07	0.58			5.41D	
0.1 - 0.25	5.4B 7.2H	3B	3.37A	1.39	0.07	0.58			5.41D	
	5.4B 7.2H		3.37A	1.39	0.07	0.58			5.41D	
0.25 - 0.4	6.7B 8.1H	19B	5.82E	8.6	0.27	5.64		24B	20.33D	23.50
0.25 - 0.4	6.7B 8.1H	19B	5.82E	8.6	0.27	5.64		24B	20.33D	23.50
0.4 - 0.55	8.4B 9.4H	66B	7.45E	12.89	0.25	8.52		30B	29.11D	28.40
0.4 - 0.55	8.4B 9.4H	66B	7.45E	12.89	0.25	8.52		30B	29.11D	28.40
0.55 - 0.7	8.6B 9.6H	80B	7.84E	13.15	0.27	11.61		31B	32.87D	37.45
0.55 - 0.7	8.6B 9.6H	80B	7.84E	13.15	0.27	11.61		31B	32.87D	37.45
0.7 - 1	8.6B 9.5H	72B	8.32E	12.46	0.26	15.43		33B	36.47D	46.76
0.7 - 1	8.6B 9.5H	72B	8.32E	12.46	0.26	15.43		33B	36.47D	46.76

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		1.26D		270B				9.4
0 - 0.1		1.26D		270B				9.4
0.1 - 0.25		0.48D		150B				10.1
		0.48D		150B				10.1
0.1 - 0.25		0.48D		150B				10.1
		0.48D		150B				10.1
0.1 - 0.25		0.48D		150B				10.1
		0.48D		150B				10.1
0.1 - 0.25		0.48D		150B				10.1
		0.48D		150B				10.1

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0.25 - 0.4 40	<2C	0.47D	140B	9.4
0.25 - 0.4 40	<2C	0.47D	140B	9.4
0.4 - 0.55 51.9	<2C	0.36D	140B	8.5
0.4 - 0.55 51.9	<2C	0.36D	140B	8.5
0.55 - 0.7 50.1	6C	0.21D	120B	6.9
0.55 - 0.7 50.1	6C	0.21D	120B	6.9
0.7 - 1 31.8	5C	0.1D	99B	11.8
0.7 - 1 31.8	5C	0.1D	99B	11.8

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
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 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 (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)