Project Name: **Tambellup Borden land resources survey**
Project Code: **TBO** **Site ID:** **1382** **Observation ID:** **1**
Agency Name: **Agriculture Western Australia**

Site Information

Desc. By: Angela Stuart-Street
Date Desc.: 25/05/99
Map Ref.:
Northing/Long.: 6225470 AMG zone: 50
Easting/Lat.: 576132 Datum: AGD84
Locality:
Elevation: No Data
Rainfall: No Data
Runoff: No Data
Drainage: Well drained

Geology

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

Landform

Rel/Slope Class: Gently undulating plains <9m 1-3%
Pattern Type: Rises

Morph. Type: Flat
Elem. Type: Plain
Slope: 1 %
Relief: No Data
Slope Category: No Data
Aspect: 225 degrees

Surface Soil Condition

Loose

Erosion

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

Soil Classification

Australian Soil Classification:
Hypercalcic Mottled-Mesonatric Grey Sodosol
ASC Confidence:
Confidence level not specified
Mapping Unit: N/A
Principal Profile Form: N/A
Great Soil Group: N/A

Site Disturbance

Cultivation. Rainfed

Vegetation

Surface Coarse Fragments

No surface coarse fragments; No surface coarse fragments

Profile Morphology

A1p 0 - 0.1 m (grains prominent) fabric; Moderately moist; Loose consistence; Sharp, Smooth change to - Dark greyish brown (2.5Y4/2-Moist); ; Loamy sand; Single grain grade of structure; Sandy

A21e 0.1 - 0.5 m (grains prominent) fabric; Moderately moist; Loose consistence; Sharp, Tongued change to - Light brownish grey (2.5Y6/2-Moist); ; Sand; Single grain grade of structure; Sandy

B21 0.5 - 0.55 m medium clay; moist; Firm consistence; Clear, Smooth change to - Light brownish grey (2.5Y6/3-Moist); , 10YR68, 10-20% , 5-15mm, Distinct; Sandy Moderate grade of structure, Columnar; Sandy (grains prominent) fabric; Moderately

B22 0.55 - 0.7 m Moderate grade of structure, Columnar; Sandy (grains prominent) fabric; Moderately moist; Weak consistence; Gradual, Smooth change to - Light olive brown (2.5Y5/6-Moist); , 7.5YR68, 10-20% , 5-15mm, Faint; Sandy light clay;

B23 0.7 - 0.9 m clay; Weak grade of structure, Polyhedral; Sandy (grains prominent) fabric; Moderately moist; Weak consistence; Clear, Wavy change to - Light yellowish brown (2.5Y6/4-Moist); , 2.5Y68, 10-20% , 5-15mm, Faint; Sandy medium

B31k 0.9 - 1.1 m clay; Weak grade of structure, Polyhedral; Sandy (grains prominent) fabric; Moderately moist; Weak consistence; Few (2 - 10 %), Calcareous, Very coarse (20 - 60 mm), Nodules; Clear, Tongued change to - Light yellowish brown (2.5Y6/4-Moist); , 2.5Y66, 2-10% , 5-15mm, Faint; Sandy medium

B32k 1.1 - 1.3 m loam; Massive grade of structure; Sandy (grains prominent) fabric; Moderately moist; Very weak consistence; Few (2 - 10 %), Calcareous, Very coarse (20 - 60 mm), Nodules; Clear, Wavy change to - Light yellowish brown (2.5Y6/4-Moist); , 10YR58, 10-20% , 30-mm, Faint; Sandy clay

B33k 1.3 - 1.6 m Light yellowish brown (2.5Y6/4-Moist); , 10YR68, 10-20% , 5-15mm, Distinct; Sandy light clay; Weak grade of structure, Polyhedral; Sandy (grains prominent) fabric; Moderately moist; Weak consistence; Few (2 - 10 %), Calcareous, Very coarse (20 - 60 mm), Nodules;

Morphological Notes

Observation Notes

Site Notes

Pit on broadly undulating plain. Clay domed. Calcium carbonate appearing from 90cm. Pit located where site TBO # 0865 done.

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Laboratory Test Results:

Depth	pH	1:5 EC	Exchangeable Cations				Exchangeable	CEC	ECEC	ESP
			Ca	Mg	K	Na	Acidity			
m		dS/m	Cmol (+)/kg							%
0 - 0.1	4.9B 5.7A	6A	3.32H	0.32	0.06	0.03	0.06J		3.73D	
0.1 - 0.5	5.2B 6A	3A	0.43H	0.06	0.03	0.05	0.02J		0.57D	
0.5 - 0.55	5.2B 6.5A	18A	1.9H	3.92	0.19	2.05	0.03J		8.06D	
0.55 - 0.7	7B 8.3A	34A	1.59E	6.95	0.55	4.03		16B	13.12D	25.19
0.7 - 0.9	7.8B 8.8A	61A	1.48E	7.99	0.56	4.97		16B	15D	31.06
0.9 - 1.1	8.7B 9.4A	110A	1.6E	8.98	0.63	6.22		18B	17.43D	34.56
1.1 - 1.3	8.7B 9.6A	75A	0.89E	5.02	0.4	3.49		10B	9.8D	34.90
1.3 - 1.6	8.3B 9A	150A	1.38E	7.49	1.4	6.05		18B	16.32D	33.61

Depth	CaCO3	Organic C	Avail. P	Total P	Total N	Total K	Bulk Density	Particle Size Analysis			
		Clay						GV	CS	FS	Silt
m	%	%	mg/kg	%	%	%	Mg/m3			%	
0 - 0.1		1.14A									1.6
2.2											
0.1 - 0.5		0.08A									1.2
1.5											
0.5 - 0.55		0.31A									5.9
26.6											
0.55 - 0.7		0.17A									2.8
37											
0.7 - 0.9		0.08A									2.7
35.3											
0.9 - 1.1	3.1C	0.07A									2.9
37											
1.1 - 1.3	<2C	0.04A									1.8
19.3											
1.3 - 1.6	1.7C	0.06A									3.5
56											

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
15C1_CA Exchangeable bases (Ca2+,Mg2+,Na+,K+) - alcoholic 1M ammonium chloride at pH 8.5,

pretreatment for soluble salts

15C1_CEC	CEC - alcoholic 1M ammonium chloride at pH 8.5, pretreatment for soluble salts
15C1_K	Exchangeable bases and CEC - alcoholic 1M ammonium chloride at pH 8.5, pretreatment for soluble salts
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 (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	Exchangeable bases Base saturation percentage (BSP) - Auto calculated from available using Sum of Cations and measured clay

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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
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
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)