

Project Name: Tambellup Borden land resources survey
Project Code: TBO **Site ID:** 0470 **Observation ID:** 1
Agency Name: Agriculture Western Australia

Site Information

| | | | |
|------------------------|----------------------|-------------------|-------------------------|
| Desc. By: | Rohan Marold | Locality: | |
| Date Desc.: | 11/03/97 | Elevation: | 197 metres |
| Map Ref.: | | Rainfall: | No Data |
| Northing/Long.: | 6218421 AMG zone: 50 | Runoff: | No Data |
| Easting/Lat.: | 612385 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: Gently undulating rises 9-30m 1-3% **Pattern Type:** Rises

| | | | |
|---------------------|-----------|------------------------|---------|
| Morph. Type: | Mid-slope | Relief: | No Data |
| Elem. Type: | Hillslope | Slope Category: | No Data |
| Slope: | 2 % | Aspect: | No Data |

Surface Soil Condition Firm

Erosion

Soil Classification

| | | | |
|---|--|--------------------------------|--------|
| Australian Soil Classification: | | Mapping Unit: | N/A |
| Hypercalcic Mottled-Mesonatric Brown Sodosol | | Principal Profile Form: | Db4.13 |
| 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 No surface coarse fragments; No surface coarse fragments

Profile Morphology

| | | |
|------|--------------|---|
| Ap | 0 - 0.1 m | Dark brown (10YR3/3-Moist); , 0-0% ; Loamy sand; Single grain grade of structure; Sandy (grains prominent) fabric; Loose consistence; Field pH 5.8 (pH meter); |
| B21 | 0.1 - 0.35 m | Dark yellowish brown (10YR4/6-Moist); , 0-0% ; Sandy light clay; Strong grade of structure, 50-100 mm, Prismatic; Smooth-ped fabric; Strong consistence; Field pH 8.9 (pH meter); |
| B22k | 0.35 - 0.8 m | Yellowish brown (10YR5/8-Moist); , 0-0% ; Light medium clay; Moderate grade of structure, 5-10 mm, Subangular blocky; Smooth-ped fabric; Strong consistence; Many (20 - 50 %), Calcareous, Extremely coarse (> 60 mm), Soft segregations; Field pH 9.1 (pH meter); |
| B23k | 0.8 - 1.75 m | Yellowish red (5YR4/6-Moist); , 7.5YR58; Light medium clay; Moderate grade of structure, 5-10 mm, Subangular blocky; Smooth-ped fabric; Strong consistence; 0-2%, medium gravelly, 6-20mm, subrounded, Granite, coarse fragments; Many (20 - 50 %), Calcareous, Extremely coarse (> 60 mm), Soft segregations; Field pH 8.5 (pH meter); |

Morphological Notes

Ap
 B21
 B22k
 B23k

Observation Notes

Site Notes

Close to a tributary of the Pallinup River. Sand/yellow-brown domed clay/limestone.

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Laboratory Test Results:

| Depth m | pH | 1:5 EC dS/m | Ca | Exchangeable Mg | Cations K | Na Cmol (+)/kg | Exchangeable Acidity | CEC | ECEC | ESP % |
|-------------|--------------|----------------|-------|--------------------|--------------|-------------------|-------------------------|-----|--------|----------|
| 0 - 0.08 | 4.7B 5.8H | 13B | 2.3H | 1.7 | 0.28 | 0.62 | 0.22J | | 4.9D | |
| 0 - 0.08 | 4.7B 5.8H | 13B | 2.3H | 1.7 | 0.28 | 0.62 | 0.22J | | 4.9D | |
| 0.08 - 0.13 | 6.3B 7.7H | 21B | 2.21A | 5.84 | 0.14 | 2.81 | | | 11D | |
| 0.08 - 0.13 | 6.3B 7.7H | 21B | 2.21A | 5.84 | 0.14 | 2.81 | | | 11D | |
| 0.13 - 0.3 | 7.3B 8.6H | 31B | 1.64E | 6.7 | 0.17 | 4.59 | | 15B | 13.1D | 30.60 |
| 0.13 - 0.3 | 7.3B 8.6H | 31B | 1.64E | 6.7 | 0.17 | 4.59 | | 15B | 13.1D | 30.60 |
| 0.3 - 0.6 | 8.5B 9.4H | 77B | 0.9E | 8.45 | 0.33 | 7.47 | | 17B | 17.15D | 43.94 |
| 0.3 - 0.6 | 8.5B 9.4H | 77B | 0.9E | 8.45 | 0.33 | 7.47 | | 17B | 17.15D | 43.94 |
| 0.6 - 0.8 | 8.6B 9.4H | 120B | 0.52E | 10.49 | 0.66 | 11.38 | | 23B | 23.05D | 49.48 |
| 0.6 - 0.8 | 8.6B 9.4H | 120B | 0.52E | 10.49 | 0.66 | 11.38 | | 23B | 23.05D | 49.48 |
| 0.8 - 1.1 | 8.6B 9.4H | 130B | 0.42E | 9.58 | 0.68 | 11.13 | | 21B | 21.81D | 53.00 |
| 0.8 - 1.1 | 8.6B 9.4H | 130B | 0.42E | 9.58 | 0.68 | 11.13 | | 21B | 21.81D | 53.00 |
| 1.1 - 1.4 | 8.2B 8.9H | 150B | 0.23E | 9.54 | 0.67 | 11.15 | | 21B | 21.59D | 53.10 |
| 1.1 - 1.4 | 8.2B 8.9H | 150B | 0.23E | 9.54 | 0.67 | 11.15 | | 21B | 21.59D | 53.10 |
| 1.4 - 1.8 | 7.8B 8.6H | 150B | 0.13E | 6.23 | 0.51 | 6.83 | | 13B | 13.7D | 52.54 |
| 1.4 - 1.8 | 7.8B 8.6H | 150B | 0.13E | 6.23 | 0.51 | 6.83 | | 13B | 13.7D | 52.54 |

| Depth m | CaCO3 % | Organic C Clay % | Avail. P mg/kg | Total P % | Total N % | Total K % | Bulk Density Mg/m3 | Particle GV CS | Size FS % | Analysis Silt |
|---------------------|------------|---------------------------|----------------------|-----------------|-----------------|-----------------|--------------------------|----------------------|-----------------|------------------|
| 0 - 0.08 7.5 | | 1.25D | | 200B | | | | | | 3.1 |
| 0 - 0.08 7.5 | | 1.25D | | 200B | | | | | | 3.1 |
| 0.08 - 0.13 19.7 | | 0.48D | | 70B | | | | | | 4.4 |
| 0.08 - 0.13 19.7 | | 0.48D | | 70B | | | | | | 4.4 |
| 0.13 - 0.3 25.7 | <2C | 0.29D | | 55B | | | | | | 3.5 |
| 0.13 - 0.3 25.7 | <2C | 0.29D | | 55B | | | | | | 3.5 |
| 0.3 - 0.6 34.9 | 2C | 0.14D | | 58B | | | | | | 2.8 |
| 0.3 - 0.6 34.9 | 2C | 0.14D | | 58B | | | | | | 2.8 |
| 0.6 - 0.8 46.6 | 6C | 0.1D | | 80B | | | | | | 5.8 |
| 0.6 - 0.8 46.6 | 6C | 0.1D | | 80B | | | | | | 5.8 |
| 0.8 - 1.1 48 | 7C | 0.1D | | 100B | | | | | | 7.7 |
| 0.8 - 1.1 48 | 7C | 0.1D | | 100B | | | | | | 7.7 |
| 1.1 - 1.4 50.3 | <2C | 0.08D | | 120B | | | | | | 11.2 |
| 1.1 - 1.4 50.3 | <2C | 0.08D | | 120B | | | | | | 11.2 |

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| | | | | |
|-----------|-----|-------|-----|------|
| 1.4 - 1.8 | <2C | 0.08D | 96B | 17.7 |
| 37.3 | | | | |
| 1.4 - 1.8 | <2C | 0.08D | 96B | 17.7 |
| 37.3 | | | | |

Laboratory Analyses Completed for this profile

| | |
|-----------------------------|--|
| 15_NR_BSa | Exchangeable bases (Ca++) - meq per 100g of soil - Auto calculated from available |
| 15_NR_CMV | 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)