

**Project Name:** Geraldton land resources survey  
**Project Code:** GTN **Site ID:** 2002 **Observation ID:** 1  
**Agency Name:** Agriculture Western Australia

#### Site Information

**Desc. By:** Christopher Grose  
**Date Desc.:** 22/02/94  
**Map Ref.:**  
**Northing/Long.:** 6778130 AMG zone: 50  
**Easting/Lat.:** 390930 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

#### Land Form

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

**Morph. Type:** No Data  
**Elem. Type:** Plain  
**Slope:** %  
**Relief:** No Data  
**Slope Category:** No Data  
**Aspect:** No Data

#### Surface Soil Condition Firm

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

#### Soil Classification

**Australian Soil Classification:**  
 Haplic Duric Red Kandosol  
**ASC Confidence:**  
 Confidence level not specified  
**Mapping Unit:** N/A  
**Principal Profile Form:** Dr4.13  
**Great Soil Group:** N/A

**Site** Cultivation. Rainfed

#### Vegetation:

#### Surface Coarse

#### Profile

Ap 0 - 0.17 m Dark reddish brown (2.5YR3/4-Moist); ; Sandy loam; Strong grade of structure, 50-100 mm, Platy;  
 Rough-ped fabric; Firm consistence; Field pH 5.9 (pH meter); Clear, Smooth change to -  
 B11 0.17 - 0.4 m Red (2.5YR4/6-Moist); ; Sandy clay loam; Massive grade of structure; Earthy fabric; Firm consistence;  
 Cultivation pan, Weakly cemented, Massive; Field pH 7.9 (pH meter); Clear, Smooth change to -  
 B12 0.4 - 0.6 m Red (2.5YR4/6-Moist); ; Sandy clay loam; Massive grade of structure; Earthy fabric; Field pH 8.5 (pH meter); Gradual, Wavy change to -  
 B2 0.6 - 0.8 m Red (2.5YR4/6-Moist); ; Sandy clay loam; Massive grade of structure; Earthy fabric; Soil matrix is  
 Slightly calcareous; Field pH 8.3 (pH meter); Abrupt, Wavy change to -  
 0.8 - m ;

#### Morphological Notes

Ap 1st layer - Platy structure.  
 B2 4th layer - Gritty sandy clay. Gritty sandy clay.  
 Coffee Rock fizzes. 80-140cm

#### Observation Notes

#### Site Notes

roots penetrate as far as coffee rock. All layers are quite porous. No sign of any clay cutans. Coffee rock appears friable and platy. Iron straining and free carbonates.

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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 - 0.17	5.1B 5.9H	3B	3.1H	0.62	0.51	0.05			4.28D	
0.17 - 0.4	6.4B 7.3H	4B	5.9A	1.1	0.23	0.15		8J	7.38D	1.88
0.4 - 0.6	6.9B 8H	3B	5.8E	0.76	0.08	0.24		9J	6.88D	2.67
0.6 - 0.8	7.2B 8.1H	4B	8.2E	1.4	0.09	0.35		12J	10.04D	2.92

Depth m	CaCO3 %	Organic C Clay %	Avail. P mg/kg	Total P %	Total N %	Total K %	Bulk Density Mg/m3	Particle GV	Size CS	Analysis FS	Silt
0 - 0.17 9		0.56D		150B	0.048E				84I		7
0.17 - 0.4 21		0.21D		79B	0.023E				71.5I		7.5
0.4 - 0.6 19.5	<2C	0.13D		59B	0.014E				72I		8.5
0.6 - 0.8 28.5	<2C	0.06D		59B	0.012E				64.5I		7

#### Laboratory Analyses Completed for this profile

15_NR_AL	Aluminium Cation - meq per 100g of soil - Not recorded
15_NR_BSa	Exchangeable bases (Ca++) - meq per 100g of soil - Auto calculated from available
15_NR_CEC	CEC - meq per 100g of soil - Not recorded
15_NR_CMRR	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
15A1_K for soluble	salts Exchangeable bases (Ca2+,Mg2+,Na+,K+) - 1M ammonium chloride at pH 7.0, no pretreatment
15A1_MG for soluble	salts Exchangeable bases (Ca2+,Mg2+,Na+,K+) - 1M ammonium chloride at pH 7.0, no pretreatment
15A1_NA for soluble	salts Exchangeable bases (Ca2+,Mg2+,Na+,K+) - 1M ammonium chloride at pH 7.0, no pretreatment
15C1_CA pretreatment for	salts Exchangeable bases (Ca2+,Mg2+,Na+,K+) - alcoholic 1M ammonium chloride at pH 8.5,
15C1_K soluble salts	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_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

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4B1	pH of 1:5 soil/0.01M calcium chloride extract - direct
6A1_UC	Organic carbon (%) - Uncorrected Walkley and Black method
7A1	Total nitrogen - semimicro Kjeldahl, steam distillation
9A3	Total Phosphorus (ppm) - semimicro kjeldahl, automated colour
P10_NR_C	Clay (%) - Not recorded
P10_NR_S	Sand (%) - Not recorded
P10_NR_Z	Silt (%) - Not recorded