

Project Name: Geraldton land resources survey
Project Code: GTN **Site ID:** 1419 **Observation ID:** 1
Agency Name: Agriculture Western Australia

Site Information

Desc. By: Rogers, Gary	Locality:
Date Desc.: 22/02/91	Elevation: No Data
Map Ref.:	Rainfall: No Data
Northing/Long.: 6828538 AMG zone: 50	Runoff: No Data
Easting/Lat.: 350602 Datum: AGD84	Drainage: Imperfectly drained

Geology

ExposureType: Auger boring	Conf. Sub. is Parent. Mat.: No Data
Geol. Ref.: No Data	Substrate Material: No Data

Land Form

Rel/Slope Class: No Data	Pattern Type: Alluvial plain
Morph. Type: Flat	Relief: No Data
Elem. Type: Plain	Slope Category: No Data
Slope: 1 %	Aspect: No Data

Surface Soil Condition Hardsetting, Hardsetting

Erosion:

Soil Classification

Australian Soil Classification:	Mapping Unit: N/A
Sodic Subplastic Red Chromosol	Principal Profile Form: Gc2.22
ASC Confidence:	Great Soil Group: N/A
Confidence level not specified	

Site Cultivation. Rainfed

Vegetation:

Surface Coarse

Profile

A1 0 - 0.13 m Massive grade coarse to -	Reddish brown (5YR4/4-Moist); ; Clay loam; Weak grade of structure, Subangular blocky; of structure; Rough-ped fabric; Dry; 2-10%, medium gravelly, 6-20mm, angular, Quartz, fragments; Soil matrix is Moderately calcareous; Field pH 8.5 (pH meter); Abrupt change
B21 0.13 - 0.3 m Angular blocky; fragments; Soil	Red (2.5YR4/6-Moist); ; Light clay; Strong grade of structure, 10-20 mm, Polyhedral; , Smooth-ped fabric; Dry; 2-10%, medium gravelly, 6-20mm, angular, Quartz, coarse matrix is Slightly calcareous; Field pH 9 (pH meter); Clear change to -
B22 0.3 - 0.46 m Strong grade of 6mm, subangular, change to -	Red (2.5YR4/6-Moist); ; Light clay; Strong grade of structure, 10-20 mm, Polyhedral; structure, 10-20 mm, Angular blocky; Smooth-ped fabric; Moist; 0-2%, fine gravelly, 2- coarse fragments; Soil matrix is Slightly calcareous; Field pH 9.5 (pH meter); Clear
B23 0.46 - 0.8 m Moist; 0-2%, fine Field pH 9.5 (pH	Red (2.5YR4/6-Moist); ; Light clay; Moderate grade of structure; Smooth-ped fabric; gravelly, 2-6mm, subangular, coarse fragments; Soil matrix is Very highly calcareous; meter); Gradual change to -
B24 0.8 - 1.05 m ped fabric;	Yellowish red (5YR5/6-Moist); ; Light medium clay; Moderate grade of structure; Smooth- Moist; Soil matrix is Very highly calcareous; Field pH 9.5 (pH meter); Clear change to -
B25 1.05 - 1.35 m is Very highly	Yellowish red (5YR5/6-Moist); ; Light clay; Moderate grade of structure; Moist; Soil matrix calcareous; Field pH 9.5 (pH meter); Gradual change to -
B26 1.35 - 1.7 m is Very highly	Yellowish red (5YR5/8-Moist); ; Light clay; Moderate grade of structure; Moist; Soil matrix calcareous; Field pH 9.5 (pH meter);

Morphological Notes

B23 free lime 10%, moderate peds?

Observation Notes

Site Notes

rbhp? gilgai soil, bulked 0-10cm <5% 2-20mm ang qz subang-subrounded Mn 5yr 3/4 pH 8.5 eff: M SCL fm grains

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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 - 0.13	7.9B 8.6H	15B	12.6E	2.32	2.45	0.49		19B	17.86D	2.58
0 - 0.1	7.9B 8.6H	15B	13E	2.02	2.7	0.21		19B	17.93D	1.11
0.13 - 0.3	8.2B 9.2H	22B	14.2E	7.1	1.7	3.61		28B	26.61D	12.89
0.3 - 0.46	8.6B 9.6H	62B	6.49E	8.9	1.11	7.6		26B	24.1D	29.23
0.46 - 0.8	8.6B 9.5H	130B	4.07E	6.53	1.1	8.4		21B	20.1D	40.00
0.8 - 1.05	8.5B 9.4H	160B	3.92E	6.51	0.95	7.65		18B	19.03D	42.50
1.05 - 1.35	8.5B 9.3H	190B	4.21E	7.38	1.01	8.05		20B	20.65D	40.25
1.35 - 1.7	8.5B 9.2H	210B	4.46E	8.11	1.07	8.45		21B	22.09D	40.24

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 - 0.13	5C	0.79D						13.5
19.3								
0 - 0.1	3C	0.8D						14.7
16.6								
0.13 - 0.3	3C	0.3D						9.9
42.2								
0.3 - 0.46	5C	0.18D						8.1
41.1								
0.46 - 0.8	18C	0.14D						17.9
35.8								
0.8 - 1.05	25C	0.1D						19.6
40								
1.05 - 1.35	16C	0.07D						14
40.9								
1.35 - 1.7	13C	0.07D						12.9
40.9								

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
 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
 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
18A1_NR	Bicarbonate-extractable potassium (not recorded)
19B_NR	Calcium Carbonate (CaCO3) - Not recorded
3_NR	Electrical conductivity or soluble salts - Not recorded
4_NR	pH of soil - 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
9B_NR	Bicarbonate-extractable phosphorus (not recorded)
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_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)