

Project Name: Geraldton land resources survey
Project Code: GTN **Site ID:** 1412 **Observation ID:** 1
Agency Name: Agriculture Western Australia

Site Information

Desc. By: Rogers, Gary	Locality:
Date Desc.: 20/02/91	Elevation: No Data
Map Ref.:	Rainfall: No Data
Northing/Long.: 6822762 AMG zone: 50	Runoff: No Data
Easting/Lat.: 390616 Datum: AGD84	Drainage: Moderately well 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: Level plain <9m <1%	Pattern Type: Alluvial plain
Morph. Type: Flat	Relief: No Data
Elem. Type: No Data	Slope Category: No Data
Slope: 0 %	Aspect: No Data

Surface Soil Condition Soft

Erosion:

Soil Classification

Australian Soil Classification:	Mapping Unit: N/A
Calcic Mesonatric Red Sodosol	Principal Profile Form: Dr4.53
ASC Confidence:	Great Soil Group: N/A
Confidence level not specified	

Site Cultivation. Rainfed

Vegetation:

Surface Coarse

Profile

A11	0 - 0.13 m	Dark red (2.5YR3/6-Moist); ; Clayey sand; Massive grade of structure; Sandy (grains prominent) fabric; Dry; Field pH 6 (pH meter); Abrupt change to -
A12	0.13 - 0.32 m	Dark red (2.5YR3/6-Moist); ; Clayey sand; Massive grade of structure; Earthy fabric; Dry; Strong consistence; 0-2%, fine gravelly, 2-6mm, angular, Quartz, coarse fragments; Field pH 6 (pH meter); Abrupt change to -
B21	0.32 - 0.5 m	Red (2.5YR4/6-Moist); ; Clay loam, sandy; Massive grade of structure; Earthy fabric; Moderately moist; Strong consistence; Field pH 6.5 (pH meter); Gradual change to -
B22	0.5 - 0.7 m	Red (2.5YR4/6-Moist); ; Sandy clay loam; 10-20 mm, Polyhedral; Moist; 0-2%, angular, Calcarenite, coarse fragments; Soil matrix is Moderately calcareous; Field pH 9 (pH meter); Gradual change to -
B23	0.7 - 1 m	Yellowish red (5YR4/6-Moist); ; Sandy clay loam; Massive grade of structure; Earthy fabric; Moist; Field pH 9 (pH meter); Clear change to -
B24	1 - 1.28 m	Yellowish red (5YR4/6-Moist); ; Sandy clay loam; Massive grade of structure; Earthy fabric; Wet; 0-2%, fine gravelly, 2-6mm, angular, Quartz, coarse fragments; Field pH 9 (pH meter); Clear change to -
B25	1.28 - 1.7 m	Light brown (7.5YR6/4-Moist); ; Sandy light clay; Massive grade of structure; Earthy fabric; Wet; Field pH 8.5 (pH meter); Clear change to -
B26	1.7 - 1.95 m	Very pale brown (10YR7/4-Moist); ; , 10-20% ; Sandy light clay; Wet; Field pH 8 (pH meter);

Morphological Notes

B21	earthy+ few smooth, sticky
B22	poly peds 5-20mm, sticky
B25	earthy?

B26

structure and fabric ?

Observation Notes

Site Notes

Alluvial red duplex/salt flat, RBHP alluvial flat plain water table at 160cm, layers 6-8 microwaved dry

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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 - 0.13	5.4B 6.5H	3B	0.94H	0.36	0.3	0.08	0.03J		1.68D	
0 - 0.1	8.5B 8.8H 5.3B 6.3H	630B 9B	1.03E 0.85H	1.51 0.32	0.41 0.3	0.64 0.06	0.04J	2B	3.59D 1.53D	32.00
0 - 0.1	8.5B 8.8H 5.3B 6.3H	630B 9B	1.03E 0.85H	1.51 0.32	0.41 0.3	0.64 0.06	0.04J	2B	3.59D 1.53D	32.00
0.13 - 0.32	6.1B 7.2H	4B	1.11A	0.52	0.28	0.21			2.12D	
0.32 - 0.5	8.4B 9.5H	23B	2.87E	4.68	1.66	2.64		12B	11.85D	22.00
0.5 - 0.7	8.6B 9.6H	30B	2.63E	4.73	1.72	3.1		13B	12.18D	23.85
0.7 - 1	8.2B 9.4H	21B	2.09E	4.9	1.96	4.28		13B	13.23D	32.92
1 - 1.28	7.9B 9H	43B	1.43E	4.54	1.76	5.24		11B	12.97D	47.64
1.28 - 1.7	7.7B 8.6H	110B	1.33E	5.16	2.31	7.05		18B	15.85D	39.17
1.7 - 1.95	7.6B 8.1H	190B	1.41E	6.07	2.04	8.85		16B	18.37D	55.31

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 - 0.13 2.9		0.27D									2.9
0 - 0.1 3.8	3C	0.28D									2.7
		0.23D 3.2									2.6
0 - 0.1 3.8	3C	0.28D									2.7
		0.23D 3.2									2.6
0.13 - 0.32 4.5		0.14D									3.5
0.32 - 0.5 27.9	3C	0.08D									3.6
0.5 - 0.7 23.6	2C	0.16D									4.6
0.7 - 1 13.4	<2C	0.06D									7.5
1 - 1.28 25.3	<2C	0.09D									4.4
1.28 - 1.7 25.3	<2C	0.1D									3.9
1.7 - 1.95 30.3	<2C	0.04D									4.1

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 Exchangeable bases (Ca2+,Mg2+,Na+,K+) - 1M ammonium chloride at pH 7.0, no pretreatment

for soluble

15A1_CEC

15A1_K

for soluble

salts

Exchangeable bases (CEC) - 1M ammonium chloride at pH 7.0, no pretreatment for soluble salts

Exchangeable bases (Ca²⁺,Mg²⁺,Na⁺,K⁺) - 1M ammonium chloride at pH 7.0, no pretreatment

salts

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15A1_MG for soluble	Exchangeable bases (Ca ²⁺ ,Mg ²⁺ ,Na ⁺ ,K ⁺) - 1M ammonium chloride at pH 7.0, no pretreatment salts
15A1_NA for soluble	Exchangeable bases (Ca ²⁺ ,Mg ²⁺ ,Na ⁺ ,K ⁺) - 1M ammonium chloride at pH 7.0, no pretreatment salts
15C1_CA pretreatment for	Exchangeable bases (Ca ²⁺ ,Mg ²⁺ ,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 (Ca ²⁺ ,Mg ²⁺ ,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 (Mn ²⁺) 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
18A1_NR	Bicarbonate-extractable potassium (not recorded)
19B_NR	Calcium Carbonate (CaCO ₃) - 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
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)