

**Project Name:** Knox Creek Plain survey (Kununurra)  
**Project Code:** KNX **Site ID:** 0137 **Observation ID:** 1  
**Agency Name:** Agriculture Western Australia

#### Site Information

**Desc. By:** Christopher Grose  
**Date Desc.:** 13/06/94  
**Map Ref.:**  
**Northing/Long.:** 8272559 AMG zone: 52  
**Easting/Lat.:** 497477 Datum: AGD84  
**Locality:**  
**Elevation:** No Data  
**Rainfall:** No Data  
**Runoff:** No Data  
**Drainage:** No Data

#### Geology

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

#### Land Form

**Rel/Slope Class:** Level plain <9m <1%  
**Morph. Type:** Flat  
**Elem. Type:** Plain  
**Slope:** 0 %  
**Pattern Type:** Plain  
**Relief:** No Data  
**Slope Category:** No Data  
**Aspect:** No Data

#### Surface Soil Condition Firm

#### Erosion:

#### Soil Classification

**Australian Soil Classification:** N/A  
**Mapping Unit:** N/A  
**Principal Profile Form:** N/A  
**ASC Confidence:** Confidence level not specified  
**Great Soil Group:** N/A

**Site** No effective disturbance other than grazing by hoofed animals

#### Vegetation:

#### Surface Coarse

#### Profile

A11 0 - 0.03 m Dark reddish brown (2.5YR3/3-Moist); ; Loamy sand; Moderate grade of structure; Earthy fabric; Dry;  
 Very weak consistence; Field pH 7.1 (pH meter); Sharp change to -  
 A12 0.03 - 0.13 m Reddish brown (2.5YR4/4-Moist); ; Fine sandy clay loam; Moderate grade of structure, 20-50 mm,  
 Subangular blocky; Rough-ped fabric; Dry; Firm consistence; Field pH 7.7 (pH meter);  
 Clear change to -  
 B21 0.13 - 0.54 m Reddish brown (5YR4/4-Moist); ; Light clay; Strong grade of structure, 20-50 mm,  
 Subangular blocky;  
 Rough-ped fabric; Dry; Very firm consistence; Few (2 - 10 %), Manganiferous, Fine (0 - 2 mm),  
 Nodules; Field pH 7.8 (pH meter); Gradual change to -  
 B22 0.54 - 1.75 m Yellowish brown (10YR5/4-Moist); Mottles, 7.5YR56, 20-50% , 0-5mm, Distinct; Sandy light clay; Weak  
 grade of structure, 100-200 mm, Subangular blocky; Dry; Strong consistence; Few (2 - 10 %),  
 Manganiferous, Fine (0 - 2 mm), Nodules; Field pH 7.8 (pH meter);

#### Morphological Notes

#### Observation Notes

#### Site Notes

Leveesoils but somewhat atypical - no E.papuana.- Duplex. Surface is compact and smooth and is thin and sandy. (recent wash?) Main roots to 60cms, fine to 150cms. Manganese staining and dark stained peds in layer4. Sampled: 1-3;3-13;13-54;54

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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 - 0.03	6.2B 6.8H	7B	3.17A	2	0.36	0.08	5.61D
0.03 - 0.13	6B 6.8H	4B	4.82A	3.71	0.61	0.09	9.23D
0.13 - 0.54	6.1B 6.8H	6B	7.15A	6.13	0.51	0.18	13.97D
0.54 - 1.15	6.3B 7.2H	5B	5.54A	5.65	0.32	0.36	11.87D
1.15 - 1.75	7.1B 7.3H	100B	10.22A	7.18	0.99	1.04	19.43D

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 - 0.03 9.8		0.75D		100B	0.056E			4.8
0.03 - 0.13 24.9		0.56D		110B	0.041E			6.2
0.13 - 0.54 38.4		0.4D		96B	0.032E			5.4
0.54 - 1.15 29.5		0.18D		61B	0.013E			5.7
1.15 - 1.75 30.2		0.1D		60B	0.013E			5.9

#### Laboratory Analyses Completed for this profile

12A1_ZN	DTPA - extractable copper, zinc, manganese and iron
15_NR_BSa	Exchangeable bases (Ca++) - meq per 100g of soil - Auto calculated from available
15_NR_CM	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
15J_BA	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
3_NR	Electrical conductivity or soluble salts - Not recorded
4_NR	pH of soil - Not recorded
4B1	pH of 1:5 soil/0.01M calcium chloride extract - direct
5_NR	Water soluble Chloride - Cl(%) - Not recorded
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_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

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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)