

**Project Name:** Knox Creek Plain survey (Kununurra)  
**Project Code:** KNX **Site ID:** 0134 **Observation ID:** 1  
**Agency Name:** Agriculture Western Australia

#### Site Information

<b>Desc. By:</b>	Noel Schoknecht	<b>Locality:</b>	
<b>Date Desc.:</b>	13/06/94	<b>Elevation:</b>	No Data
<b>Map Ref.:</b>		<b>Rainfall:</b>	No Data
<b>Northing/Long.:</b>	8275799 AMG zone: 52	<b>Runoff:</b>	No Data
<b>Easting/Lat.:</b>	499937 Datum: AGD84	<b>Drainage:</b>	Poorly drained

#### Geology

<b>ExposureType:</b>	Soil pit	<b>Conf. Sub. is Parent. Mat.:</b>	No Data
<b>Geol. Ref.:</b>	No Data	<b>Substrate Material:</b>	No Data

#### Land Form

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

**Surface Soil Condition** Cracking

#### Erosion:

#### Soil Classification

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

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

#### Vegetation:

**Surface Coarse** ; 20-50%, , subrounded, Shells

#### Profile

A11	0 - 0.1 m	Dark greyish brown (10YR4/2-Moist); Mottles, 10YR56, 2-10% , 0-5mm, Faint; Medium clay; Strong consistence; Field
		grade of structure, 20-50 mm, Subangular blocky; Rough-ped fabric; Dry; Very firm pH 6.6 (pH meter); Clear change to -
A12	0.1 - 0.47 m	Dark greyish brown (10YR4/2-Moist); ; Medium heavy clay; Strong grade of structure, 100-200 mm, Prismatic; Rough-ped fabric; Dry; Very strong consistence; Field pH 7.8 (pH meter); Gradual change to -
B21	0.47 - 0.77 m	Dark greyish brown (10YR4/2-Moist); ; Medium clay; Moderate grade of structure, 50-100 mm, Angular blocky; Smooth-ped fabric; Moderately moist; Very strong consistence; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Concretions; Field pH 8 (pH meter); Gradual change to -
B22	0.77 - 1.15 m	Brown (10YR4/3-Moist); ; Medium heavy clay; Moderate grade of structure, 20-50 mm, Angular blocky; Smooth-ped fabric; Moist; Strong consistence; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Concretions; Field pH 8.2 (pH meter); Clear change to -
B23	1.15 - 2 m	Brown (10YR4/3-Moist); ; Medium clay; Moderate grade of structure, 50-100 mm, Angular blocky; Smooth-ped fabric; Moist; Very firm consistence; Common (10 - 20 %), Gypseous, Fine (0 - 2 mm), Crystals; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Concretions; Field pH 8.4 (pH meter);

#### Morphological Notes

#### Observation Notes

#### Site Notes

Surface stone 50-200mm cover >30% - from conglomerate at Mulligans hill. Moderately gilgaied & occasionally cracked self-mulching surface. Main roots to 0.8 ang wide cracks to 0.5m. V.prominent slickensides in layer5 and some in 2,3 and 4.

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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 - 0.1	6.3B 6.7H	47B	14.64A		1.51	1.06				
0.1 - 0.47	7B 7.7H	37B	14.7A		1.17	3.56				
0.47 - 0.77	7.4B 7.8H	130B	14.73E		0.62	6.26		43B		14.56
0.77 - 1.15	7.6B 7.8H	370B	12.3E		0.68	7.84		44B		17.82
1.15 - 2	7.7B 7.8H	440B	11.63E		0.55	6.86		37B		18.54
1.55 - 2	7.8B 8H	440B	12.31E		0.49	6.68		35B		19.09

Depth	CaCO3	Organic C Clay	Avail. P	Total P	Total N	Total K	Bulk Density	Particle GV	Size CS	Analysis FS	Silt
m	%	%	mg/kg	%	%	%	Mg/m3			%	
0 - 0.1		0.56D		53B	0.035E						16.1
61.3											
0.1 - 0.47		0.32D		48B	0.019E						15.6
67											
0.47 - 0.77		0.3D		49B	0.019E						15
69											
0.77 - 1.15		0.18D		41B	0.013E						13.4
66.1											
1.15 - 2		0.08D		35B	0.008E						10.7
55.1											
1.55 - 2	3C	0.08D		40B	0.007E						12.3
54.4											

**Laboratory Analyses Completed for this profile**

12A1_ZN	DTPA - extractable copper, zinc, manganese and iron
15A1_CA	Exchangeable bases (Ca <sup>2+</sup> ,Mg <sup>2+</sup> ,Na <sup>+</sup> ,K <sup>+</sup> ) - 1M ammonium chloride at pH 7.0, no pretreatment
for soluble	salts
15A1_CEC	Exchangeable bases (CEC) - 1M ammonium chloride at pH 7.0, no pretreatment for soluble salts
15A1_K	Exchangeable bases (Ca <sup>2+</sup> ,Mg <sup>2+</sup> ,Na <sup>+</sup> ,K <sup>+</sup> ) - 1M ammonium chloride at pH 7.0, no pretreatment
for soluble	salts
15A1_NA	Exchangeable bases (Ca <sup>2+</sup> ,Mg <sup>2+</sup> ,Na <sup>+</sup> ,K <sup>+</sup> ) - 1M ammonium chloride at pH 7.0, no pretreatment
for soluble	salts
15C1_CA	Exchangeable bases (Ca <sup>2+</sup> ,Mg <sup>2+</sup> ,Na <sup>+</sup> ,K <sup>+</sup> ) - 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_NA	Exchangeable bases and CEC - alcoholic 1M ammonium chloride at pH 8.5, pretreatment for
soluble salts	
15N1_a	Exchangeable sodium percentage (ESP) - Auto calculated from available using CEC
19B_NR	Calcium Carbonate (CaCO <sub>3</sub> ) - Not recorded
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)

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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)