

Project Name: Ravensthorpe land resources survey
Project Code: RAV **Site ID:** 0245 **Observation ID:** 1
Agency Name: Agriculture Western Australia

Site Information

Desc. By:	Brendan Nicholas	Locality:	
Date Desc.:	21/08/95	Elevation:	No Data
Map Ref.:		Rainfall:	No Data
Northing/Long.:	6307458 AMG zone: 51	Runoff:	No Data
Easting/Lat.:	315683 Datum: AGD84	Drainage:	Imperfectly drained

Geology

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

Landform

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

Morph. Type:	Mid-slope	Relief:	No Data
Elem. Type:	Plain	Slope Category:	No Data
Slope:	2.5 %	Aspect:	270 degrees

Surface Soil Condition Hardsetting

Erosion

Soil Classification

Australian Soil Classification:	Calci Hypernatric Brown Sodosol Thin Gravelly Loamy Clay-loamy	Mapping Unit:	N/A
Form:	Deep		Principal Profile
ASC Confidence:	Confidence level not specified	Great Soil Group:	N/A

Site Disturbance Cultivation. Rainfed

Vegetation

Surface Coarse Fragments No surface coarse fragments

Profile Morphology

A1	0 - 0.08 m	Dark brown (10YR3/3-Moist); ; Sandy loam; Massive grade of structure; Weak grade of structure, 2-5 mm; ; Moderately moist; Firm consistence; 20-50%, Quartz, coarse fragments; Field pH 7.7 (pH meter); Gradual, Smooth change to -
B2t	0.08 - 0.15 m	Brown (7.5YR4/4-Moist); ; Clay loam; Moderate grade of structure, 5-10 mm, Subangular blocky; Moist; Very firm consistence; 10-20%, Quartz, coarse fragments; Field pH 8.5 (pH meter); Gradual, Smooth change to -
B21tk	0.15 - 0.5 m	Reddish yellow (7.5YR6/6-Moist); ; Light medium clay; Strong grade of structure, 20-50 mm, Angular blocky; Moderately moist; Strong consistence; 2-10%, Quartz, coarse fragments; Common cutans, 10-6 mm), Soft 50% of ped faces or walls coated, distinct; Common (10 - 20 %), Calcareous, Medium (2 - segregations; Field pH 9.5 (pH meter); Gradual, Smooth change to -
B22tk	0.5 - 0.8 m	Brown (7.5YR5/4-Moist); ; Light medium clay; Strong grade of structure, 20-50 mm, Angular blocky; Strong consistence; 2-10%, subrounded, Quartz, coarse fragments; Common cutans, 10-50% of ped faces or walls coated, distinct; Many (20 - 50 %), Calcareous, Medium (2 -6 mm), Soft segregations; Field pH 9 (pH meter); Gradual, Smooth change to -
B23tk	0.8 - 1.1 m	Strong brown (7.5YR5/6-Moist); ; Light clay; Strong consistence; Common cutans, 10-50% of ped faces or walls coated, distinct; Many (20 - 50 %), Calcareous, Medium (2 -6 mm), Soft segregations; Field pH 8.8 (pH meter);

Morphological Notes

A1

B2t
B21tk
B22tk Carbonate loose vertical alingment
B23tk

Observation Notes

Site Notes

Ironstone and quartz fragments on surface.? Carbonate and quartz segregations

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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 - 0.08	6.3B 6.6H	73B	10.34A	2.38	0.33	0.66			13.71D	
0.08 - 0.15	7.4B 8.6H	30B	5.16E	5.78	0.31	4.46		17B	15.71D	26.24
0.15 - 0.5	8.8B 9.7H	85B	2.6E	8.77	0.4	9.85		19B	21.62D	51.84
0.5 - 0.8	8.3B 9.2H	88B	0.95E	6.19	0.46	10.66		16B	18.26D	66.63
0.8 - 1.1	8.1B 9H	110B	0.4E	5.53	0.5	8.39		14B	14.82D	59.93

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 - 0.08		1.78D		130B	0.083E			4.8
0.08 - 0.15	<2C	0.68D		43B	0.037E			4.3
0.15 - 0.5	2C	0.18D		28B	0.015E			5.7
0.5 - 0.8	<2C	0.06D		25B	0.006E			7.8
0.8 - 1.1	<2C	0.06D		20B	0.005E			5.1

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	salts
15A1_CEC	Exchangeable bases (CEC) - 1M ammonium chloride at pH 7.0, no pretreatment for soluble salts
15A1_K	Exchangeable bases (Ca2+,Mg2+,Na+,K+) - 1M ammonium chloride at pH 7.0, no pretreatment
for soluble	salts
15A1_MG	Exchangeable bases (Ca2+,Mg2+,Na+,K+) - 1M ammonium chloride at pH 7.0, no pretreatment
for soluble	salts
15A1_NA	Exchangeable bases (Ca2+,Mg2+,Na+,K+) - 1M ammonium chloride at pH 7.0, no pretreatment
for soluble	salts
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
19B_NR	Calcium Carbonate (CaCO ₃) - 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
6A1_UC	Organic carbon (%) - Uncorrected Walkley and Black method

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7A1	Total nitrogen - semimicro Kjeldahl, steam distillation
9A3	Total Phosphorus (ppm) - semimicro kjeldahl, automated colour
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)