MODERATELY DEEP RED CLAY ON CALCRETE

General Description: Dark reddish brown well structured clay over calcrete deeper than 50 cm

Landform: Very low rises (islands in

ancient back lagoons) on flat

plains

Substrate: Calcreted limestone of the

Padthaway Formation.

Vegetation:



Type Site: Site No.: SE161A 1:50,000 mapsheet: 7023-2 (Penola)

Hundred:ComaumEasting:485830Section:471Northing:5869360

Sampling date: 27/02/2008 Annual rainfall: 655 mm average

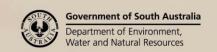
Slight rise. Firm (inter-row) to hard (row) surface with no stones. Non irrigated grape vines.

Soil Description:

Depth(cm)	Description
0-10	Dark reddish brown friable light clay with strong fine polyhedral structure. Clear to:
10-20	Dark reddish brown hard light clay with weak to moderate medium polyhedral structure. Gradual t
20-40	Dark reddish brown hard medium clay with weak coarse polyhedral structure. Gradual to:
40-60	Dark reddish brown hard light clay with weak coarse polyhedral structure. Gradual to:
60-80	Dark reddish brown hard light clay with weak coarse polyhedral structure. Sharp to:
80-90	Hard calcrete with 2-10% manganiferous segregations.



 $\textbf{Classification:} \quad \text{Haplic, Petrocalcic, Red Kandosol; medium, non-gravelly, clayey / clayey, moderate} \\$





Soil Characterisation Site data sheet

Summary of Properties

Drainage: Well drained. The profile is rarely saturated for more than a couple of days at a time.

Fertility: Inherent fertility is moderately high, as indicated by the exchangeable cation data. This is

due to the high clay and organic matter contents of the surface layers. Laboratory data

indicate satisfactory levels of all tested nutrients.

pH: Slightly alkaline at the surface (either due to applied lime or road dust contamination),

acidic with depth, and then grading back to neutral above the calcrete.

Rooting depth: 80 cm in sampling pit (calcrete).

Barriers to root growth:

Physical: There are no significant physical barriers to root growth above the calcrete, depth to

which is critical in determining the potential rootzone. This is more significant in dry

vineyards than where irrigation is used.

Chemical: There are no chemical limitations.

Waterholding capacity: Approximately 145 mm in the potential rootzone.

Seedling emergence: Satisfactory.

Workability: Satisfactory.

Erosion Potential:

Water: Low.

Wind: Low.

Laboratory Data

Depth cm	pH H ₂ O	pH CaC1 ₂	-	EC1:5 dS/m			%	NH ₄	P	K	mg/kg	Fe	Boron mg/kg	Trace Elements mg/kg (DTPA)				Sum cations	Exchangeable Cations cmol(+)/kg				Est. ESP
								mg/kg	mg/kg	mg/kg		mg/kg		Cu	Fe	Mn	Zn	cmol (+)/kg	Ca	Mg	Na	K	
0-10	7.6	6.7	0	0.16	0.43	15	3.41	18	98	581	9.9	1	1.6	3.56	155	19.1	4.34	21.8	18.0	2.23	0.13	1.47	0.6
10-20	6.5	5.7	0	0.05	0.19	8	1.50	-	30	313	4.6	769	-	-	-	- 1	- 1	12.1	9.84	1.39	0.14	0.72	1.2
20-40	5.8	4.8	0	0.03	0.11	12	1.12	-	11	219	6.6	583	-	-	-	1	-	10.5	8.38	1.32	0.17	0.59	1.6
40-60	6.1	5.1	0	0.03	0.10	12	0.93	-	8	164	6.4	655	-	-	-	-	1	13.7	10.9	2.04	0.23	0.56	1.7
60-80	6.8	5.8	0	0.03	0.15	14	0.72	-	6	136	8.2	977	-	-	-	-	-	15.7	13.0	2.03	0.23	0.41	1.5
80-90	-	-	-	-	1	-	-	-	-	-	-	1	-	-	-	- 1	- 1	ı	1	1	- 1	-	-

Note: Sum of cations, in a neutral to alkaline soil, approximates the CEC (cation exchange capacity), a measure of the soil's capacity to store and release major nutrient elements.

ESP (exchangeable sodium percentage) is derived by dividing the exchangeable sodium value by the CEC, in this case estimated by the sum of cations.

Further information: DEWNR Soil and Land Program

