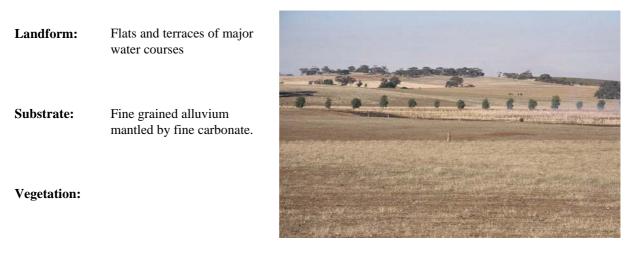
DARK GRADATIONAL LOAM

General Description:

Dark loam becoming more clayey with depth grading to a highly calcareous clay within 100 cm.



Type Site:	Site No.:	CM104									
	1:50,000 sheet:	6629-4 (Halbury)	Hundred:	Upper Wakefield							
	Annual rainfall:	575 mm	Sampling date:	12/05/04							
	Landform:	Terrace of Wakefield Riv									
	Surface:	Hard setting with no ston									

Soil Description:

Depth (cm)	Description
0-10	Dark brown firm loam with weak fine granular structure. Clear to:
10-20	Dark brown hard clay loam with weak fine polyhedral structure. Clear to:
20-40	Very dark grey hard light medium clay with moderate medium polyhedral structure. Diffuse to:
40-80	Very dark grey and dark brown mottled hard medium clay with weak coarse prismatic breaking to strong polyhedral structure. Clear to:
80-120	Very dark greyish brown and dark yellowish brown mottled hard highly calcareous medium clay with weak coarse prismatic breaking to strong medium polyhedral structure and 20-50% fine carbonate segregations. Gradual to:
120-145	Brown and yellowish brown mottled hard light clay with moderate coarse angular blocky structure and 2-10% fine carbonate segregations.



Classification: Sodic, Hypercalcic, Black Dermosol; medium, non-gravelly, loamy / clayey, deep

Summary of Properties

Drainage:	Moderately well to imperfectly drained. The coarsely structured clayey subsoil has moderately low permeability, so the profile is not freely draining. Waterlogging may occur for periods of a week or more following heavy or prolonged rainfall.							
Fertility:	Inherent fertility is high. Apart from phosphorus and nitrogen, deficiencies of other nutrients will not occur routinely.							
рН:	Slightly alkaline at the surface, alkaline with depth.							
Rooting depth:	120 cm in pit but few roots below 80 cm.							
Barriers to root growth:								
Physical:	The deep subsoil clay imposes a slight restriction on root growth.							
Chemical:	Elevated salt (EC) and chloride levels affect some sensitive plants. Clayey substrate material restricts salt leaching.							
Water holding capacity:	Approximately 150 mm (total available) for annual crop and pasture plants. Approximately 50 mm (readily available) in potential grape vine rootzone of 80 cm.							
Seedling emergence:	Fair due to hard setting sealing surface. Gypsum should ameliorate this condition.							
Workability:	Fair. Soil tends to shatter if worked too dry and puddle if worked too wet. Gypsum will help.							
Erosion Potential								
Water:	Low							

Wind: Low.

Laboratory Data

Depth cm	pH H ₂ O	pH CaC1 ₂	CO3 %	EC 1:5	ECe dS/m	Cl mg/kg		Р	Avail. K	SO4 mg/kg	SO ₄ Boron ng/kg mg/kg					Sum cations	Exchangeable Cations cmol(+)/kg				ESP
				dS/m				mg/kg	mg/kg			Cu	Fe	Mn	Zn	cmol (+)/kg	Ca	Mg	Na	Κ	
0-10	7.7	7.1	0	0.32	1.703	86	2.53	27	685	97	1.0	-	-	-	-	19.1	13.7	3.49	0.34	1.64	1.8
10-20	7.7	7.0	0	0.22	0.871	65	1.76	10	504	80	0.8	-	-	-	-	19.4	14.6	3.31	0.27	1.20	1.4
20-40	7.8	7.2	0	0.28	0.551	64	1.35	7	323	235	0.9	-	-	-	-	27.2	21.7	4.29	0.44	0.83	1.6
40-80	8.0	7.5	1.2	0.81	1.355	307	1.10	8	349	680	1.1	-	-	-	-	34.2	23.1	9.12	1.08	0.88	3.2
80-120	8.2	7.8	7.9	1.47	4.34	845	0.35	7	408	1693	1.1	-	-	-	-	29.8	14.9	11.6	2.29	0.97	7.7
120-145	8.6	8.1	4.8	1.21	6.90	1123	0.24	3	457	142	1.6	-	-	-	-	25.9	8.47	13.1	3.35	1.06	12.9

Note: Sum of cations is an estimate of cation exchange capacity, a measure of the soil's capacity to store and release nutrient elements.

ESP (exchangeable sodium percentage) is derived by dividing the exchangeable sodium value by the sum of cations.