Site Code[1] CLRA1

Near level alluvial plain near Leopold

Location Leopold (Drysdale Road), Bellarine Peninsula

Landform Stagnant alluvial plain

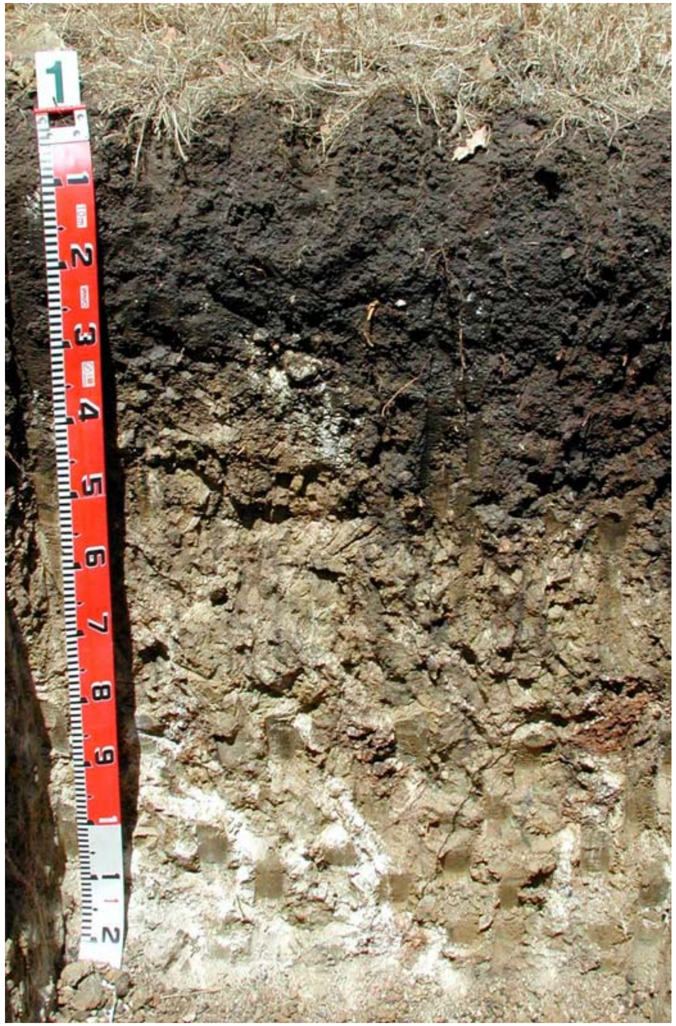
Geology Quaternary alluvium, colluvium, lagoon and swamp deposits: *gravel, sand, silt*

Element Flat

Slope <1%

Aspect East

Horizon	Depth (cm)	Description
A11	0–5	Very dark grey (10YR3/1); sapric silty loam; weak medium subangular blocky parting to strong fine polyhedral structure; rough ped fabric; very firm consistence (dry); pH 6.0; smooth abrupt boundary to:
A12	5–30	Black (10YR2/1); light medium clay; very few angular sandstone (2–20 mm) coarse fragments; strong fine polyhedral structure; rough ped fabric; strong consistence (dry); pH 6.5; smooth clear boundary to:
A3	30–45	Dark grey (10YR4/1) with common medium distinct brown (10YR5/3) mottles; silty medium heavy clay; weak medium prismatic parting to strong fine polyhedral structure; smooth ped fabric; strong consistence (dry); pH 6.5; smooth clear boundary to:
B21	45–80	Light yellowish brown (2.5Y6/3) with very few large distinct red and yellow mottles; silty heavy clay; strong medium prismatic parting to strong medium angular blocky structure; smooth ped fabric; few distinct clay skins and other cutans; very strong consistence (dry); common calcareous soft segregations (6–20 mm); pH 8.5; wavy gradual boundary to:
B22	80–130+	Light yellowish brown (2.5Y6/3); many moderate faint yellow (10YR6/6) mottles; silty heavy clay; strong medium prismatic parting to strong medium angular blocky structure; smooth ped fabric; few distinct clay skin and other cutans; strong dry consistence; common calcareous soft segregations (6–60 mm); pH 9.0.



Melanic, Eutrophic, Grey Dermosol/ Endocalcareous, Self-mulching, Grey Vertosol

[1] Source: Robinson et al (2003) A land resource assessment of the Corangamite region. Department of Primary Industries, Centre for Land Protection Research Report No. 19.

Analytical data[2]

Site CLRA1 Horizon	Sample depth cm	pH H2O	pH CaCl2	EC dS/m	NaCl %	Ex Ca cmolc/kg	Ex Mg cmolc/kg	Ex K cmolc/kg	Ex Na cmolc/kg	Ex Al mg/kg	Ex Acidity cmolc/kg	FC −10kPa %	PWP −1500kPa %	KS %	FS %	Z %	C %
A11	0–5	6.2	5.9	0.37	0.02	29	5.1	2.9	0.3	17	11	48.9	37.9	10	24	17	32
A12	5–30	7.1	6.7	0.21	N/R	25	4.7	3.2	0.58	17	5.2	41.9	24.5	4.3	24.6	14.5	49.5
A3	30–45	8	7.5	0.36	0.02	27	6.8	2.5	1.2	N/R	N/R	59.0	31.9	1.8	11.8	7	73
B21	45–80	8.2	7.8	0.63	0.05	20	9.2	1.3	1.3	N/R	N/R	50.1	27.0	2.8	10.9	6.5	65.5
B22	80–130	8.2	7.9	0.77	0.08	17	13	1.5	1.9	N/R	N/R	49.4	26.4	2.9	11.6	7.5	65

Management considerations

Clay soils are generally impermeable when saturated and require similar attention to the cracking soils; moisture status is important. Incorporation of organic matter may help structure and provide micro environments for roots.

Friable surface soils (and subsoils) occur where there is a build up of organic matter [OC: A11; 9.4%, A12; 2.7%], (and to some extent iron rich clay complexes) generally in cooler wetter areas (less extreme wetting and drying cycling).

Alkaline subsoils are associated with a high nutrient load but produce an imbalance in nutrient availability and do not suit some plant species (eg. potatoes). These soils are often associated with sodic and calcic soil materials. The high organic carbon levels of the upper soil and the high calcium levels are responsible for a stable soil [Emerson class 7 for the upper soil and Emerson class 5 for the subsoil] at this site.

Calcium carbonate nodules (segregations; soft and hard) are associated with alkaline soils, usually as secondary lime found in the deep subsoil in many basalt derived soils. In this case much of the carbonate is of marine or estuarine origin (shells).

[2] Source: Government of Victoria State Chemistry Laboratory.