

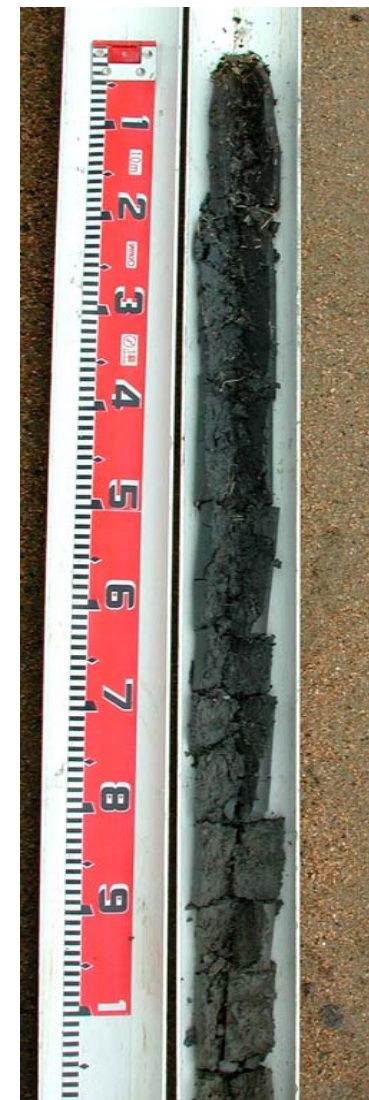
Site code<sup>1</sup> CLRA48

Location The Sanctuary (Beal Road), Colac district, south-west Victoria



Flat plains south-west of Mount Gellibrand

Landform Lava plain  
Geology Quaternary paludal lagoon and swamp deposits: *silt, clay*  
Element Flat  
Slope 0–1%  
Aspect South-west



Epihypersodic, Self-mulching, Grey Vertosol

Horizon	Depth (cm)	Description
A	0–35	Black (2.5/N); heavy clay; strong coarse and medium prismatic, parting to medium and fine angular blocky structure; smooth ped fabric; very firm consistence (moist); non-calcareous, pH 7.5; diffuse boundary to:
B21	35–80	Dark grey (2.5Y4/1) with very few fine faint orange mottles; medium heavy clay; strong coarse and medium prismatic, parting to medium and fine angular blocky structure; smooth ped fabric; firm consistence (moist); non-calcareous, pH 9; diffuse boundary to:
B22	80–140+	Dark grey and greyish brown (2.5Y4/1, 2.5Y5/2) with few medium distinct orange mottles; medium clay; very few fine rounded quartz pebbles; strong coarse and medium prismatic, parting to fine angular blocky structure; smooth ped fabric; firm consistence (moist); non-calcareous, pH 9.

<sup>1</sup> 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<sup>2</sup>

Site CLRA48 Horizon	Sample depth cm	pH		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 %
		H <sub>2</sub> O	CaCl <sub>2</sub>														
A	0-35	8	7.6	1.3	N/R	6.2	26	2.5	17	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R
B21	35-80	8.5	8.1	2.6	N/R	5	26	2.8	38	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R
B22	80-140+	8.8	8.3	2.7	N/R	4.5	25	2.8	39	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R

## Management considerations

This is a structured cracking clay soil. Cracking clay soils vary in their workability depending on their moisture status (highly permeable when dry and impermeable when saturated). These soils are also prone to structure decline particularly when worked wet. They are also generally alkaline with depth and can place stress on roots with their high shrink-swell capabilities. The main priority on these soils is to avoid working when wet (on or below plastic limit). The alkaline subsoils are associated with a high nutrient capacity but result in an imbalance in nutrient availability (may be restrictive to certain plant species (eg. potatoes). This soil type is often associated with sodic and calcic soil properties, here very sodic, magnesian as well as saline in the subsoil. Growing alkaline tolerant species is a practical option. Soil salinity at depth will affect deeper rooting plants and may indicate water movement restrictions. It is important not to increase the groundwater level bringing the salinity closer to the surface; more efficient use of water by plants and/or deep drainage is suggested.

<sup>2</sup> Source: Government of Victoria State Chemistry Laboratory.