

**Site Code<sup>1</sup>** CLRA4

**Location** Murradoc (Drysdale St Leonards Road), St Leonards district, Bellarine Peninsula



**Landform** Plain

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

**Element** Flat

**Slope** 0°

**Aspect** -



Eutrophic, Mottled-hypernatric, Brown Sodosol

Near level alluvial plains near St Leonards

Horizon	Depth (cm)	Description
A1	0–15	Dark grey (10YR4/1); fine sandy loam; weak medium subangular blocky structure; rough ped fabric; weak consistence (dry); pH 5.5; wavy clear boundary to:
A2	15–30	Light brownish grey (10YR6/2), conspicuous bleach (10YR8/1 dry); heavy fine sandy loam; apedal massive structure; earthy fabric; very firm consistence (dry); pH 6.0; smooth abrupt boundary to:
B21	30–80	Brown (10YR5/3) with many medium distinct orange grey and red (10YR5/6, 10YR4/1, 2.5YR5/6) mottles; light medium clay; strong coarse columnar parting to strong medium angular blocky structure; smooth ped fabric; common prominent clay skin and other cutans; very strong consistence (dry); few (6–60 mm) ferruginous soft concretions; pH 7.0; wavy gradual boundary to:
B22	80–120	Yellowish brown (2.5Y5/4); light medium clay; weak coarse columnar parting to medium and strong medium prismatic structure; smooth ped fabric; few distinct clay skin cutans; strong consistence (dry); pH 8.5; wavy gradual boundary to:
B23/B3	120–145+	Light yellowish brown (2.5Y6/4) with few large yellow faint mottles; medium clay; weak coarse columnar parting to medium and strong medium prismatic structure; smooth ped fabric; very few faint clay skin cutans; strong consistence (dry); pH 8.5.

<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 CLRA4	Sample depth cm	pH		EC dS/m	NaCl %	Ex Ca cmol <sub>c</sub> /kg	Ex Mg cmol <sub>c</sub> /kg	Ex K cmol <sub>c</sub> /kg	Ex Na cmol <sub>c</sub> /kg	Ex Al mg/kg	Ex Acidity cmol <sub>c</sub> /kg	FC -10kPa %	PWP -1500kPa %	KS %	FS %	Z %	C %
		H <sub>2</sub> O	CaCl <sub>2</sub>														
A1	0–15	5.2	4.6	0.12	N/R	2.7	1.2	0.57	0.51	12	9.1	23.4	5.9	10.6	62.4	14	7
A2	15–30	5.7	5.1	<0.05	N/R	0.58	0.31	0.1	0.16	<10	2	15.2	1.5	11.6	68.2	19	2.5
B21	30–80	7.4	6.4	0.29	0.04	3.7	10	0.3	4.9	N/R	N/R	37.3	17.2	7.4	46.4	8	34.5
B22	80–120	8.1	7.1	0.41	0.06	2.3	8.1	0.3	5.1	N/R	N/R	33.1	15.0	6.2	49.9	10	30.5
B23/B3	120–145+	8.1	7.2	0.61	0.11	3.4	12	0.4	8	N/R	N/R	43.3	27.8	N/R	N/R	N/R	N/R

## Management considerations

This soil has a strong texture contrast between the surface soil and the subsoil as well as sodic subsoils. It is important to maintain or improve the upper soil by increasing organic matter (particularly in the subsurface soil). The organic carbon content of the surface is 2% and the subsurface is 0.36%. It would be advisable not to bring the very dispersive subsoil [Emerson class1] to the surface as it would promote surface sealing (hardsetting) as well as adverse nutrient affects.

Maintenance of a vegetative cover is important for soil stability particularly where the surface soil is light and susceptible to water and wind erosion.

Root penetration of the subsoil may be difficult with the hardsetting nature of the soil, coarse structure and nutrient imbalance (alkalinity with high sodicity and some salinity).

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