

Site code¹ CLRA11

Location Kennedys Creek (Lavers Hill Cobden Road), Otway Ranges, south-west Victoria



Landform Low hills

Geology Neogene Gellibrand Marl:
*marine silty clay, clayey silt,
calcareous, minor calcarenite*

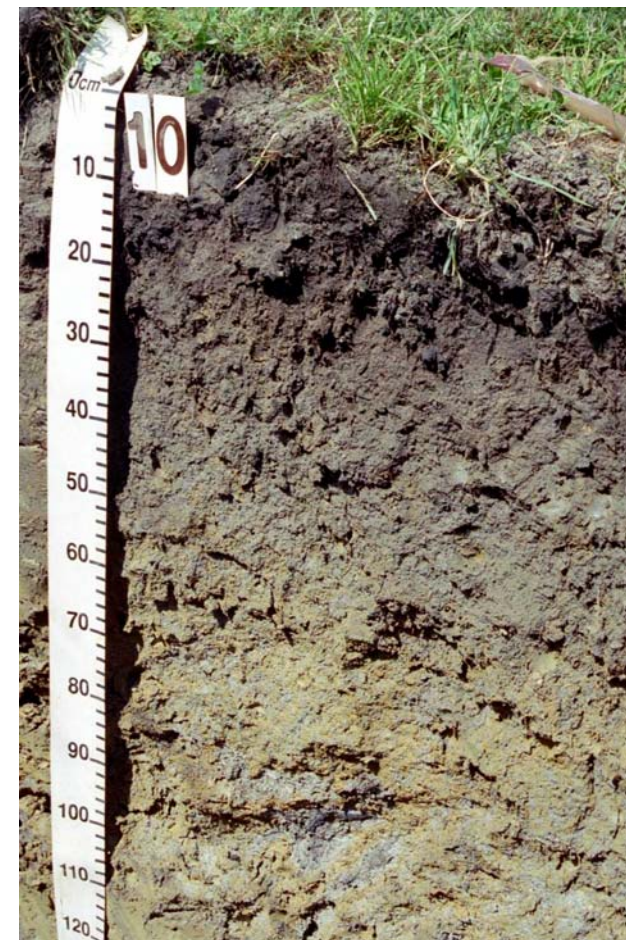
Element Mid slope

Slope 165%

Aspect North-north-east

Low hills near Kennedys Creek, Otway Ranges

Horizon	Depth (cm)	Description
A1	0–20	Very dark grey (10YR3/1); sandy clay loam; strong coarse and medium blocky, parting to fine and very fine polyhedral structure; rough ped fabric; strong consistence (dry); non-calcareous, pH 6.0; clear smooth boundary to:
B21g	20–50	Very dark greyish brown (2.5Y3/2) with common medium distinct brownish yellow (10YR6/8) mottles; light medium clay; strong fine to medium polyhedral structure; smooth ped fabric; strong consistence (dry); non-calcareous, pH 5.5; gradual smooth boundary to:
B22g	50–85	Greyish brown (2.5Y5/2) with many coarse prominent yellowish brown (10YR5/6) mottles; medium heavy clay; strong fine to medium polyhedral structure; smooth ped fabric; strong consistence (dry); non-calcareous, pH 5.5; gradual irregular boundary to:
B23g	85–130+	Greyish brown (2.5Y5/2) with many coarse prominent yellowish brown (10YR5/6) mottles; medium clay; strong very fine lenticular structure; smooth ped fabric; strong consistence (dry); non-calcareous, pH 5.5.



Melanic, Eutrophic, Black Kurosol

¹Source: 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 data²

Site CLRA11 Horizon	Sample depth cm	pH		EC dS/m	NaCl %	Ex Ca cmol _c /kg	Ex Mg cmol _c /kg	Ex K cmol _c /kg	Ex Na cmol _c /kg	Ex Al mg/kg	Ex Acidity cmol _c /kg	FC -10kPa %	PWP -1500kPa %	KS %	FS %	Z %	C %
		H ₂ O	CaCl ₂														
A1	0–20	5.8	5.1	0.14	N/R	9.7	3.3	0.41	0.53	N/R	15	N/R	N/R	N/R	N/R	N/R	N/R
B21g	20–50	5.3	4.5	0.08	N/R	4.4	4.8	0.47	0.44	N/R	12	N/R	N/R	N/R	N/R	N/R	N/R
B22g	50–85	4.9	4.1	0.14	N/R	3.7	6.1	0.5	0.73	N/R	16	N/R	N/R	N/R	N/R	N/R	N/R
B23g	85–130+	5.2	4.1	0.11	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R

Management considerations

This soil is similar to that described by CLRA10, it is gradational with limited texture change with depth and gradational horizon boundaries. The weak structure contributes to the imperfect drainage of the soils as evidenced by subsoil mottling and colour. Other influences on drainage include rainfall and topographic position; here on a mid slope receiving moisture from upslope. Texture and soil stability indices were not recorded but regarded as similar to CLRA10 where fine sand is a dominant component of this soil and the soil is quite stable (Emerson class 5 for subsoil) though a little less so for the B1 horizon (Emerson class 3(1) for subsoil). The high organic matter content of the surface (9.9% OM) and the upper subsoil (1.9% OM) aids stability. The surface soil is slightly limited in depth and therefore restricting as a seedbed. The lower pH in the subsoil will restrict the availability of some nutrients (less calcium) and increase the availability and mobility of aluminium, while the higher surface pH is a result of management intervention to improve nutrient availability.

² Source: Government of Victoria State Chemistry Laboratory.