

**Site code<sup>1</sup>** CLRA41



Coastal low land dune field

**Location** Lake Victoria (Shell Road), Ocean Grove district, Bellarine Peninsula

**Landform** Coastal dunes

**Geology** Quaternary coastal dune deposits: aeolian coastal and inland dunes; *dune sand, some swamp deposits*

**Element** Dune crest

**Slope** 5%

**Aspect** South-south-east

Horizon	Depth (cm)	Description
A1	0–10	Dark grey (10YR4/1); sand; apedal single grain structure; sandy fabric; very weak consistence (dry); non-calcareous, pH 7.5; clear boundary to:
2A11	10–20	Very dark grey (2.5Y3/1); loamy sand; apedal single grain structure; earthy fabric; very weak consistence (dry); non-calcareous, pH 8.0; clear boundary to:
2A12	20–30	Brown (7.5YR5/2); sand; apedal single grain structure; earthy fabric; very weak consistence (dry); non-calcareous, pH 7.0; sharp boundary to:
2A21	30–75	Greyish brown (10YR5/2), conspicuously bleached light grey (10YR7/2 dry); sand; apedal single grain structure; sandy fabric; loose consistence (dry); non-calcareous, pH 7.5; diffuse boundary to:
2A22	75–110	Brown (10YR5/3), light brownish grey (10YR6/2 dry); sand; apedal single grain structure; sandy fabric; loose consistence (dry); slightly calcareous, pH 8.0; sharp boundary to:
2B2	110–125	Strong brown (7.5YR5/6); sandy clay; common large angular calcarenite coarse fragments; weak medium prismatic structure; smooth ped fabric; very firm moderately consistence (moist); few distinct other cutans; very highly calcareous, pH 9.5.



Melanic, Regolithic, Bleached-leptic Tenosol

<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	Sample	pH		EC	NaCl	Ex Ca	Ex Mg	Ex K	Ex Na	Ex Al	Ex	FC	PWP	KS	FS	Z	C
CLRA41	depth	H <sub>2</sub> O	CaCl <sub>2</sub>	dS/m	%	cmol <sub>c</sub> /kg	cmol <sub>c</sub> /kg	cmol <sub>c</sub> /kg	cmol <sub>c</sub> /kg	mg/kg	Acidity	-10kPa	-1500kPa	%	%	%	%
Horizon	cm										cmol <sub>c</sub> /kg	%	%	%	%	%	%
2B2	110-125	8.5	8	0.48	N/R	5.1	4	0.7	1.9	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R

## Management considerations

This is a neutral to alkaline sandy soil with a heavier subsoil at depth (125cm). Sandy topsoils generally have poor plant water holding capacity and poor nutrient holding capacity and due to the low level of bonding between soil particles are prone to wind, sheet and rill erosion (depending on organic matter content and vegetative cover). This site has an organic surface soil which is protecting the material with loose/weak consistence below. These soils may be hydrophobic (in conjunction with organic coatings) when dry, taking time to reabsorb moisture. It is helpful to reduce the wetting/drying cycle and as well as increase organic matter and clay content (clay spreading is practiced in western Victoria). Sandy topsoils do however drain rapidly. Maintenance of a vegetative cover is important. The bleached A2 horizons (or subsurface soils) are a major feature here as are many of soils within the Corangamite Catchment Management Authority (CMA) region. They are an indication of restricted drainage, poor soil structure (often massive) and low organic matter, nutrient and water holding capacity, nearly always in conjunction with a restrictive soil below such as a clayey soil or a pan (eg. coffee rock), though here they are still alkaline. These bleached horizons may act as conduit for subsurface flow, particularly on sloping ground. If the soil is dispersive then gypsum application would be suitable, while increasing organic matter and maintaining vegetative cover is important.

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