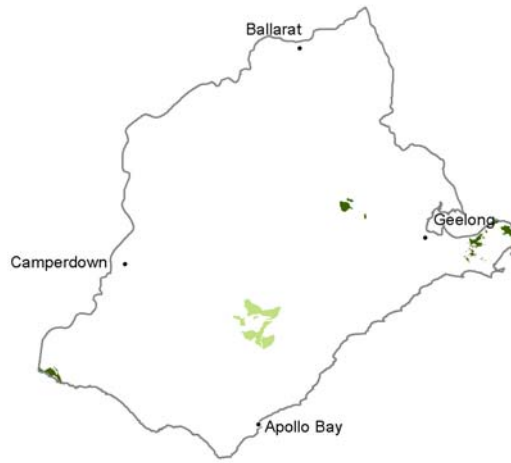


8. Deep sands and sands over clay on older dunes and reworked sediments on Quaternary aeolian sediments

These soils occur on the Bellarine Peninsula south of Portarlington as well as other coastal and inland locations.

These soils have a dark weakly structured sandy loam surface soil (10–20 cm) overlying a bleached apedal (unconsolidated) sand or loamy sand (to 30–60+ cm) abruptly overlying a coarse strongly structured red and yellow mottled medium clay grading into a mottled sandy clay (to 100 cm) and then into a clayey fine sand (to 150+ cm). Occasionally, a thin dark structured light clay may lie between the bleached subsurface horizon and the mottled medium clay, forming a weak organic argillic (clay) pan. The surface and subsurface horizons are strongly acidic with greater alkalinity with depth; the underlying clayey fine sand sediments being slightly alkaline (pH 7.7). The sand depth may be greater than 150 cm in many instances (i.e. dune crests).



Notable characteristics include: texture and consistency contrast, weak consistence of upper sandy soil, binding ability of surface soil organic matter, clay accumulation/pans at depth over older sediments, and strongly acidic sands over alkaline clayey sands.

Soil sites

Site code	Soil-landform unit	Component	ASC	FK	1:100 000 mapsheet
CLRA5	82	Lower dune slope	Eutrophic, Mottled-Subnatric, Yellow Sodosol	Dy5.41	T7821 - SORRENTO
CLRA25	209	Mid slope	Mottled, ?, Red Chromosol, Podosol	Dr5.12	T7821 - SORRENTO
OTR500	317	Mid slope	Acidic, Regolithic, Bleached-leptic Tenosol	Uc/ Dy5.41	T7721 - GEELONG
OTR608	74	–	Melacic, Humic/alsilic, Semiaquic, Podosol	Uc4.0	T7520 - PRINCETOWN
OTR737	76	–	Melacic-mottled, Petroferric, Brown Kandosol	Um5.42/ Dy3.11	T7620-OTWAY
OTR739	60	Upper slope	Melacic-parapanic, Humic/sesquic, Aquic Podosol	Uc4.0	T7520 - PRINCETOWN
OTR740	74	Mid slope	Fragic, subnatric, Aeric Podosol	Uc5.11	T7520 - PRINCETOWN

Site code¹ OTR740



Fire scarred landscape near Newling

Location Newling
Landform Hills
Geology Palaeogene Pebble Point Formation
Element Mid slope
Slope 37%
Aspect North-easterly



Fragic, subnatric, Aeric Podsol/Tenosol

Horizon	Depth (cm)	Description
A11	0–60	Brown (7–5YR4/4); loamy sand; apedal single grain structure; diffuse smooth boundary to:
A12	60–110	Strong brown (7.5YR5/6); loamy sand; apedal single grain structure; gradual smooth boundary to:
B2	110–180	Yellowish red (5YR5/8); loamy sand; apedal single grain structure; occasional ironstone and quartz gravel fragments; gradual irregular boundary to:
C	180	Strong brown (7.5YR5/6) with some red (2.5YR4/8) mottles; sand; apedal structure.

¹ Source: Pitt AJ (1981) A study of the land in the catchments of the Otway Range and adjacent plains. TC-14. Soil Conservation Authority. Kew, Victoria

Analytical data²

Site OTR740 Horizon	Sample depth cm	pH		EC	NaCl	Ex Ca	Ex Mg	Ex K	Ex Na	Ex Al	Ex Acidity	FC -10kPa	PWP -1500kPa	KS	FS	Z	C
		H ₂ O	CaCl ₂	dS/m	%	cmol _c /kg	cmol _c /kg	cmol _c /kg	cmol _c /kg	cmol _c /kg	mg/kg	cmol _c /kg	%	%	%	%	%
A11	0-10	5.7	N/R	0.035	0.004	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R
A11	10-20	6.1	N/R	0.023	0.002	0.5	0.4	0.2	0.04	N/R	N/R	N/R	N/R	51	38	4	8
A11	20-30	6.1	N/R	0.020	0.002	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R
A12	60-90	5.9	N/R	0.016	0.001	0.1	0.6	0.1	0.05	N/R	N/R	N/R	N/R	56	32	4	8
B2	120-150	5.7	N/R	0.015	0.001	0.05	0.36	0.1	0.03	N/R	N/R	N/R	N/R	74	19	2	7
C	180-210	5.8	N/R	0.012	0.001	<0.01	0.09	0.06	0.01	N/R	N/R	N/R	N/R	87	9	1	4

Management considerations

Deep sandy soils generally have poor plant water/nutrient holding capacities and can be extremely vulnerable to wind, and sheet and rill erosion. These soils may be hydrophobic (in conjunction with organic coatings) when dried out, taking time to reabsorb moisture. They do however drain rapidly. Ferruginous and Ferromanganiferous nodules (ironstone), concretions and pans can restrict root penetration and limit available water holding capacity where there are sufficient amounts, often forming a discontinuous or continuous pan where concentrated (>50%). They are also an indication of a periodic waterlogging.

² Source: Government of Victoria State Chemistry Laboratory.