

Site code¹ SW27



Pasture used for grazing

Location Bostock Creek
Landform Lower slope in gently undulating hills
Geology Quaternary – Newer volcanics (scoria)
Element Lower slope

Horizon	Depth (cm)	Description
A11	0–15	Black (10YR2/1); fine sandy clay loam; weak to moderate medium polyhedral, parting to moderate fine polyhedral structure; firm to very firm consistency (dry); weak-firm consistence (moist); pH 6.1; gradual boundary to:
A12	15–40	Very dark grey (10YR3/1); fine sandy clay loam; moderate medium polyhedral, parting to moderate fine polyhedral structure; weak-firm consistence (moist); pH 5.8; abrupt boundary to:
A2	40–50	Brown (10YR5/3), conspicuously bleached (7.5YR7/2dry); fine sandy clay loam; apedal structure; very many (> 50%) medium size(2–6 mm) ferruginous nodules ;pH 6.5; sharp boundary to:
B21	50–70	Very dark greyish brown (becoming dark greyish brown (2.5Y4/2) with depth) with yellowish brown (10YR5/6) mottles; heavy clay; moderate very coarse prismatic, parting to moderate coarse to medium polyhedral structure; strong consistence (dry); pH 6.5; gradual boundary to:
B22	70–100	Greyish brown (2.5Y5/2), with yellowish brown (10YR5/8) mottles; heavy clay; strong very coarse prismatic, parting to coarse prismatic and very coarse blocky structure; strong consistence (dry); many slickensides present; pH 7.0; abrupt boundary to:
C	100+	Weathered volcanic ash.



Melanic-Vertic (& Ferric), Subnatric, Grey Sodosol

¹ Source: Imhof M, Brown A, Ward G (unpublished) Soils associated with dairy irrigation and winter wet soils in Southwest Victoria

Analytical data²

Site SW27 Horizon	Sample depth cm	pH		EC	NaCl	Ex Ca	Ex Mg	Ex K	Ex Na	Ex Al	Ex acidity	FC	PWP	KS	FS	Z	C
		H ₂ O	CaCl ₂	dS/m	%	cmolc/kg	cmolc/kg	cmolc/kg	cmolc/kg	mg/kg	cmolc/kg	(-10kPa) %	(-1500kPa) %	%	%	%	%
A11	0–15	6.1	5.7	0.29	0.02	14	2.3	0.6	0.1	N/R	N/R	39.3	18.2	6	39	22	19
A12	15–40	5.8	5	0.09	N/R	6.7	2.1	0.1	0.1	N/R	N/R	33.8	11.1	5	46	22	20
A2	40–50	6.5	5.6	0.08	N/R	4.5	2.2	<0.1	0.2	N/R	N/R	26.4	10.7	29	33	15	19
B21	50–70	6.5	5.8	0.18	N/R	5.8	9.6	0.2	1.4	N/R	N/R	55.5	34.9	4	12	5	73
B22	70–100	7	6.1	0.18	N/R	4.7	11	0.2	2.4	N/R	N/R	26.1	32.3	3	14	8	72

Management considerations

The soil profile has deep surface (A1) horizons that are not hard, have a moderate organic matter contents and a reasonable aeration capacity. They will be well suited for plant growth.

The strong texture contrast between the surface soil and the coarser structured subsoil is a very important soil feature. This can have a major effect by reducing and/or redirecting the internal drainage and restricting root growth beyond the upper horizons.

Bleached A2 horizons (or subsurface soils) are a major feature of many of soils within the Corangamite region. These layers are usually an indication of restricted drainage, and they are poorly structured (often massive) and have low organic matter levels, nutrient and water holding capacities. They are often associated with a restrictive soil below - such as a dense clayey subsoil. These bleached horizons may act as conduit for subsurface flow, particularly on sloping ground.

Mottled subsoils are common and are also an indication of periodic waterlogging, particularly if the mottles are pale (low oxygen conditions). Improved drainage may be beneficial.

Mole drains will probably work well in these soils and are likely to last reasonably well. The deep surface horizons, however, may negate the need for mole drainage.

² Source: Government of Victoria State Chemistry Laboratory.