

Site code<sup>1</sup> SW8



Lower slope of a gently undulating rise

**Location** Alvie  
**Landform** Undulating plains and rises  
**Geology** Quaternary volcanic ash deposits (Qvs)  
**Element** Lower slope



Sodic, Eutrophic, Brown Dermosol

Horizon	Depth (cm)	Description
A1	0–15	Brown (7.5YR4/2) fine sandy clay loam; moderate medium blocky, parting to moderate fine granular structure; firm consistence moderately (moist); pH 6.5; clear boundary to:
B21	15–25	Dark reddish brown (5YR3/3) heavy clay loam (becoming light clay with depth); moderate medium blocky, parting to moderate fine blocky structure; firm consistence (moderately moist); pH 6.6; abrupt boundary to:
B22	25–40	Dark brown (7.5YR3/4) light medium clay; strong medium polyhedral, parting to strong fine polyhedral structure (smooth-faced peds); very firm consistence (dry); pH 6.5; gradual boundary to:
B23	40–50	Dark brown (7.5YR3/2) medium clay; strong coarse blocky, parting to strong medium polyhedral, parting to strong fine polyhedral parting to very coarse polyhedral structure; firm consistence; pH 7.1; gradual boundary to:
B/C	50–70	Dark brown (7.5YR3/2) fine sandy clay loam; strong consistence (dry); contains a light (20%) amount of weathered basalt and volcanic ash; pH 8.0.
C	70 +	Volcanic ash deposits.

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 Source: Imhof M, Brown A, Ward G (unpublished) Soils associated with dairy irrigation and winter wet soils in Southwest Victoria

## Analytical data<sup>2</sup>

Site SW8	Sample depth Horizon	pH		EC	NaCl	Ex Ca	Ex Mg	Ex K	Ex Na	Ex Al	Ex acidity	FC	PWP	KS	FS	Z	C	
		H <sub>2</sub> O	CaCl <sub>2</sub>															(-10kPa)
	A1	0–15	6.5	5.5	0.11	N/R	6.4	10	0.68	0.95	N/R	N/R	N/R	17.9	7.0	31.5	14.5	41.0
	B21	15–25	6.6	5.6	0.14	N/R	7.3	7.7	0.71	1.3	N/R	N/R	N/R	16.1	7.0	34.8	21.0	30.0
	B22	25–40	6.5	5.5	0.09	N/R	7.4	19	0.85	1.1	N/R	N/R	N/R	24.6	6.7	21.8	11.0	53.5
	B23	40–50	7.1	5.9	0.08	N/R	8.2	28	0.89	1.1	N/R	N/R	N/R	30.5	6.3	18.4	10.5	57.0
	B/C	50–70	8.0	7.2	0.22	N/R	11	26	0.83	1.7	N/R	N/R	N/R	23.7	23.4	36.0	14.0	17.5

## Management considerations

The upper soil profile (to 50 cm depth) is very well structured (parting to many fine polyhedral shaped peds) and is friable when moist. As a result of these attributes, the soil profile will provide few restrictions to water and root movement and will be very conducive to plant growth.

Infiltration of water into the well-structured surface soil will be quite high and the upper soil horizons will be very well drained.

Soils such as these with high clay contents in the surface soil can be susceptible to compaction. Tillage or over-stocking of clayey soils should be avoided if the soil is wet (i.e. wetter than the plastic limit). At such moisture conditions excessive tillage, trafficking or over-stocking can result in structural damage (e.g. compaction, smearing) occurring. Ideally, tillage and trafficking should take place when the soil is drier than the plastic limit (down to at least the tillage depth).

---

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