

Site code¹ SW32



Lower slope of gently undulating rise

Location Kawarren
Landform Undulating rises within rolling hills
Geology Palaeogene - Dilwyn Formation.
Element Lower slope

Horizon	Depth (cm)	Description
A11	0–15	Very dark brown (10YR2/2); light fine sandy clay loam; weak coarse blocky, parting to weak medium blocky structure; pH 5.8:
A12	15–35	Very dark greyish brown (10YR3/2); light sandy clay loam; apedal massive structure; pH 5.2:
A21	35–60	Brown (10YR5/3), sporadically bleached; sandy loam (heavy); apedal massive structure; contains a few (2-5%) quartz fragments; pH 5.1:
A22	60–80	Pale brown (10YR6/3); conspicuously bleached; sandy loam; apedal massive structure; contains very few (2%) rounded quartz coarse fragments (2–5 mm); pH 5.3:
A3	80–100	Very dark grey (10YR3/1) with brownish yellow (10YR6/8) mottles; sandy loam; apedal massive structure; contains a few (5%) rounded quartz fragments (2-5 mm); pH 5.5:
B21	100+	Light brownish grey (10YR6/2) with brownish yellow (10YR6/8) mottles; fine sandy light clay; pH 5.3.



Bleached-Mottled, Mesotrophic, Grey Kurosol

¹ Source: Imhof M, Brown A, Ward G (unpublished) Soils associated with dairy irrigation and winter wet soils in Southwest Victoria

Analytical data²

Site SW32 Horizon	Sample depth cm	pH		EC dS/m	NaCl %	Ex Ca cmolc/kg	Ex Mg cmolc/kg	Ex K cmolc/kg	Ex Na cmolc/kg	Ex Al mg/kg	Ex acidity cmolc/kg	FC (-10kPa) %	PWP (-1500kPa) %	KS %	FS %	Z %	C %
		H ₂ O	CaCl ₂														
A11	0–15	5.8	5.0	0.18	N/R	5.4	1.8	0.1	0.2	N/R	N/R	29.6	13.9	19	47	11	13
A12	15–35	5.2	4.4	0.12	N/R	1.1	0.9	0.05	0.05	N/R	N/R	18.2	5.4	22	54	9	12
A21	35–60	5.1	4.4	0.11	N/R	0.6	0.7	0.05	0.05	N/R	N/R	18	4.6	23	55	10	11
A22	60–80	5.3	4.5	0.07	N/R	0.4	0.4	0.05	0.05	N/R	N/R	13.6	2.5	24	58	11	7
A3	80–100	5.5	4.6	0.08	N/R	0.6	0.9	0.05	0.05	N/R	N/R	16.3	4	22	57	11	10
B21	100+	5.3	4.5	0.12	N/R	1.7	3.1	0.1	0.2	N/R	N/R	25.8	11.6	18	44	8	30

Management considerations

The following comments are made on the basis of examination of a single profile and are therefore indicative only. Fertiliser and lime requirements would need to be verified and quantified through analysis of bulk samples of standard depth taken from across a whole paddock.

The soil profile is strongly acid throughout. This indicates that aluminium and manganese toxicity may occur. Lime can be used to increase soil pH. Other factors need to be considered before lime is recommended (e.g. pasture species grown, method of application, local trial responses, soil surface structure and likely cost/benefit). Manganese toxicity is more likely to occur in poorer drained situations (as waterlogging may bring manganese into solution). If lime is required, and pH increased, then the availability of major nutrients (e.g. phosphorus and some trace elements such as molybdenum) may improve. The soil profile has low overall levels of exchangeable basic cations (i.e. low nutrient holding capacity).

Mole drains may not be totally effective on soils such as these with very deep surface (A) horizons.

² Source: Government of Victoria State Chemistry Laboratory.