

Site code¹ SW101



'Slickensides' – prominent shrink-swell features dominate the subsoil

Location Lovely Banks, Bacchus Marsh-Geelong Road
Landform Plain
Geology Quaternary basalt (Lovely Banks Monocline)
Element plain
Slope 0
Aspect East



Episodic-Endocalcareous, Self-mulching, Black VERTOSOL

Horizon	Depth (cm)	Description
A1	0-10	Very dark grey (5YR3/1 moist); light medium clay; self-mulching surface, rough faced peds (<10 mm); pH 6.9; clear and smooth boundary to:
B21t	10-30/40	Very dark grey (5YR3/1 moist); medium heavy clay; strongly pedal, polyhedral structure with prominent small slickensides; pH 8.5; clear and wavy boundary to:
B22ss	30/40-65/75	Dark reddish brown (5YR3/2 moist); medium clay; prismatic, polyhedral and lenticular structure, frequent large (>300 mm) slickensides; pH 9.2; wavy and abrupt to clear boundary to:
B23kss	65/75+	Dark greyish brown (2.5Y4/2 moist) or grey (2.5Y5/1); light clay; with very large slickensides (up to 1 metre) and abundant large patches of whitish soft carbonate.

Management considerations

Deep fertile soil with strongly structured surface. Shrinking and cracking constitutes a major hazard for engineering works (buildings, roads, power poles). Sodidity of the soil is high and this, coupled with the high clay content, will limit water movement through the profile.

¹ Source: MacEwan R, Imhof M (in press) Major Soils and Landscapes along the Southwest Gas Pipeline 1999. DPI

Analytical data²

Site 101 Horizon	Sample depth cm	pH		EC dS/m	NaCl %	Ex Ca cmole/kg	Ex Mg cmole/kg	Ex K cmole/kg	Ex Na cmole/kg	Ex Al mg/kg	Ex Acidity cmole/kg	FC -10kPa %	PWP -1500kPa %	KS %	FS %	Z %	C %
		H ₂ O	CaCl ₂														
A1	0-10	6.9	5.9	0.28	0.03	7.8	8.8	0.7	4.0	N/R	N/R	42.1	23.4	5.7	23.8	21	41
B21t	15-30	8.5	7.8	0.92	0.15	11.0	15.0	1.0	16	N/R	N/R	74.2	36.7	3	10.8	22.5	54.5
B22ss	40-60	9.2	8.6	1.0	0.20	8.7	14.0	1.0	17	N/R	N/R	61.4	34.3	4.6	21.8	35.5	32.5



Lovely Banks monocline in the basalt plain, view eastwards (You Yangs on the left). The road running across the image is the Bacchus Marsh-Geelong road. SW101 is situated in the pipeline trench near the road crossing



Trench section on the Lovely Banks Monocline slope showing shallower self mulching soil overlying highly calcareous subsoil

² Source: Government of Victoria State Chemistry Laboratory.