

Site code¹	MM5149
Location	Lal Lal Reservoir (Elaine Road), Gordon district, central Victorian Highlands
Landform	Gently undulating basalt rises
Geology	Quaternary Newer Volcanics: <i>extrusive tholeiitic to alkaline basalts, minor scoria and ash</i>
Element	Crest

Profile morphology

Horizon	Depth (cm)	Description
A1	0–25	Very dark greyish brown (10YR3/2); clay loam; weak coarse granular structure; firm consistence (dry); clear boundary to:
A2	25–45	Sporadically bleached, light grey (10YR7/2 dry); clay loam; common fine segregations; sharp boundary to:
B21	45–65	Very dark greyish brown (10YR3/2); heavy clay; strong coarse blocky structure; strong consistence (dry); gradual boundary to:
B22	65+	Dark greyish brown (2.5Y4/2) with brown (10YR5/8) mottles; heavy clay; strong coarse blocky structure; strong consistence (dry).

ASC: Melacic-Mottled, Eutrophic, Black Chromosol

Analytical data²

Site MM5149 Horizon	Sample depth cm	pH		EC	NaCl	Ex Ca	Ex Mg	Ex K	Ex Na	Ex Al	Ex acidity
		H ₂ O	CaCl ₂	dS/m	%	cmol _c /kg	cmol _c /kg	cmol _c /kg	cmol _c /kg	mg/kg	cmol _c /kg
A1	0–25	5.3	N/R	0.07	N/R	1.8	1.8	0.2	0.1	38	11.5
A2	25–45	5.8	N/R	0.03	N/R	1.3	1.3	0.1	0.2	15	11.2
B21	45–65	6.4	N/R	0.05	N/R	5.7	5.7	0.2	1.3	N/R	17.7
B22	65+	6.7	N/R	0.07	N/R	8	8	0.3	1.6	N/R	7.8

Site MM5149 Horizon	Sample depth cm	FC (-10kPa) %	PWP (-1500kPa) %	KS %	FS %	Z %	C %	Org C %	Bulk density t m ⁻³
A1	0–25	43.8	19.7	6	32	26	28	4.4	1.05
A2	25–45	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R
B21	45–65	50.2	31.1	5	13	10	68	N/R	1.12
B22	65+	N/R	N/R	5	12	13	68	N/R	N/R

Management considerations

Strong texture contrast between the surface soil and the subsoil is a very important soil feature and may impact upon subsoil permeability. Sporadically bleached A2 horizons containing many fine segregations are key features of this profile while mottled subsoils are other prominent features of this soil type.

The application of gypsum would be suitable for soil structure and improved permeability, while increasing organic matter and maintaining vegetative cover is important to help improve the soil structure. Penetration by deep-rooted crops is also a recommended management practice.

¹ Source: Maher JM, Martin JJ 1987 Soils and landforms of south-western Victoria. Department of Agriculture and Rural Affairs. Research Report No. 40.

² Source: Government of Victoria, State Chemistry Laboratory.