

Site code¹	MM5150
Location	Lal Lal Reservoir (Rotten Lane), Gordon district, central Victorian Highlands
Landform	Gently undulating plains
Geology	Neogene fluvial post Newer Volcanic hillwash: <i>gravel, sand, silt</i>
Element	Mid slope

Profile morphology

Horizon	Depth (cm)	Description
A1	0–20	Very dark greyish brown (10YR3/2); sandy loam; apedal massive structure; weak consistence (dry); clear boundary to:
A2	20–65	Pale brown (10YR6/3), sporadically bleached, light grey (10YR7/2 dry); sandy loam; apedal massive structure; weak consistence (dry); boundary to:
B21	65+	Yellowish brown (10YR5/6) with yellowish brown (7.5YR5/8) mottles; medium clay; strong coarse blocky structure; firm consistence (moderately moist).

ASC: Melanic-Mottled, Dystrophic, Brown Chromosol

Analytical data²

Site MM5150 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	0–20	5.5	N/R	0.06	N/R	0.6	0.6	0.2	0.1	N/R	9.3
A2	20–65	5.9	N/R	0.01	N/R	0.2	0.2	0	0	N/R	15.1
B21	65+	5.7	N/R	0.03	N/R	0.6	0.6	0.1	0.2	N/R	5.7

Site MM5150 Horizon	Sample depth cm	FC (-10kPa) %	PWP (-1500kPa) %	KS %	FS %	Z %	C %	Org C %	Bulk density t m ⁻³
A1	0–20	17.9	5.3	41	37	10	10	2.3	1.32
A2	20–65	N/R	N/R	39	40	10	10	N/R	N/R
B21	65+	31.1	14	20	31	6	41	N/R	1.56

Management considerations

Strong texture contrast between the sandy topsoil and the medium clay subsoil is a very important soil feature and may impact upon subsoil permeability. The sporadically bleached A2 horizon is a key feature 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 and hold the sandy topsoil in place. 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.