

ACIDIC SANDY LOAM OVER BROWN CLAY ON ROCK

General Description: *Thick sandy surface soil with abundant stone and gravel, overlying a yellow brown and grey brown firm clay subsoil, grading to weathering metamorphosed sandstone.*

Landform: Slopes of undulating to rolling low hills of the north eastern Mt. Lofty Ranges

Substrate: Metamorphosed sandstones of the Backstairs Passage Formation

Vegetation: Blue gum and red gum woodland

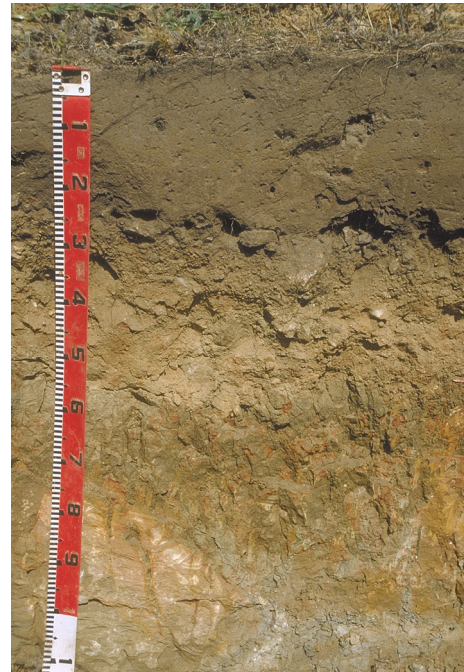


Type Site:	Site No.:	CH035	1:50,000 mapsheet:	6728-4 (Angaston)
	Hundred:	Jutland	Easting:	326450
	Section:	485	Northing:	6165700
	Sampling date:	11/12/92	Annual rainfall:	595 mm average

Lower slope of undulating low hills, 8% slope. Firm surface, with negligible stone.

Soil Description:

Depth (cm)	Description
0-20	Very dark grey soft sandy loam with weak granular structure. Abrupt to:
20-35	Brown soft massive coarse sandy loam, with more than 50% quartz gravel and stones. Clear to:
35-50	Yellowish brown and brown soft massive loamy sand. Abrupt to:
50-70	Greyish brown, brown and red mottled medium clay with coarse blocky structure and up to 50% metasandstone fragments. Abrupt to:
70-120	Weathering metasandstone with clay in fissures.



Classification: Bleached-Mottled, Eutrophic, Grey Chromosol; thick, non-gravelly, loamy / clayey, moderate



Summary of Properties

- Drainage:** Moderately well drained. The soil is unlikely to remain wet for more than a week or so.
- Fertility:** Moderate natural fertility, as indicated by the exchangeable cation data. Acidification will further reduce nutrient retention capacity. Extractable phosphorus and potassium levels are high at pit site, but copper and exchangeable calcium, magnesium and potassium levels are low. Organic carbon levels are satisfactory.
- pH:** Acidic at surface, slightly acidic with depth. Dolomitic lime will correct pH problem.
- Rooting depth:** 70 cm in pit.
- Barriers to root growth:**
- Physical:** None apparent.
 - Chemical:** Low fertility in subsurface layers, particularly the 35-50 cm layer.
- Waterholding capacity:** 70 mm in rootzone (moderate).
- Seedling emergence:** Good, except where organic matter is severely depleted.
- Workability:** Good.
- Erosion Potential:**
- Water:** Moderate (8% slope).
 - Wind:** Moderately low to low.

Laboratory Data

Depth cm	pH H ₂ O	pH CaCl ₂	CO ₃ %	EC1:5 dS/m	ECe dS/m	Org.C %	Avail. P mg/kg	Avail. K mg/kg	SO ₄ mg/kg	Boron mg/kg	Trace Elements mg/kg (EDTA)				CEC cmol (+)/kg	Exchangeable Cations cmol(+)/kg				ESP
											Cu	Fe	Mn	Zn		Ca	Mg	Na	K	
Paddock	5.6	5.1	0	0.09		1.8	58	330	-	0.7	0.62	284	18.6	2.87	4.3	3.31	0.72	0.17	0.36	4.0
0-20	5.3	4.8	0	0.05	0.25	1.6	91	380	-	0.5	-	-	-	-	5.6	3.46	0.59	0.21	0.28	3.8
20-35	5.3	4.8	0	0.03	0.10	0.37	20	200	-	0.5	-	-	-	-	3.4	2.07	0.64	0.11	0.13	3.2
35-50	5.7	5.1	0	0.03	0.08	0.20	8	190	-	0.2	-	-	-	-	2.9	1.42	1.10	0.15	0.06	5.2
50-70	5.6	5.0	0	0.04	0.10	0.27	3	210	-	0.6	-	-	-	-	8.2	2.51	5.28	0.32	0.19	3.9
70-120	6.5	5.7	0	0.03	0.12	0.01	3	220	-	<0.1	-	-	-	-	2.4	1.09	3.27	0.77	0.05	n.a.

Note: Paddock sample bulked from 20 cores (0-10 cm) taken around the pit.
CEC (cation exchange capacity) is a measure of the soil's capacity to store and release major nutrient elements.
ESP (exchangeable sodium percentage) is derived by dividing the exchangeable sodium value by the CEC.

Further information: [DEWNR Soil and Land Program](#)

