

## ACIDIC SANDY LOAM OVER BROWN CLAY ON ROCK

**General Description:** *Sandy to loamy surface soil with variable stone and gravel, overlying a brown, yellow and red, well structured clay subsoil, grading to weathering schist or micaceous sandstone.*

**Landform:** Slopes of undulating to rolling low hills of the north-eastern Mount Lofty Ranges

**Substrate:** Weathering sandy schists or micaceous sandstones of the Backstairs Passage Formation

**Vegetation:** Red gum woodland



<b>Type Site:</b>	Site No.:	CH029	1:50,000 mapsheet:	6728-3 (Tepko)
	Hundred:	Tungkillo	Easting:	321800
	Section:	1103	Northing:	6139700
	Sampling date:	12/01/93	Annual rainfall:	655 mm average

Upper slope of rolling low hills, 12% slope. Firm surface with minor outcrop and surface boulders of metasandstone.

### Soil Description:

Depth (cm)	Description
0-10	Dark greyish brown massive sandy loam. Gradual to:
10-30	Dark greyish brown massive sandy loam. Diffuse to:
30-50	Dark brown massive heavy sandy loam with 10% metasandstone gravel. Abrupt to:
50-75	Very dark grey, yellowish brown and dark red medium heavy clay with strong coarse angular blocky structure, and up to 50% metasandstone fragments. Abrupt to:
75-100	Hard micaceous sandstone.



**Classification:** Haplic, Eutrophic, Black Kurosol; thick, slightly 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:** High natural fertility, as indicated by the high cation exchange capacity of the subsoil. Magnesium is low relative to calcium and potassium, and copper is deficient. Phosphorus levels are marginal. Organic carbon levels are high.
- pH:** Acidic throughout. Dolomite is required for correction.
- Rooting depth:** 75 cm in pit (i.e. to rock).
- Barriers to root growth:**
- Physical:** Shallow depth to rock.
  - Chemical:** Acidity will restrict root growth if pH falls further.
- Waterholding capacity:** 90 mm in pit (moderate), but this is dependent on depth to rock.
- Seedling emergence:** Good.
- Workability:** Good to fair, depending on rock and stone cover, which can be extensive with this soil.
- Erosion Potential:**
- Water:** Moderately high, due to the slope.
  - Wind:** Low.

## Laboratory Data

Depth cm	pH H <sub>2</sub> O	pH CaCl <sub>2</sub>	CO <sub>3</sub> %	EC1:5 dS/m	ECe dS/m	Org.C %	Avail. P mg/kg	Avail. K mg/kg	SO <sub>4</sub> 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	5.7	5.2	0	0.07	0.31	2.4	24	380	-	1.2	1.32	370	59	9.1	11.2	9.16	1.78	0.17	0.65	1.5
0-10	5.6	4.9	0	0.05	0.23	1.8	10	420	-	0.7	-	-	-	-	7.4	5.05	1.02	0.16	0.57	2.2
10-30	5.2	4.5	0	0.03	0.13	0.69	5	360	-	0.5	-	-	-	-	5.8	2.78	0.80	0.17	0.49	2.9
30-50	5.2	4.5	0	0.03	0.12	0.40	5	380	-	0.4	-	-	-	-	5.4	2.93	1.12	0.24	0.43	4.4
50-75	5.2	4.6	0	0.06	0.13	0.84	5	520	-	1.5	-	-	-	-	20.0	8.64	7.52	0.47	0.99	2.4

**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](#)

