

## SANDY LOAM OVER RED SANDY CLAY ON ROCK

**General Description:** *Medium thickness gritty loamy sand to sandy loam over a red sandy clay, slightly calcareous at depth, grading to weathering granite, often shallower than 50 cm.*

**Landform:** Undulating rises, often with granite tors.

**Substrate:** Granite.

**Vegetation:**

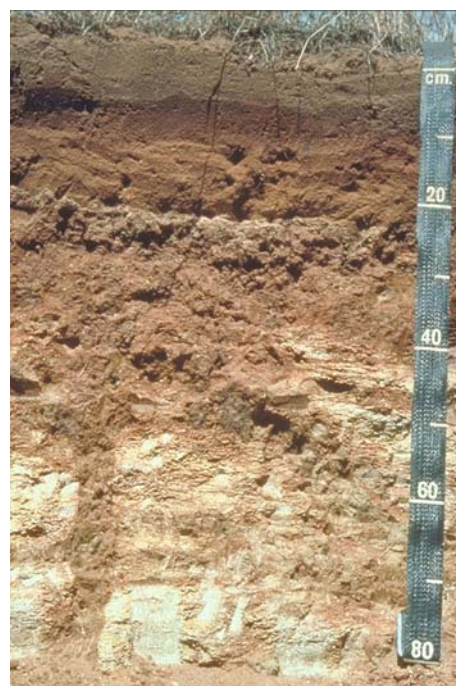


**Type Site:** Site No.: MO017

1:50,000 sheet:	6727-4 (Monarto)	Hundred:	Mobilong
Annual rainfall:	350 mm	Sampling date:	1976
Landform:	Upper slope of gently sloping rise, 3% slope		
Surface:	Firm with occasional granite stones		

### Soil Description:

Depth (cm)	Description
0-9	Reddish brown soft massive sandy loam with 2-10% quartz gravel (2-6 mm). Sharp to:
9-19	Yellowish red soft massive loamy sand with minor quartz gravel. Clear to:
19-22	Reddish yellow soft massive loamy sand with minor quartz gravel. Sharp to:
22-30	Red and brown firm sandy light clay with weak slightly domed subangular blocky structure. Clear to:
30-40	Reddish brown hard sandy light clay with weak platy structure, 20-50% granite fragments and minor fine carbonate segregations. Gradual to:
40-90	Weathering granite with pockets of clay.



**Classification:** Hypocalcic, Mesonatric, Red Sodosol; medium, slightly gravelly, loamy / clayey, shallow

## *Summary of Properties*

- Drainage:** Well drained. Soil rarely remains wet for more than a few days following heavy or prolonged rainfall.
- Fertility:** Inherent fertility is moderately low, as indicated by the exchangeable cation data. Most surface nutrient retention capacity is attributable to organic matter. Adequate reserves of macro nutrients are held in the subsoil clay, but phosphorus and nitrogen are widely deficient.
- pH:** Neutral at the surface, slightly alkaline with depth.
- Rooting depth:** Not recorded. Estimate 40 cm in pit, with a few roots to 90 cm in clay pockets.
- Barriers to root growth:**
- Physical:** The subsoil clay imposes a slight to moderate restriction, due to high density. Granite is at variable depth. Where shallower than 50 cm, there is a significant restriction on root growth.
- Chemical:** There are no chemical barriers.
- Water holding capacity:** Approximately 50 mm in the root zone.
- Seedling emergence:** Satisfactory.
- Workability:** Firm surface is easily worked.

## **Erosion Potential**

- Water:** Moderately low to moderate, depending on slopes.
- Wind:** Moderately low.

## *Laboratory Data*

Depth cm	Coarse sand %	Fine sand %	Silt %	Clay %	pH H <sub>2</sub> O	CO <sub>3</sub> %	EC 1:5 dS/m	Cl mg/kg	CEC cmol (+)/kg	Exchangeable Cations cmol(+)/kg				ESP
										Ca	Mg	Na	K	
0-9	48	40	1	10	7.2	0	0.09	<50	6	2.9	0.87	1.1	0.84	19.3
22-30	31	19	2	44	7.7	0	0.12	115	12	4.9	3.9	1.6	0.93	14.1
30-40	15	10	2	62	7.6	2	0.19	104	19	7.4	6.5	3.1	1.7	16.6

**Note:** CEC (cation exchange capacity) is a measure of the soil's capacity to store and release major nutrient elements. CEC at this site is estimated from the sum of exchangeable cations.

ESP (exchangeable sodium percentage) is derived by dividing the exchangeable sodium value by the CEC.