

## SHALLOW SANDY LOAM OVER ROCK

**General Description:** *Shallow stony loamy sand to sandy loam becoming more clayey with depth over weathering coarse grained basement rock mantled by secondary carbonate.*

**Landform:** Undulating rises.

**Substrate:** Schist mantled by fine carbonate.

**Vegetation:**

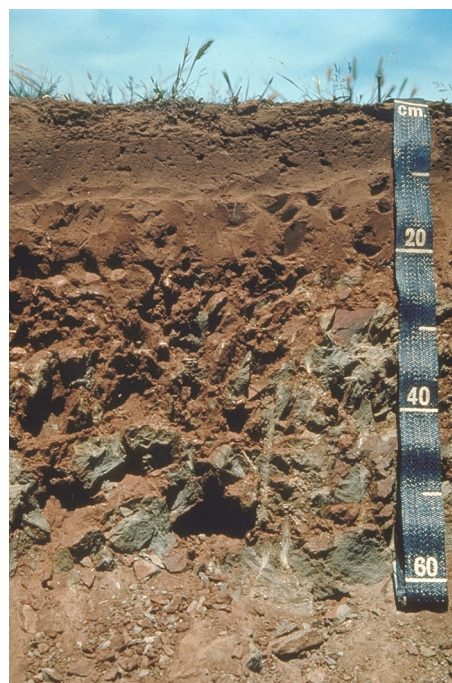


<b>Type Site:</b>	Site No.:	MO020	1:50,000 mapsheet:	6727-4 (Monarto)
	Hundred:	Monarto	Easting:	329030
	Section:	198	Northing:	6115750
	Sampling date:	1976	Annual rainfall:	415 mm average

Lower slope of long gentle rise, 5% slope. Firm surface with schist stones.

### Soil Description:

Depth (cm)	Description
0-10	Reddish brown soft massive loamy sand with minor quartz gravel. Clear to:
10-17	Dark reddish brown soft massive loamy sand. Clear to:
17-23	Reddish brown soft massive sandy loam with 10-20% rock fragments. Sharp to:
23-30	Dark reddish brown firm massive loam with more than 50% rock fragments. Sharp to:
30-45	Weathering schist with pockets of loam (as above) and fine white carbonate.



**Classification:** Sodic, Calcic, Red Kandosol; medium, gravelly, sandy / loamy, very shallow



## Summary of Properties

- Drainage:** Well drained. The soil is never saturated for more than a few days.
- Fertility:** Inherent fertility is moderately low, as indicated by the exchangeable cation data. Low clay content limits nutrient retention capacity.
- pH:** Neutral at the surface, alkaline with depth.
- Rooting depth:** Not recorded. Estimate 30 cm in pit.
- Barriers to root growth:**
- Physical:** Hard rock at shallow depth is the over-riding limitation.
  - Chemical:** There are no chemical barriers.
- Waterholding capacity:** Approximately 40 mm in the rootzone.
- Seedling emergence:** Satisfactory.
- Workability:** The soft surface is easily worked, but surface stone and rocky outcrop interfere with tillage.
- Erosion Potential:**
- Water:** Moderately low to moderate.
  - Wind:** 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	
0-10	26	64	2	6	7.3	0	0.08	<50	3	2.0	0.43	0.03	0.95	na
10-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17-23	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23-30	13	54	12	22	9.2	29	0.23	68	11	4.2	3.7	1.9	1.3	17.1
30-45	-	-	-	-	-	-	-	-	-	-	-	-	-	-

**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.

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

