

# PEAT

**General Description:** *Moderately deep to deep soil dominated by organic matter*

**Landform:** Waterlogged flats and swamps.

**Substrate:** Variable, usually alluvium.

**Vegetation:** Rushes, sedges.



**Type Site:** Site No.: CH124  
1:50,000 sheet: 6627-3 (Willunga) Hundred: Myponga  
Annual rainfall: 850 mm Sampling date: 01/06/00  
Landform: Swampy flat between rolling low hills.  
Surface: Soft (moist) with no stones.

## Soil Description:

<i>Depth (cm)</i>	<i>Description</i>
0-13	Very dark grey friable (moderately moist) fibrous peat. Clear to:
13-50	Black friable (moist) loamy peat. Gradual to:
50-80	Black friable (moist) loamy peat. Clear to:
80-100	Very dark brown friable (wet) loamy peat.



**Classification:** Regolithic, Acidic, Sapric, Organosol; thick

## Summary of Properties

- Drainage:** Poorly drained. Soil remains wet for several months at a time, depending on the effects of drains.
- Fertility:** Inherent fertility is moderate, but due mainly to the high nutrient retention capacity of the organic matter. Phosphorus and manganese concentrations are very low. Calcium to magnesium ratios are also low. Liming to correct acidity is necessary prior to any fertilizer inputs.
- pH:** Strongly acidic throughout.
- Rooting depth:** Roots extending below 100 cm.

### Barriers to root growth:

- Physical:** No barriers, apart from water tables where present.
- Chemical:** There are no toxic concentrations of salts, but acidity and low subsoil trace element levels restrict root growth.

**Water holding capacity:** Moderately low.

**Seedling emergence:** Satisfactory.

**Workability:** Restricted by wetness. When moderately moist, no restriction.

### Erosion Potential

- Water:** Low.
- Wind:** Moderately low - soil becomes fluffy when dry and cultivated. Bulk density is 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> -S 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	
0-13	4.6	4.1	0	0.50	-	32.0	<3	347	86	1.1	2.2	1900	6.7	9.6	30.9	11.8	11.8	1.6	1.1	5.2
13-50	4.1	3.5	0	0.48	-	31.5	<3	34	85	0.9	<0.2	43	<0.2	<0.2	29.3	4.9	6.7	1.5	0.2	5.1
50-80	4.4	3.8	0	0.28	-	23.8	<3	25	99	0.5	2.7	170	<0.2	0.9	25.7	3.9	6.1	0.8	0.2	3.1
80-100	4.8	4.1	0	0.20	-	17.2	<3	62	59	<0.2	3.3	61	<0.2	1.5	22.7	1.9	3.4	0.8	0.3	3.5

**Note:** 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.