

## PO6: Parapanic, Humic, Semiaquic Podsol

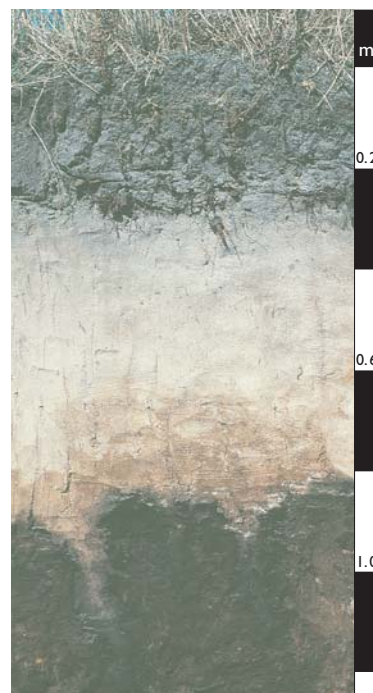
### General description of the soil

A Podsol with short-term saturation and a strongly coherent, variably cemented Bh horizon (coffee rock).

<b>Distribution:</b>	Probably a common soil – widely occurring where Podosols have been recorded.
<b>Typical land use:</b>	Often cleared for improved pasture and horticulture in favourable environments.
<b>Common variants:</b>	Variable development of the A1 and Bh horizons.
<b>World Reference Base:</b>	Densic Podzol.
<b>Other names:</b>	Podzols and Humus Podzols.

### Environment and location of the example profile

<b>Landform:</b>	Gently undulating sand plain.
<b>Parent material or substrate:</b>	Quaternary aeolian sand.
<b>Drainage class:</b>	Imperfectly drained.
<b>Surface condition:</b>	Loose.
<b>Site disturbance:</b>	Cleared.

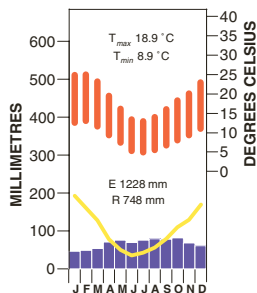


Near Cranbourne, south-east of Melbourne, Victoria

### Site location



### Site climate



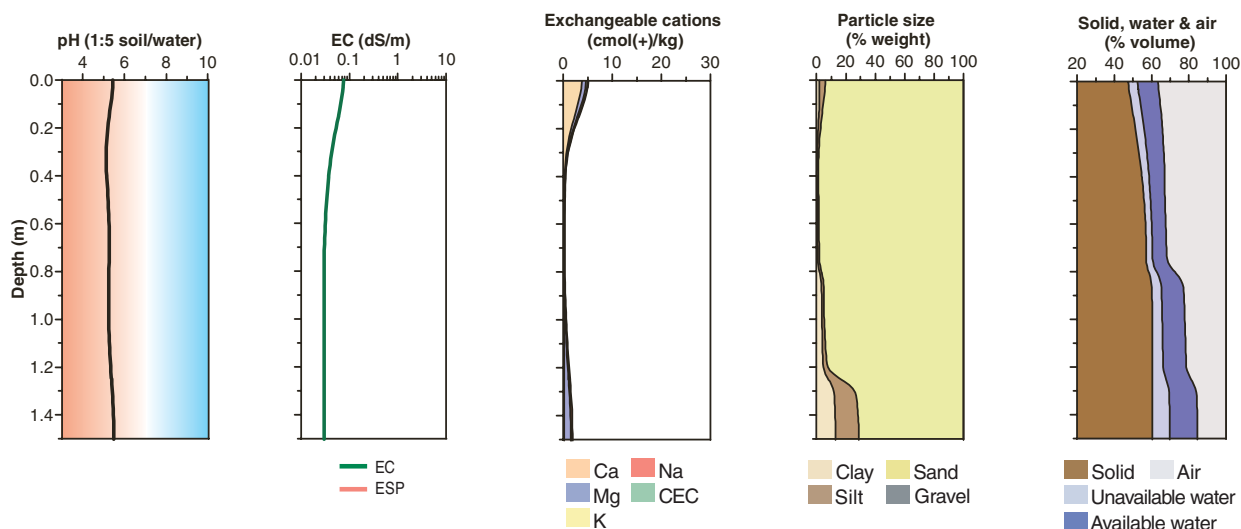
### Soil morphology

Horizon	Depth (m)	Colour	Mottles	Texture	Structure			Consistence	Coarse fragments	Segregations	Boundary
					Grade	Shape	Size				
A1	0.00–0.15	black (10YR 2/1)	–	loamy sand	single grain	–	–	very weak (dry)	–	–	clear
A21e	0.15–0.40	greyish brown (10YR 5/2) light grey (10YR 7/1 d)	–	sand	single grain	–	–	loose (dry)	–	–	clear
A22e	0.40–0.80	very pale brown (10YR 7/3) light grey (10YR 7/1 d)	–	sand	single grain	–	–	loose (dry)	–	–	sharp tongued
Bh	0.80–1.25	very dark brown (10YR 2/2)	some pipeyness	sand	massive	–	–	strong (dry)	–	variably cemented sand (coffee rock)	abrupt
C	1.25–1.27	light grey (10YR 7/2)	–	sand					–	–	abrupt
D	1.27+	grey (10YR 6/1)	yellowish brown (10YR 5/6)	fine sandy loam	weak				–	–	

### Soil chemical and physical properties

Horizon	Sample Depth (m)	pH H <sub>2</sub> O <sup>A</sup>	pH CaCl <sub>2</sub> <sup>B</sup>	Elect. Cond. dS/m <sup>A</sup>	CaCO <sub>3</sub> %	Org. C % <sup>A</sup>	Extr. P mg/kg	Tot. P %	Tot. K %	Cation exchange properties <sup>1</sup> cmol(+)/kg						ESP %	Bulk dens. Mg/m <sup>3</sup>	Particle size % <sup>G</sup>					
										Ca	Mg	K	Na	H+Al	CEC			ECEC	CS	FS	Silt	Clay	
A1	0.00–0.15	5.4	4.4	0.07		2.6				3.4	0.8	0.3	0.2				–		48	42	3	2	
A21e	0.15–0.40	5.0	3.8	< 0.05						0.1	0.1	0.1	<0.1				–		54	40	1	1	
A22e	0.40–0.80	5.3	4.1	< 0.05						0.1	<0.1	<0.1	<0.1				–		52	44	1	1	
Bh	0.80–1.25	5.2	4.3	< 0.05		0.9				0.1	0.2	0.1	0.1				–		45	45	2	4	
C	1.25–1.27																						
D	1.27+	5.5	4.2	< 0.05						0.2	1.4	0.1	0.3				–		16	56	16	13	

Key profile properties



General qualities of the soil

Infiltration:	Rapid.
Available water store:	Small.
Permeability:	High above the layer of coffee rock.
Physical root limitations:	Rooting depth will be restricted by the coffee rock and short-term saturation may restrict aeration.
Erosion hazard:	Sandy surface soil is prone to wind erosion if vegetation cover is removed.
Nutrient availability:	Surface soil layers have very low inherent fertility.
Toxicities:	None apparent.



Podosols on cleared, gently undulating sand dunes used for horticulture near Cranbourne, Victoria

Acknowledgements: Soil image, soil description and laboratory data: Department of Primary Industries, Victoria. Site GP 20, Cranbourne. Landscape image: Qasco Victoria.