

## HY6: Humose, Dermosolic, Redoxic Hydrosol

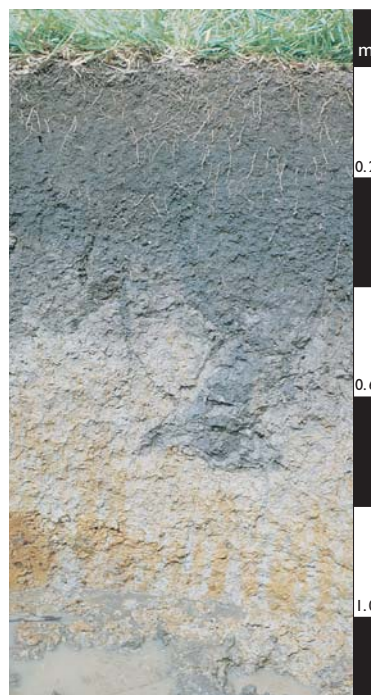
### General description of the soil

A seasonally wet, mottled, structured, clayey soil that has a well-developed humic A horizon.

<b>Distribution:</b>	A common soil on the seasonally wet coastal lowlands of south-east Queensland and likely to occur elsewhere in similar environments.
<b>Typical land use:</b>	Nature conservation and cattle grazing of improved pastures, mainly <i>Paspalum dilatatum</i> .
<b>Common variants:</b>	Variable thickness of the humic A1 horizon and a range of colours and mottles in the Bg horizons.
<b>World Reference Base:</b>	Umbric Gleysol.
<b>Other names:</b>	Commonly known as a Humic Gley.

### Environment and location of the example profile

<b>Landform:</b>	Flat to gently sloping alluvial plain.
<b>Parent material or substrate:</b>	Unconsolidated alluvium.
<b>Drainage class:</b>	Very poorly drained.
<b>Surface condition:</b>	Firm.
<b>Site disturbance:</b>	Cleared. Previously cultivated.
<b>Native vegetation:</b>	Open forest dominated by <i>Melaleuca quinquenervia</i> .

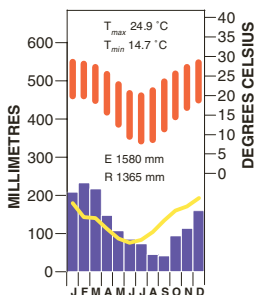


Caloundra district, south-east Queensland

### Site location



### Site climate



### Soil morphology

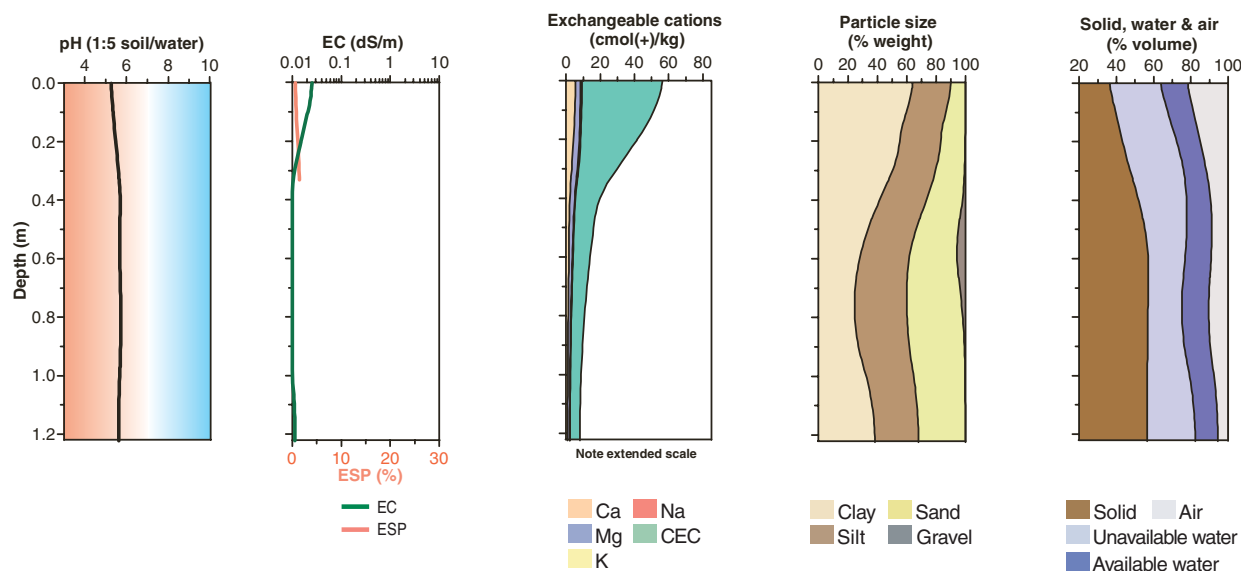
Horizon	Depth (m)	Colour	Mottles	Texture	Structure			Consistence	Coarse fragments	Segregations	Boundary
					Grade	Shape	Size				
A11g	0.00–0.10	very dark grey (10YR 3/1)	–	fibric clay loam	strong	granular	5–10 mm	weak (moist)	–	–	clear
A12g	0.10–0.20	very dark grey (10YR 3/1)	–	fibric light clay	strong	subangular blocky	10–20 mm	weak (moist)	–	–	gradual
A13g	0.20–0.33	dark grey (10YR 4/1)	light grey (10YR 7/1) faint	medium heavy clay	strong	prismatic	100–200 mm	strong (dry)	–	–	gradual
B21g	0.33–0.46	light grey (10YR 7/2)	brownish yellow (10YR 6/6) faint	silty medium clay	strong	prismatic	100–200 mm	strong (dry)	–	–	gradual
B22g	0.46–0.66	white (10YR 8/1 d)	yellow (10YR 7/8) distinct	silty clay loam	weak	prismatic	100–200 mm	firm (dry)	–	2–10% ferruginous nodules	diffuse
B23g	0.66–0.97	white (10YR 8/1 d)	pale yellow (2.5Y 8/4) distinct and yellow (10YR 7/6) distinct	fine sandy clay loam	massive	–	–	very weak (moist)	–	–	diffuse
D	1.02–1.22	white (2.5Y 8/0 d)	brownish yellow (10YR 6/8) distinct and red (10YR 4/8) distinct	medium clay	massive	–	–	–	–	–	–

### Soil chemical and physical properties

Horizon	Sample Depth (m)	pH H <sub>2</sub> O <sup>A</sup>	pH CaCl <sub>2</sub>	Elect. Cond. dS/m <sup>A</sup>	CaCO <sub>3</sub> %	Org. C % <sup>F</sup>	Extr. P mg/kg <sup>B</sup>	Tot. P % <sup>F</sup>	Tot. K %	Cation exchange properties <sup>A</sup>						ESP % <sup>C</sup>	Bulk dens. Mg/m <sup>3</sup>	Particle size % <sup>E</sup>				
										cmol(+)/kg								Ca	Mg	K	Na	H+Al <sup>E</sup>
A11g	0.00–0.10	5.3		0.03		8.1	6	0.045		5.4	3.0	0.5	0.4	44.8		54	1		1	7	21	52
A12g	0.10–0.20	5.4		0.02		4.6													1	16	26	50
A13g	0.20–0.33	5.6		0.01		2.6		0.017		3.7	3.8	0.3	0.5	25.0		33	2		1	14	26	56
B21g	0.33–0.46	5.8		0.01		0.8				1.8	2.7	0.1	0.3	11.0		16	–		2	23	33	40

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										Ca	Mg	K	Na	H+Al <sup>E</sup>	CEC	ECEC			CS	FS	Silt	Clay	
B22g	0.46-0.66	5.6		0.01				0.009			1.1	1.4	0.1	0.2	7.0		10	-		3	32	36	29
B23g	0.66-0.97	5.8		0.01																5	37	38	19
D	1.02-1.22	5.6		0.01																3	28	29	41

## Key profile properties



## General qualities of the soil

<b>Infiltration:</b>	Slow or less when saturated.
<b>Available water store:</b>	Moderate to large.
<b>Permeability:</b>	Low.
<b>Physical root limitations:</b>	Restricted aeration.
<b>Erosion hazard:</b>	Low.
<b>Nutrient availability:</b>	Mostly poor following loss of A1 horizon organic matter.
<b>Toxicities:</b>	None expected.



**Open forest of *Melaleuca quinquinervia*, south-east Queensland**

*Acknowledgements:* Soil image, soil description and laboratory data: CSIRO Land and Water. Profile B182. Landscape image: Australian National Botanic Gardens.