RU3: Basic, **Stratic Rudosol**

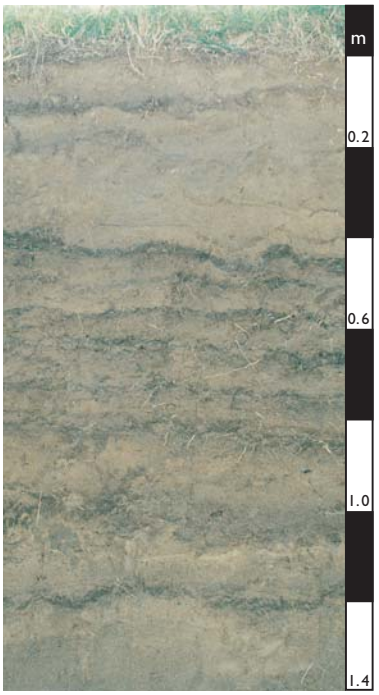
General description of the soil

This Rudosol is characterised by a number of alluvial depositional layers that have been little altered by pedogenic processes except at or near the surface. The uppermost depositional layers may be as young as recent floods.

Distribution:	Very common soils which occupy small areas on levees and low terraces adjacent to many streams and rivers throughout Australia, including occurrences in the arid zone.
Typical land use:	Some cropping and improved pastures. Flooding is a major hazard.
Common variants:	Texture varies markedly between profiles and often within a profile, ranging from sands and sandy loams to sandy clays. Layers of gravel may occur, particularly in the upper reaches of catchments.
World Reference Base:	Hypereutric Fluvisol.
Other names:	Commonly known as Alluvial Soils.

Environment and location of the example profile

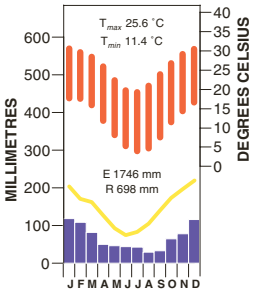
Landform:	Levees.
Parent material or substrate:	Alluvial sediments.
Drainage class:	Well-drained.
Surface condition:	Loose.
Site disturbance:	Cleared and cultivated.
Native vegetation:	*Eucalyptus tereticornis* and *Casuarina* woodland.



Stratified alluvium on a channel of the Logan River, south-east Queensland

Site location

Site climate



Soil morphology

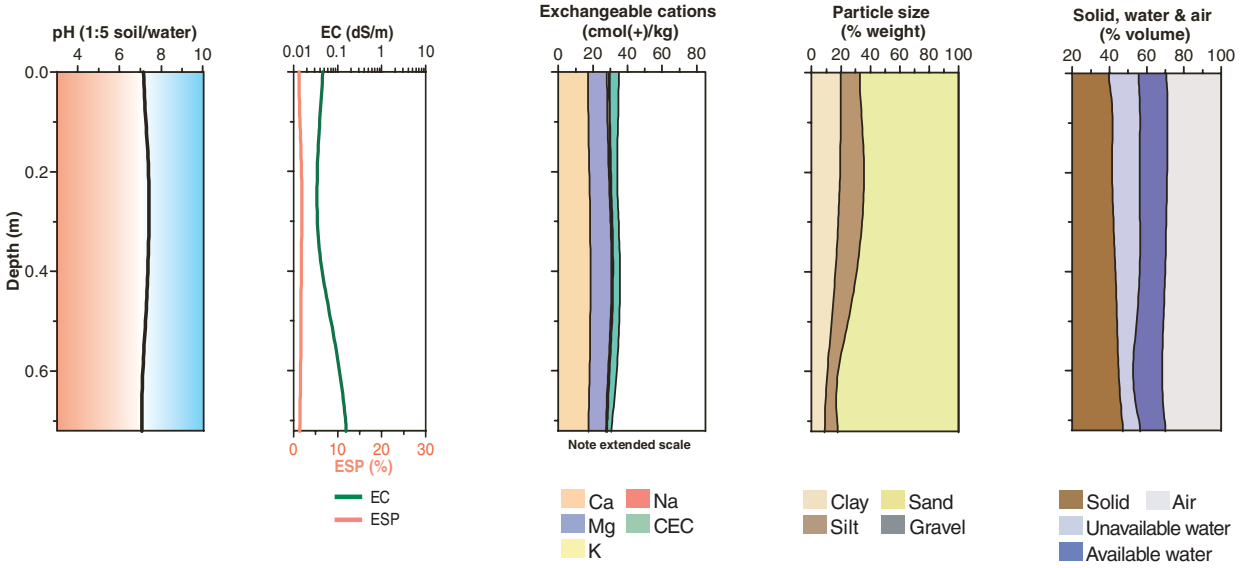
Horizon	Depth (m)	Colour	Mottles	Texture	Structure			Consistence	Coarse fragments	Segregations	Boundary
					Grade	Shape	Size				
A1	0.00–0.08	brown (7.5YR 4/3)	–	loamy sand	single grain	–	–		–	–	abrupt
2A11	0.08–0.12	dark brown (7.5YR 3/2)	–	sandy clay loam	massive	–	–		–	–	abrupt
2A12	0.12–0.20	brown (7.5YR 4/3)	–	loamy sand	single grain	–	–		–	–	abrupt
2A13	0.20–0.38	brown (7.5YR 4/3)	–	sandy loam	single grain	–	–		–	–	abrupt
3A11	0.38–0.44	dark brown (7.5YR 3/2)	–	sandy clay loam	massive	–	–		–	–	abrupt
3A12	0.44–0.55	brown (7.5YR 4/3)	–	loamy sand	single grain	–	–		–	–	abrupt
4A11	0.55–0.63	dark brown (7.5YR 3/2)	–	sandy clay loam	massive	–	–		–	–	abrupt
4A12	0.63–0.70	brown (7.5YR 4/3)	–	loamy sand	single grain	–	–		–	–	abrupt
5A1	0.70–0.72	dark brown (7.5YR 3/2)	–	sandy clay loam	massive	–	–		–	–	

Soil chemical and physical properties

Horizon	Sample Depth (m)	pH H_2O[A]	pH $CaCl_2$	Elect. Cond. dS/m[A]	$CaCO_3$ %	Org. C %[G*]	Extr. P mg/kg[B*]	Tot. P %	Tot. K %	Cation exchange properties[B] cmol(+)/kg							ESP %[A]	Bulk dens. Mg/m^3	Particle size %[I]			
										Ca	Mg	K	Na	H+Al	CEC	ECEC			CS	FS	Silt	Clay
A1	0.00–0.08	7.2		0.04		0.8	9			17	11.0	1.1	0.4		35		1		30	37	14	20
2A13	0.20–0.30	7.5		0.03						18	11.0	0.6	0.7		33		2		28	39	17	20
3A12	0.44–0.55	7.4		0.03						19	13.0	0.3	0.7		37		2		24	49	14	16
4A12	0.63–0.70	7.0		0.12						18	10.0	0.4	0.6		34		2		47	35	7	10
5A1	0.70–0.72	7.1		0.18						17	10.0	0.3	0.4		29		1		43	40	9	9

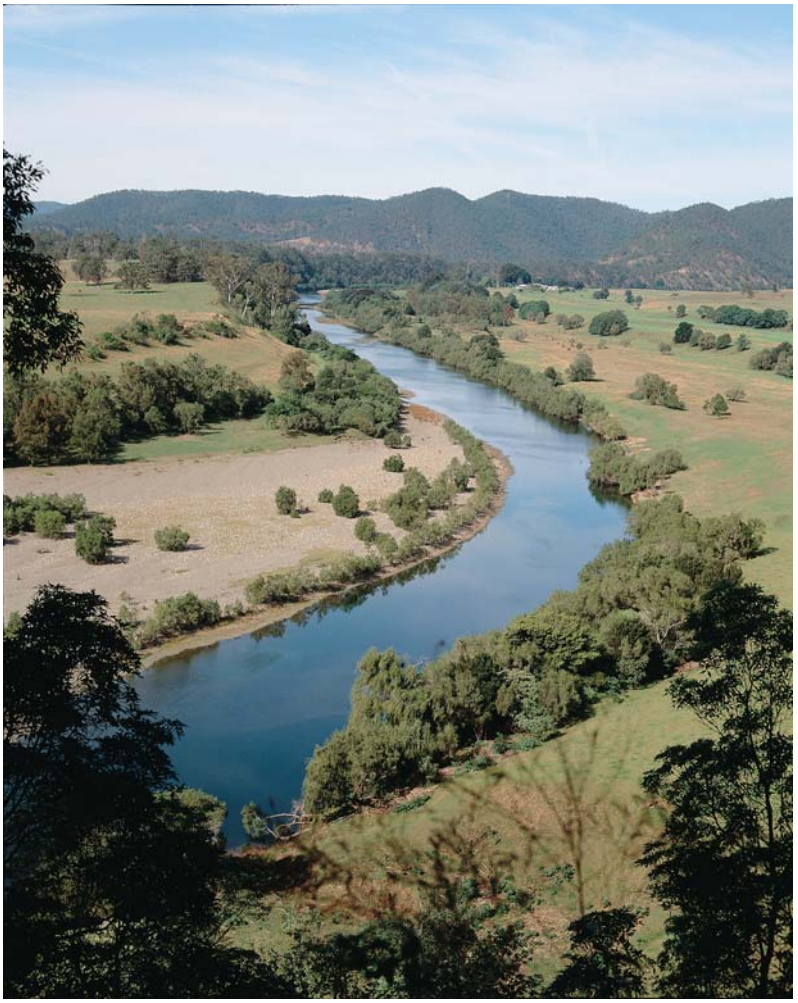
* Bulk sample
Note: Laboratory data for a similar soil.

Key profile properties



General qualities of the soil

Infiltration:	Usually rapid.
Available water store:	Often moderate to large but less in sandy material.
Permeability:	High.
Physical root limitations:	None.
Erosion hazard:	Moderate risk on unprotected surfaces. Susceptible to sheet, rill and streambank erosion.
Nutrient availability:	Very variable but can be high depending on the nature and origin of the sedimentary layers.
Toxicities:	None likely.



Stratic Rudosols are common on the channel benches, levees and low terraces that flank many streams and rivers. MacLeay River near Kempsey, New South Wales.

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