

798121

LOUISA PLAINS

This land system occurs in the south east of the study area around Louisa Plains, Deadmans Bay, New River Lagoon and Surprise Rivulet. It consists of undulating plains with some very poorly drained flats and depressions. Aerial photographs were used to examine the area north of New River Lagoon because of its inaccessibility. Alluvial fans from Precipitous Bluff and Pindars Peak (both in the South, East and Midlands Land Systems Survey area, Region 6 see Davies 1988) have been deposited (in this land system) immediately west of New River Lagoon. There could be significant amounts of Jurassic dolerite in soil profiles associated with these deposits. The most prominent features of the Louisa Plains area are the well drained knolls with tall, heathy vegetation, and raised surfaces, or river terraces, which may have resulted from Pleistocene sea level changes.

Most of the land system consists of undulating lowland blanket bog covered by sedgeland/heath although north of New River Lagoon it appears to be covered by thick scrub (possibly *Leptospermum* and *Melaleuca* spp.). Better drained sites on sand or those adjacent to creeks support forest or scrub vegetation. Riverine rainforest with occasional emergent *Eucalyptus nitida*, grows on deep alluvial soils next to the Louisa River. This is often surrounded by a belt of *Eucalyptus nitida*, *E. ovata*, *Melaleuca squamea*, *Leptospermum scoparium*, *Acacia verticillata*, *Monotoca glauca* and *Banksia marginata* scrub which probably results from fire encroachment into the wetter forests. Well drained slopes on the edges of the flats or tablelands

component were not examined in detail, but woodland or scrub dominated by *Eucalyptus nitida* with an understorey of *Banksia marginata*, *Restio tetraphyllus*, *Oxylobium ellipticum*, *Telopea truncata* and *Cenarrhenes nitida* dominate on these scarps.

Rainforest—sedgeland/heath boundaries occur in the Deadmans Bay area. The soil on the sedgeland/heath (land system 798121 — dominated by *Gymnoschoenus sphaerocephalus*, *Melaleuca* sp. and *Leptospermum* sp.) consists of black (fibrous and muck) peat (45 cm deep) over gravels. In contrast 20 m into the rainforest (land system 718252—dominated by *Nothofagus cunninghamii*, *Eucryphia lucida*, *Atherosperma moschatum* and *Phyllocladus aspleniifolius*) 5 cm of brown fibrous peat overlies a 60 cm sandy clay loam to sandy clay mineral soil. The rainforest is in the Ironbound Range land system where mineral soils have formed on relatively unmetamorphosed Precambrian sandstone and conglomerate units in comparison to this land system (798121) where soil profiles are dominated by organic soils on Precambrian quartzitic gravels.

Organic soils are vulnerable to sheet erosion from regular firing. Indications from a recently burnt area near Deadmans Bay suggest that 10 cm of peat was destroyed during a recent fire. In addition, flat lying bedrock has been exposed in places and estimations from other bogs in the area suggest up to 50 cm of peat has been lost.

Recreation and nature conservation are present land uses. The South Coast Track crosses this land system in a number of places. Track bifurcation, most notably on poorly drained flats and depressions, has resulted in the formation of muddy wallows. Track (rill) erosion has resulted in the loss of up to 30 cm of peat.

LAND SYSTEM
LOUISA PLAINS

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Area (ha): 8689

ALTITUDINAL RANGE:	0-300	APPROXIMATE ANNUAL RAINFALL (mm) 1500-2000		
SITE NO/ALTITUDE (m) /ASPECT	(16/30/-) (8/10/-)	13/20/-	(14/30/-)(8/10/S)	15/35/-
TOPOGRAPHY		Undulating plains		
Position:	Poorly drained flats and depressions	River banks	Well drained flats or tablelands	Well drained creek banks
Typical Slope ()	0-2	0	0-2	0-3
Proportion (%)	35	15	45	5
GEOLOGY		Peat deposits overlying gravel, sand and Precambrian quartzite		
NATIVE VEGETATION Structure	Open to closed-	Closed-forest	Open to closed-sedgeland/heath	Open to closed- scrub
Floristic Association. (See Appendix 1 for common names)	Leptospermum nitidum Melaleuca squamea Sprengelia incarnata Baeckea leptocaulis Gleichenia dicarpa Restio complanatus Empodisma minus Bauera rubioides Gymnoschoenus sphaerocephalus	Nothofagus cunninghamii Atherosperma moschatum Anodopetalum biglandulosum Anopterus glandulosus Eucryphia lucida Trochocarpa cunninghamii Grammitis billardieri Blechnum wattsi	Gymnoschoenus sphaerocephalus Sprengelia incarnata Bauera rubioides Baeckea leptocaulis Melaleuca squamea Leptospermum nitidum Lepyrodia tasmanica Leptocarpus tenax Boronia sp. Xyris sp. Banksia marginata Restio monocephalus Hibbertia	Banksia Marginata Empodisma minus Bauera rubioides Gymnoschoenus sphaerocephalus Gleichenia dicarpa Restio monocephalus Acaena novae-zelandiae
SOIL Surface (A or P horizon) Colour (wet) (moist) and	Blade (5 YR 2. 5/1) fibrous peat	Very dark brown (10 YR 2. 2) organic loam	Black (10 YR 2/1, 5 YR 2. 5/1) fibrous peat. Sometimes overlies a muck	Fibrous peat (no colour recorded)
Subsoil (B horizon) colour (moist) and texture	Waterlogged (unable to check)	Yellowish brown (10 YR 5/4) sandy clay loam over a light yellowish brown (10 YR 6/4)	Very dark grey (10 YR 3/1) silty clay loam over a very dark greyish brown (10 YR	Very dark grey (10 YR 3/1) silty clay loam
Primary Profile form	Organic	duplex (alluvium)	Organic	Uniform (alluvium)
Depth surface horizon (m)	>1. 05	0. 10-0. 15	0. 25-0. 40	0. 25
Typical total depth (m)	>1. 05	>0. 85	0. 60-0. 75	>1. 00
Permeability	High	High	High	Moderate
LAND USE		Nature conservation, recreation		
HAZARD		Moderate to high track erosion and High sheet erosion if burnt		