DIVISION OF LAND UTILISATION

QUEENSLAND DEPARTMENT OF PRIMARY INDUSTRIES

MACKAY SUGAR CANE LAND SUITABILITY STUDY

SOILS

by G.K. Holz and P.G. Shields

SCALE 1 : 100 000

KILOMETRES

2 0 2 4 6 8 10 12

GREY NUMBERED GRID LINES ARE 10000 METRE INTERVALS OF THE AUSTRALIAN MAP GRID, ZONE 55, CENTRAL MERIDIAN 147° E
GRID VALUES ARE SHOWN IN FULL ONLY AT THE SOUTH-WEST CORNER OF THE MAP.
NOTE: THE RELATIONSHIP OF MAPPED POSITIONS TO THE GRID IS SUBJECT TO ALTERATION.

Drawn by J.N. Jeffery and G.F.Finney

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REFERENCE

MAPPING UNIT	GREAT SOIL GROUP OF DOMINANT SOIL	MAJOR CHARACTERISTICS OF DOMINANT SOIL
SOILS OF UPLANDS DERIVED FROM ACID CRYSTALLINE TUFFS ON 1–4% SLOPES		
Me Marwood	podzol in deep A horizon of gleyed podzolic soil	acid, bleached sand with iron–organic B horizon in deep A horizon of acid, gleyed, duplex soil.
Mn Munbura	red–yellow podzolic soil	acid, bleached, red–yellow, massive, sandy, duplex to gradational soil.
SOILS OF UPLANDS DERIVED FROM ACID TO INTERMEDIATE INTRUSIVES AND DYKES		
SEDENTARY SOILS WITH COARSE SURFACE TEXTURES ON 2–10% SLOPES		
Du Dunwold	yellow–gleyed podzolic soil	acid, bleached, mottled, yellow–grey, sandy, duplex soil.
Sp Septimus	rudimentary podzol	acid, bleached, pale yellow sand.
Ub2 Uruba, sandy A horizon variant	no suitable group	acid, bleached, yellow, sandy, duplex to gradational soil.
ALLUVIAL–COLLUVIAL SOILS WITH COARSE SURFACE TEXTURES ON 0–4% SLOPES		
Ga Gargett	yellow–gleyed podzolic soil	neutral, bleached, mottled, yellow–grey, sandy, duplex soil.
Gat Gargett, deep A horizon variant	gleyed podzolic soil	acid, bleached, deep A horizon over gleyed clay.
Ta Tannalo	no suitable group	acid to neutral, brown, massive, sandy, gradational soil.
SEDENTARY SOILS WITH MEDIUM TO FINE SURFACE TEXTURES ON 3–20% SLOPES		
Fn Finch Hatton	no suitable group	neutral, red–brown, non–cracking clay to gradational soil.
Nl Netherdale	no suitable group	grey–brown, structured A horizon overlying neutral, decomposing granodiorite.
Pl Pinnacle	krasnozem	acid, red, non–cracking clay.
Ub Uruba	non–calcic brown soil to red–yellow podzolic soil	neutral, yellow–brown, duplex soil.
Fl Farleigh	no suitable group (affinities with non–calcic brown soil).	shallow, neutral, yellow–brown, duplex soil with dark A horizon.
ALLUVIAL–COLLUVIAL SOILS WITH MEDIUM TO FINE SURFACE TEXTURES ON 1–6% SLOPES		
Ke Kowari	no suitable group	stony, black loam.
Fnt Finch Hatton, alluvial–colluvial variant	no suitable group	neutral, brown–yellow, non–cracking clay to gradational soil.
Ub1 Uruba, alluvial–colluvial variant	no suitable group to yellow podzolic soil	neutral, mottled, yellow, duplex soil.
SOILS OF UPLANDS DERIVED FROM BASIC TO INTERMEDIATE VOLCANICS		
SEDENTARY SOILS ON 2–10% SLOPES		
Wg Wagoora	prairie soil	neutral, brown–yellow, gradational soil to non–cracking clay.
Wg1 Wagoora, basic parent material variant	prairie soil	neutral, brown–red, non–cracking clay to gradational soil.
Na Nabilla	prairie soil	neutral, brown gradational soil with abundant iron–manganese nodules.
Ro Royston	prairie soil	self–mulching, neutral, dark, non–cracking clay.
Mr Martin	minimal prairie soil	cobbly, neutral, yellow–brown, duplex to gradational soil.
Ku Kungurri	no suitable group	acid, reddish brown, gradational soil to non–cracking clay.
Gl Glenella	prairie soil	neutral, brown, gradational soil to non–cracking clay.
Hb Habana	no suitable group	cobbly, acid, yellow–brown, gradational soil.
ALLUVIAL–COLLUVIAL SOILS ON 1–4% SLOPES		
Sg Silkell Grove	black earth	self–mulching, black, cracking clay.
El Elsewie	no suitable group and solodic–solodized solonetz	grey, non–cracking clay and alkaline, grey duplex soil.
El1 Elsewie, neutral duplex variant	solodic to yellow podzolic soil	neutral, bleached, yellow, duplex soil.
SOILS OF UPLANDS DERIVED FROM ACID TO INTERMEDIATE VOLCANICS ON 2–8% SLOPES		
Wh Whitsail	solonth	acid, bleached, mottled, yellow, duplex soil.
Wo Wollingford	solodic–solodized solonetz	alkaline, bleached, mottled, grey–yellow, duplex soil.
Wo1 Wollingford, intrusive parent material variant	solodic–solodized solonetz	alkaline, bleached, mottled, yellow–olive, duplex soil.
Wo2 Wollingford, yellow B horizon variant	solodic–solodized solonetz	alkaline, bleached, yellow, duplex soil.
Me Mentmore	solonth	gravelly, acid, bleached, mottled, yellow, duplex soil.
Met Mentmore, sandy loam variant	solonth	acid, bleached, yellow, duplex soil with shallow, sandy loam A horizon.
Bl Belmunda	no suitable group	acid, brown, duplex soil with abundant iron–manganese nodules.
SOILS OF UPLANDS DERIVED FROM SEDIMENTARY ROCKS ON 2–8% SLOPES		
Pi Pindi	solonth	gravelly, acid, bleached, mottled, yellow, duplex soil.
Jm Jumper	solodic–solodized solonetz	gravelly, alkaline, bleached mottled, yellow–olive, duplex soil.
Pa Palmyra	solonth	shallow, gravelly, acid, bleached, mottled, pale yellow, duplex soil.
Ku Kuttabul	yellow–red podzolic soil	acid, bleached, yellow–red, duplex soil.
Ml Mulei	yellow earth and bleached yellow earth	acid, yellow, massive, gradational soil.
SOILS OF ALLUVIAL–COLLUVIAL PLAINS DERIVED FROM SEDIMENTARY ROCKS AND ACID TO INTERMEDIATE VOLCANICS ON 0–4% SLOPES		
Os Ossa	solonth	neutral, bleached, mottled, grey, duplex soil.
Os1 Ossa, cobbly variant	no suitable group	cobbly, acid, bleached, mottled, brown, duplex soil.
Se Seaforth	solonth	neutral, bleached, mottled, yellow–grey, duplex soil.
Se1 Seaforth, dark B horizon variant	solonth	acid, bleached, dark, duplex soil.
Se2 Seaforth, yellow B horizon variant	solonth	acid, bleached, yellow, duplex soil.
Bb Balberra	solonth	acid to neutral, bleached, mottled, grey, duplex soil overlying gravelly pans.
Kut Kuttabul, alluvial–colluvial variant	yellow podzolic soil	acid, bleached, yellow, duplex soil.
SOILS DERIVED FROM QUATERNARY ALLUVIUM		
DUPLEX SOILS OF THE ALLUVIAL PLAINS		
Cl Calen	solodic–solodized solonetz	neutral to alkaline, bleached, mottled, grey–yellow duplex soil.
Nr Nargi	solodic	alkaline, bleached, mottled, grey duplex soil overlying grey, clay D horizon.
Eo Elton	solodic–solodized solonetz	alkaline, bleached, mottled, dark–grey, duplex soil.
Su Sunnyside	no suitable group (affinities with solodic–solodized solonetz)	silty, alkaline, bleached, mottled, grey–olive, duplex soil.
Sa Sandiford	yellow podzolic soil–soloth	acid to neutral, bleached, mottled, yellow, duplex soil overlying sandy D horizon.
Ma Marian	no suitable group	neutral, bleached, mottled, brown duplex soil.
Mat Marian, yellow B horizon variant	yellow podzolic soil	acid to neutral, bleached, mottled, yellow, duplex soil.
Mr Mirani	yellow–gleyed podzolic soil	acid to neutral, bleached, mottled, grey–yellow, sandy, duplex soil.
UNIFORM CLAY SOILS OF THE ALLUVIAL PLAINS		
Vc Victoria Plains	black earth	self–mulching, black, cracking clay.
Br Brightley	grey clay	self–mulching, grey, cracking clay.
Bh Berkshire	grey clay	bleached, mottled, grey–yellow, cracking clay.
Du Dundula	grey clay	bleached, mottled, grey–brown, cracking clay.
DUPLEX SOILS OF THE RELICT PLAINS ON 0–3% SLOPES		
Kc Kinchant	soloth	acid, bleached, yellow–gleyed, sandy, duplex soil overlying a pan.
Kc1 Kinchant, coarse sandy variant	gleyed podzolic soil	acid, bleached, yellow–gleyed, coarse sandy, duplex soil overlying a pan.
Al Allandale	soloth	acid to neutral, bleached, yellow–brown, duplex soil overlying a pan.
Al1 Allandale, strongly sodic variant	solodized solonetz	strongly alkaline, bleached, yellow–brown, duplex soil overlying a pan.
SOILS OF THE LEVEES, TERRACES AND FLOOD–PLAINS		
Pn Pioneer	non–calcic brown soil	acid to neutral, red–brown, duplex soil.
Pn1 Pioneer, red B horizon variant	non–calcic brown soil	neutral, red, duplex soil.
St St. Helens	prairie to minimal prairie soil	acid to neutral, dark, gradational soil.
Cm Cameron	alluvial soil and no suitable group	acid to neutral, brown, massive, uniform loam to gradational soil.
Mu Murray	alluvial soil	acid sand.
SOILS OF THE BEACH RIDGES AND COASTAL DUNES		
As Andergrove	rudimentary podzol	acid, bleached sand with yellow B horizon.
As1 Andergrove, coarse sandy variant	yellow–gleyed podzolic soil	acid, bleached, coarse sand overlying yellow–gleyed sandy clay.
As2 Andergrove, calcareous variant	calcareous sand	alkaline, brown sand.
Nt Neils	yellow–gleyed podzolic soil	acid, bleached, yellow–gleyed, fine sandy duplex soil.
Fs Frontal Dunes	siliceous sand	sand (undescribed).
MISCELLANEOUS UNITS		
MT Mountains and Hills		
GU Gullied Lands		
MG Mangroves and Saltmarsh		
SM Freshwater Swamps		
SB Streambeds		
UR Urban and Industrial		

Skeletal soils including gravelly, stony or cobbly soils and lithosols occur in some unique map areas but are not mapped separately.

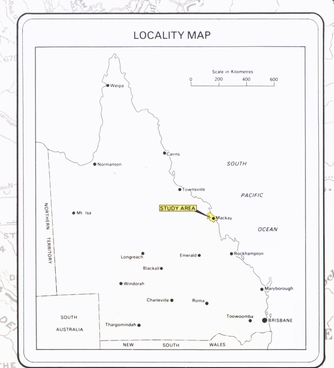
●S11 Soil sample sites

Sugar mill

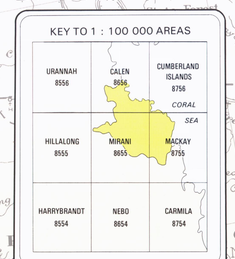
Channel of Eton Irrigation Scheme

Pipeline of Eton Irrigation Scheme

LOCALITY MAP



KEY TO 1 : 100 000 AREAS



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Map 4

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