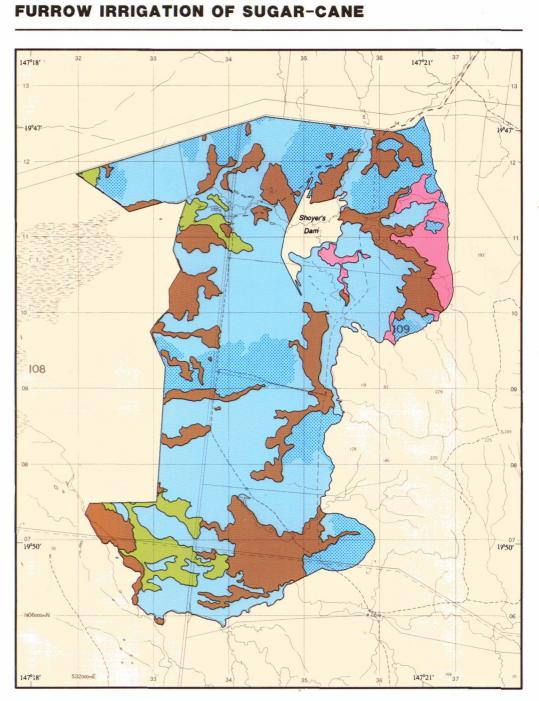
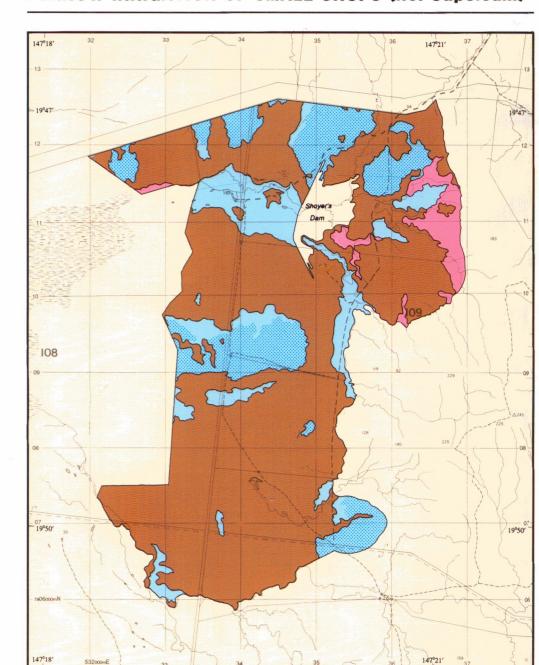
DEPARTMENT OF PRIMARY INDUSTRIES

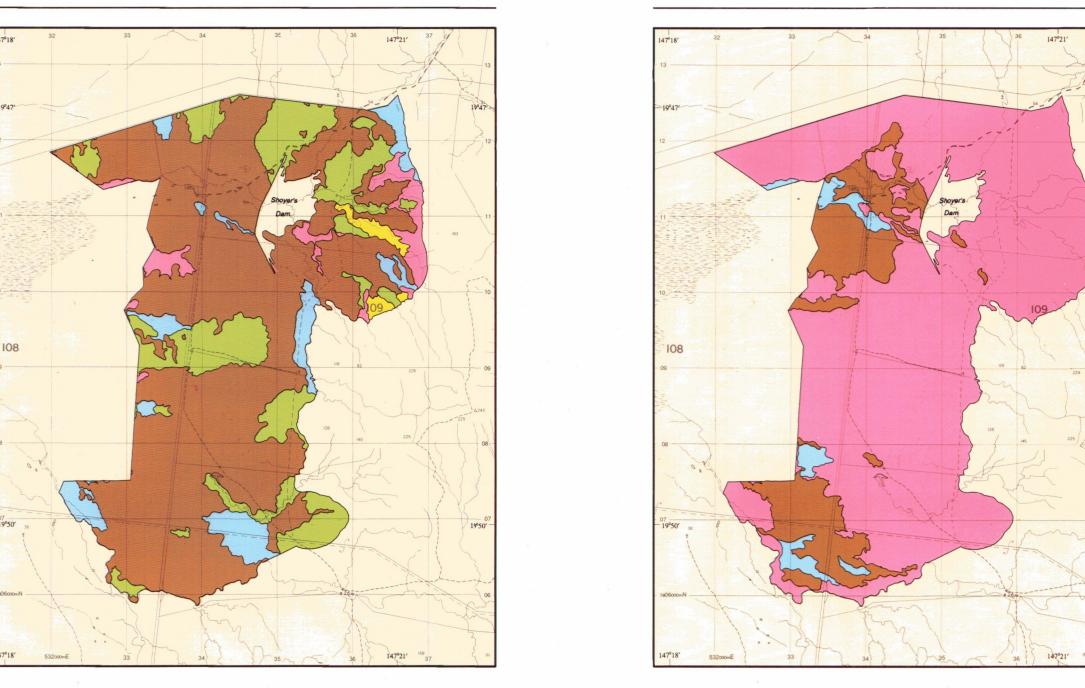
LAND SUITABILITY



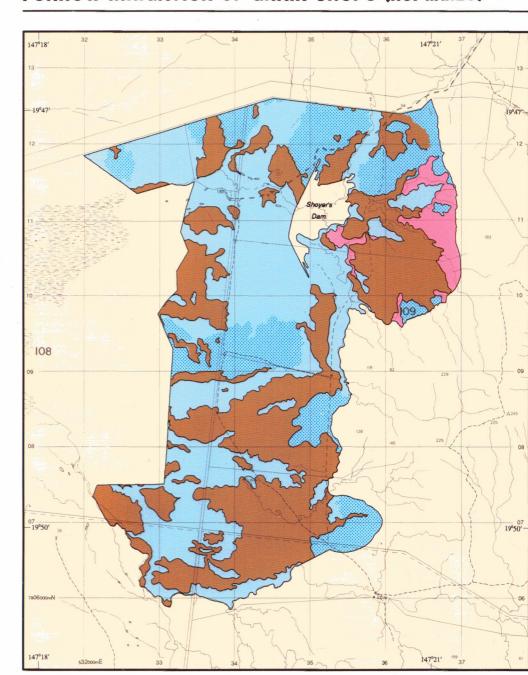
LOW VOLUME IRRIGATION OF MANGOES

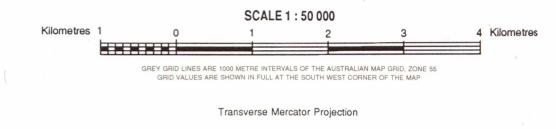
FURROW IRRIGATION OF SMALL CROPS (i.e. Capsicum)





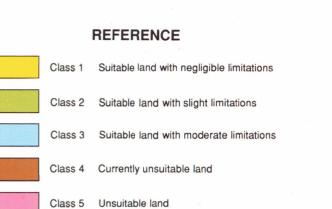
FURROW IRRIGATION OF GRAIN CROPS (i.e. Maize)





INTENSITY STATEMENT

This assessment uses the results of a high intensity soil survey. The soil survey was based on aerial photograph interpretation and ground observations of the order of one observation to an area of 4-6 hectares.



NOTE

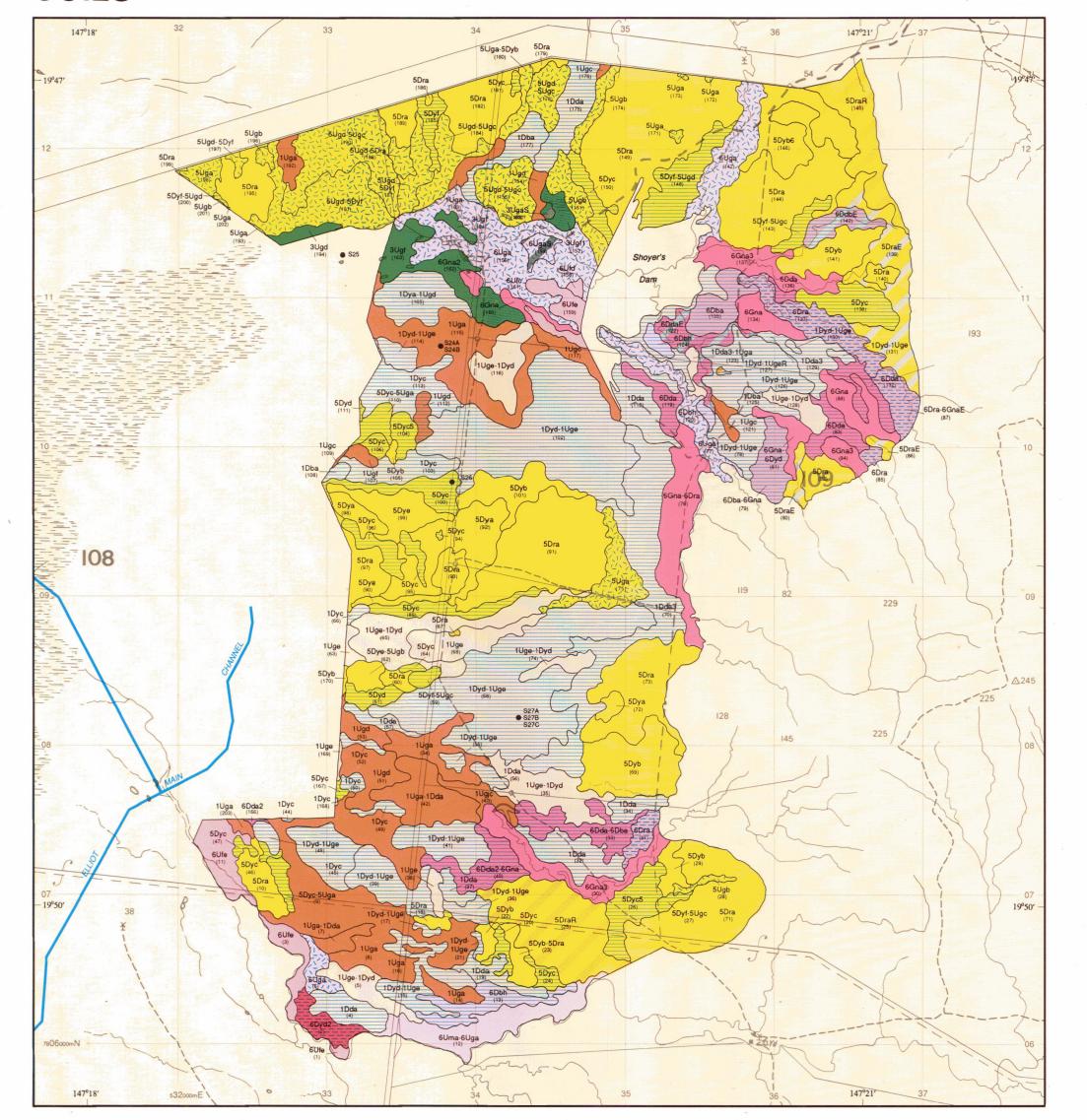
Land is classified on the basis of a specified land use which allows optimum production with minimal degradation to the land resource in the long term.

Current technology and management are assumed and the land was assessed as it was found at the time of the survey.

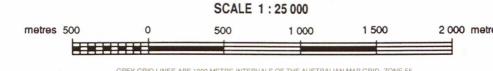
Areas where only spray or trickle irrigation

This is a scanned image and some detail may be illegible or lost. While every care is taken to ensure the accuracy of this product, the Department of Natural Resources and Mines makes no representations or warranties about its accuracy, reliability, completeness or suitability for any particular purpose and disclaims all responsibility and all liability (including without limitation, liability in negligence) for all expenses, losses, damages (including indirect or consequential damage) and costs which you might incur as a result of the product being inaccurate or incomplete in any way for any reason.

SOILS



medium to heavy clay to 1.50+ m.



Transverse Mercator Projection

This is a high intensity soil survey. It is based on aerial photograph interpretation and ground observations of the order of one observation to an area of 4-6 hectares,

LOCALITY MAP 0 10 20 30 40

SURVEY by K.J. Day, Land Resources Branch, Queensland Department of Primary Industries, Ayr. CARTOGRAPHY by M.J. Bryant, Land Resources Branch, Queensland Department of Primary Industries, Brisbane. BASE MAP compiled from the 1:25 000 Topographic Series supplied by the Queensland Department of Lands, Division of Information, and reproduced with the permission of the Surveyor General, Brisbane. PRINTED by GOPRINT, Brisbane, 1991.

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							REFERENCE			
Mapping ^x Unit Code	Series Affiliation	Major Attributes of Dominant Soli*+	Great Soll Group	Main Principal Profile Forms	Mapping ^x Unit Code	Series Affiliation	Major Attributes of Dominant Soil*+	Great Soll Group	Main Principal Profile Forms	Ma U C
SOILS OF 1	THE LOCAL AL	LUVIAL PLAINS AND ASSOCIATED PEDIMENTS			SOILS OF T	HE GENTLY (UNDULATING RISES ON AN INTRUSIVE ROCK COMPLEX			SOI
LOW LYING FLATS AND DRAINAGE DEPRESSIONS					NO FIXE	NO FIXED SLOPE POSITION				
1Uga	Barrunga	0.02 m moderate self mulch over dark to grey medium clay to 0.05 - 0.15 m over alkaline dark to grey medium to heavy clay to 1.50+ m, moderate to strong gilgai.	Black earth - grey clay	Ug5.16 Ug5.24	5Uga	Wygong	0.02 m moderate to strong self mulch over dark medium to heavy clay to 0.05 - 0.12 m over alkaline dark to grey medium to heavy clay to 0.70 - 1.00 m over decomposing rock.	Black earth	Ug5.12 Ug5.14	FL 6I
1Ugc	Barrunga	Hard setting surface over brown-mottled dark light to light medium clay to 0.05 - 0.10 m A1 horizon frequently over bleached A2 horizon to 0.08 - 0.15 m over alkaline dark to grey medium to heavy clay to 1.50+ m, weak gilgai.	Black earth - (bleached)** black earth - (bleached) grey clay	Ug5.16 Ug3.1	51Jgb /	Wygong	Weakly self mulching to hard setting surface over grey to dark light to light medium clay A1 horizon to 0.10 - 0.20 m occasionally over bleached A2 to 0.15 - 0.25 m, over alkaline grey to dark medium clay to 0.40 - 0.80 m over grey to yellow-brown medium clay to 0.70 - 1.00 m over decomposing rock.	Grey clay - black earth (bleached) grey clay	Ug5.22 Ug5.14 Ug3.2	61
1Ugd	Barrunga	0.02 m weak self mulch over brown-mottled grey light medium to	Grey clay	Ug5.28	UPPER AN	UPPER AND MID SLOPES				60
ioga	Danunga	medium clay to 0.05 - 0.15 m over alkaline grey to yellow-grey medium to heavy clay to 1.50+ m, weak to moderate gilgai.	City olay	Ug5.24	5Dra	Dairymple	0.10 - 0.20 m dark to brown clay loam A1 horizon frequently over a non-bleached A2 horizon to 0.20 - 0.30 m over neutral red medium clay B horizon to 0.70 - 1.20 m over decomposing rock.	Non-calcic brown soil	Dr2.12 Dr2.22 Gn3.15	
1Ugf	Barrunga	Weakly self mulching to hard setting surface over grey to dark light to light medium clay A1 horizon to 0.05 - 0.15 m over bleached A2 horizon to 0.15 - 0.30 m over grey medium clay to 0.40 - 0.80 m over alkaline grey to yellow-brown medium to heavy clay to 1.50+ m,	(Bleached) grey clay	Ug3.2 Ug2	5Dya		0.15 - 0.25 m dark to brown sandy clay loam to clay loam A horizon over neutral yellow-brown medium clay B horizon to 0.70 - 1.00 m over decomposing rock.	No suitable group, yellow equivalent of non calcic brown soil	Dy2.12 - Dy3.12	61
		weak to moderate gilgai.			MID TO LO	WER SLOPES	s			
PEDIME 1Uge	ENTS WITH LIN	<u>Depression</u> : Weakly self mulching to hard setting surface over dark	Black earth - grey clay	Ug5.16	5Dyb	Kyanoota	0.10 - 0.20 m dark to brown clay loam A horizon over alkaline occasionally yellow-mottled yellow-brown light medium to medium clay B horizon to 0.90 - 1.30 m over decomposing rock.	No suitable group	Dy2.13 Dy3.13	60
E. 0501280AC9E		to grey light to light medium clay to 0.10 - 0.20 m over alkaline dark to grey medium clay to 0.45 - 0.80 m over yellow-brown to grey medium clay to 1.50+ m.		Ug5.24	5Dye Yalboota 0.05 - 0.15 m dark sandy clay loam A1 horizon over a non-bleached No A2 horizon to 0.15 - 0.30 m over neutral to alkaline yellow-mottled		No suitable group	Dy3.22 Dy3.23	60	
		Mound: 0.02 m moderate self mulch over grey to dark light to medium clay to 0.05 - 0.15 m over strongly alkaline grey to dark medium clay to 0.40 - 0.70 m over yellow-brown to grey medium clay to 1.50+ m.	Grey clay - black earth	Ug5.24 Ug5.28 Ug5.16		Underly	yellow-brown light medium to medium heavy clay B horizon to 1.05 - 1.50 m over decomposing rock. Linear gilgai complex with shelf (5Df), depression (5Ugc) and mound			60
1Dyd-		Linear gilgai complex with shelf (1Dyd), mound (1Uge) and				Ondeny	(5Ugd).			
1Uge		depression (1Uge or occasionally 1Dyd). Shelf: (1Dyd) 0.05 - 0.15 m dark to grey clay loam A1 horizon over bleached A2 horizon to 0.10 - 0.25 m over alkaline dark to grey	Solodic-solodized solonetz	Dd1.33 Dd1.43	5Dyf		Shelf: (5Dyf) 0.10 - 0.15 m grey to brown sandy clay loam A1 horizon over bleached A2 horizon to 0.15 - 0.20 m over alkaline grey to brown medium clay B horizon to 0.80 - 1.10 m over decomposing rock.	Solodic-solodized solonetz	Dy2.33 Dy2.43 Db1.33	60
		medium to medium heavy clay B horizon to 0.70 - 1.50 m over yellow-grey to brown sandy clay to medium heavy clay B or D horizon to 1.50+ m.		Dy2.33 Dy2.43	5Ugc		Depression: (5Ugc) Weakly self mulching to hard setting surface over dark light to light medium clay A1 horizon to 0.10 - 0.15 m occasionally over bleached A2 horizon to 0.15 - 0.20 m over alkaline	Black earth - (bleached) black earth	Ug5.13 Ug5.14 Ug3.1	BA
PEDIME	ENTS AND SLIG	SHTLY ELEVATED FLATS					dark medium clay to 0.50 - 0.90 m over grey to brown medium clay to 0.90 - 1.10 m over decomposing rock.			60
1Dba	Gaynor	0.05 - 0.15 m brown to dark clay loam A horizon bleached throughout or near base over alkaline brown medium to heavy clay B horizon to 0.35 - 0.40 m over strongly alkaline yellow-brown light medium clay D horizon to 1.50+ m.	Solodic-solodized solonetz	Db1.33 Db1.43	5Uga		Mound: (5Ugd) 0.02 m weak to moderate self mulch over dark to olive-brown to grey light to medium clay to 0.08 - 0.10 m over alkaline dark to olive-brown to grey medium to medium heavy clay to 1.00 - 1.20 m over decomposing rock.	Black earth - (olive) brown clay - grey clay	Ug5.13 Ug5.32 Ug5.26	
1Dya	Gaynor	0.05 - 0.10 m grey sandy clay loam to clay loam A horizon bleached	Solodic-solodized	Dy2.43			•			VAR
		throughout or near base over alkaline grey medium clay B horizon to 0.50 - 0.90 m over strongly alkaline grey to brown medium clay B	solonetz	Dy2.33	LOWER SI	OPES				
1Dyc	Gaynor	horizon to 1.50+ m. 0.05 - 0.10 m brown-mottled dark to brown clay loam A1 horizon over bleached A2 horizon to 0.10 - 0.15 m over alkaline grey	Solodic-solodized solonetz	Dy2.43 Dy2.33	5Dyc	Ranly	0.10 - 0.20 m brown-mottled dark to brown sandy clay loam to clay loam A1 horizon over bleached A2 horizon to 0.15 - 0.30 m over alkaline grey medium clay B horizon to 0.40 - 1.20 m over grey to yellow-grey medium clay to 0.80 - 1.50+ m over decomposing rock	Solodic-solodized solonetz	Dy2.33 Dy2.43	
		medium to heavy clay B horizon to 0.40 - 0.80 m over strongly alkaline grey to yellow-brown medium clay B horizon to 1.50+ m.					or colluvia.			
1Dda	Gaynor	0.05 - 0.10 m brown-mottled dark to grey clay loam A1 horizon over bleached A2 horizon to 0.10 - 0.15 m over alkaline dark medium to heavy clay B horizon to 0.60 - 1.20 m over grey light to medium clay	Solodic-solodized solonetz	Dd1.33 Dd1.43	5Dyd		0.05 - 0.10 m dark to grey sandy clay loam to clay loam A1 horizon over bleached A2 horizon to 0.10 - 0.12 m over strongly alkaline grey to yellow-brown medium clay B horizon to 0.70 - 1.20 m over decomposing rock or colluvia.	Solodic-solodized solonetz	Dy2.43 Dy2.33	
		B or D horizon to 1.50+ m.								
SOILS OF	THE LOCAL AL	LUVIAL PLAIN					DUS ALLUVIAL LANDFORMS REEK AND RELICT ALLUVIAL LANDFORMS			9
PLAIN					FLOODOU	TS, FANS AN	DLEVEES			
3Uga	Koberinga	0.02 m moderate medium self mulch over dark heavy clay to 0.90 - 1.20 m over grey heavy clay to 1.50+ m, strongly alkaline above or at 0.60 m, carbonate present above or at 0.75 m, moderate to strong gilgai.	Black earth	Ug5.16	6Uma	Burdekin	0.15 - 0.40 m dark to brown sandy loam to clay loam A horizon over acid to neutral brown sandy loam to clay loam B horizon to 0.80 - 1.10 m over brown sandy loam to sandy clay loam D horizon to	No suitable group, affinities with yellow earth	Um5.52 Gn2.22 Gn2.41	•
3Ugd	Koberinga	0.02 m strong coarse self mulch over dark heavy clay to 0.75 -	Black earth	Ug5.16	6Ufc		1.50+ m.0.30 - 0.50 m dark silty clay to light clay over acid to neutral dark to	No suitable group,	Uc5.22 Uf6.31	
		1.20 m over grey heavy clay to 1.50+ m, strongly alkaline at or below 0.90 m, carbonate present below 0.75 m, moderate to strong gilgai.					brown light medium clay to 0.80 - 1.20 m over brown to yellow light to medium clay to 1.50+ m.	affinities with prairie soil	Uf6.32	
3Ugf		0.01 - 0.02 m weak self mulch over dark silty clay to 0.10 - 0.30 m over alkaline dark medium clay to 0.80 - 1.00 m over dark to grey medium to heavy clay to 1.50+ m.	Black earth	Ug5.1 Ug5.16	6Ufd		0.15 - 0.45 m dark light to light-medium clay A horizon over acid to neutral dark to brown light to light medium clay B horizon to 0.70 - 1.50+ m over brown to yellow sand to loamy sand D horizon to	Prairie soil	Uf6.32 Uf6.31	

Mapping ^x Unit Code	Series Affiliation	Major Attributes of Dominant Soil*+	Great Soll Group	Main Princip Profile Form
		DUS ALLUVIAL LANDFORMS REEK AND RELICT ALLUVIAL LANDFORMS (continued)		
FLOODO	JTS, FANS AN	D LEVEES		
6Ufe		0.05 - 0.30 m brown-mottled dark to grey light to medium clay A horizon over acid to alkaline grey to brown sand D1 horizon to 0.30 - 0.70 m over neutral to alkaline sand to clay D horizons to 1.50+ m.	Alluvial soil	Uf6.22 Uf6.23
6Uga		Hard setting to weakly self mulching surface over dark light to light medium clay to 0.05 - 0.20 m over alkaline dark to grey medium clay to 1.00 - 1.50+ m over grey sandy clay to medium clay D horizon to 1.50+ m.	Black earth - grey clay	Ug5.17 Ug5.16 Ug5.2
6Gna	Farencer	0.20 - 0.40 m dark clay loam A horizon over neutral to alkaline brown to dark light to medium clay B horizon to 0.90 - 1.20 m over brown sandy clay loam to sandy clay D horizon to 1.50+ m.	No suitable group, affinities with alluvial so	Db1.12 IDb1.13 Gn3.42 Dd1.12
Ora	Lancer	0.15 - 0.20 m dark to brown sandy loam to light sandy clay loam A1 horizon over a non-bleached, brown to red-brown sandy loam to light sandy clay loam A2 horizon to 0.20 - 0.30 m over neutral red to red-brown sandy clay to medium clay B horizon to 0.85 - 1.50+ m over red-brown to brown sandy clay to light medium clay D horizon to 1.50+ m.	Red podzolic soil	Dr2.22
Dba		0.10 - 0.20 m dark to brown sandy loam to sandy clay loam A1 horizon over bleached A2 horizon to 0.15 - 0.30 m over alkaline brown medium clay B horizon to 1.50+ m.	Solodic-solodized solonetz	Db1.33
6Dbh		0.05 - 0.15 m grey to brown loam to clay loam A1 horizon over bleached A2 horizon to 0.10 - 0.25 m over alkaline brown light to medium clay B horizon to 0.60 - 1.00 m over brown clay loam to medium clay D horizon to 1.50+ m.	Solodic-solodized solonetz	Db1.43 Db1.33
SDyd	Tootra	0.10 - 0.20 m brown-mottled grey to dark loam to clay loam A1 horizon over bleached A2 horizon to 0.20 - 0.40 m over acid to neutral red-mottled yellow-brown to brown medium clay B horizon to 1.20 - 1.30 m over red-brown sandy clay to light clay D horizon to 1.50+ m.	Brown podzolic soil	Db2.32 Dy3.42 Dy3.41
6Ddb		0.15 - 0.30 m dark to grey coarse sand to sandy loam A1 horizon over bleached A2 horizon to 0.25 - 0.50 m over alkaline dark medium to heavy clay B horizon to 1.50+ m.	Solodic soil	Dd1.43 Dd1.33

0.10 - 0.15 m dark to brown clay loam A1 horizon over bleached A2 horizon to 0.15 - 0.25 m over alkaline dark medium clay B horizon to 0.70 - 1.10 m over grey to dark clay loam to light medium clay D horizon to 1.50+ m.

S	UFFIXES	
	1 .	Depth to underlying rock or decomposing rock is significantly less than that of the modal soil type.
	2	Buried soils or D horizons of contrasting or coarser texture underlie the modal soil type at depths less than 1.50 m or at depths less than that specified in the major attributes.
	3	Significant variation in depth or field texture of the A horizon to that of the modal soil type.
	5	Significant variation in colour of the B horizon to that of the modal soil type.

6 Significantly higher pH of the B horizon than that of the modal soil type. Areas with sufficient rock outcrop, boulders, cobble or gravel cover to make tillage difficult or impractical.

E Areas affected by severe erosion. Saline seep outbreak in lower slope positions.

S24 Soil sampling sites.

Within areas of intense soil variability, the mapping unit is a soil complex and is named after the two most frequently occurring soil types, for example 1Dyd-1Uge.

Values of attributes are described in terms of the dominant values in the Leichhardt Downs Relift only. The full range

of values within each soil type in the Lower Burdekin Valley does not necessarily occur in this area. Variants and phases of soil types may occur, for example, 5Dyc5, 6DdbE. Such mapping units are described by the major attributes of the modal soil type modified by the description of the variant or phase concerned. Variants and phases are described separately in the reference.

** These bracketed qualifiers are not an official part of great soil group names.