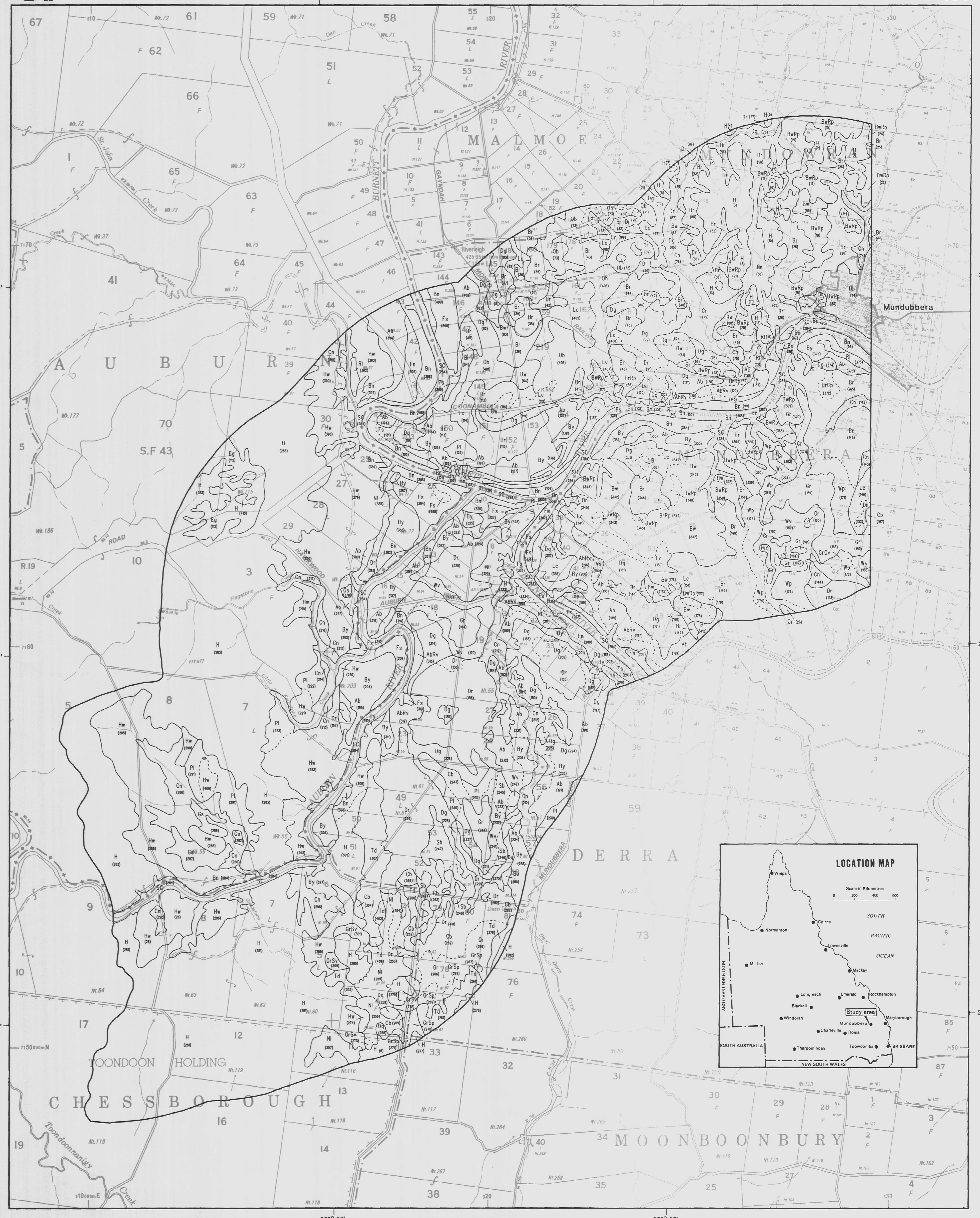
QUEENSLAND
DEPARTMENT OF PRIMARY INDUSTRIES

SOILS

by P.R. Wilson and P. Sorby

AUBURN RIVER IRRIGATION SUITABILITY STUDY



SCALE 1:50000

Metres 1000 0 1 2 3 4 Kilometres

TRANSVERSE MERCATOR PROJECTION

GREY NUMBERED GRID TICS ARE 10 000 METRE INTERVALS OF THE AUSTRALIAN MAP GRID, ZONE 56.
GRID VALUES ARE SHOWN IN FULL ONLY AT THE SOUTH WEST CORNER OF THE MAP.

REFERENCE

Mapping Unit		Major Attributes of Dominant Soil	Great Soil Group	Main Principal Profile Forms	Area (ha)
SOILS OF THE RECENT ALLUVIAL PLAINS					
		TERRACES			
Bn	Burnett	0.15 to 0.40m brown or dark sandy loam to loam fine sandy and sandy clay loam A horizon over neutral, brown or dark layered sandy loam to light clay subsoils to 1.5m	Alluvial soil	Um1.43 Um5.52	585
Fs	Flagstone	0.1 to 0.35m dark sandy clay loam, clay loam to light clay A1/Ap horizon over neutral to alkaline, dark or brown clay loam fine sandy to medium clay B horizon to 1.5m	Prairie soil, brown earth	Uf6.32 Um6.32 Dd1.13 Um6.31 Db1.13	680
Rl	Riverleigh	0.10 to 0.25m dark or brown clay loam fine sandy to silty clay loam A1/Ap horizon over bleached A2 horizon to 0.25 to 0.6m over neutral to alkaline, brown, grey-brown or dark light medium to medium heavy clay B2 horizon to 1.5m	Solodic soil	Db1.32 Dy2.32 Dy2.42 Dd1.33 Db1.33	165
		ALLUVIAL PLAINS ALONG CREEKS			
Cn	Coonambula	0.10 to 0.15m dark or grey-brown clay loam to clay loam sandy A1 horizon over conspicuously bleached A2 horizon to 0.2 to 0.4m over neutral to alkaline, brown, grey-brown, yellow-brown or grey medium to medium heavy clay B2 horizon to 1.5m	Solodic soil	Dy2.43 Dy2.42 Dy3.43 Db1.42 Dy3.42	1080
Gs	Grindstone	0.05m brown silty clay to light medium clay A1 horizon over bleached A2 horizon to 0.13m over neutral to alkaline, grey medium heavy clay B2 horizon to 1.5m	(Bleached)[1] grey clay	Ug3.2	130
SOILS OF THE RELICT ALLUVIAL PLAINS					
		ALLUVIAL PLAINS			
Dr	Derra	0.03 to 0.05m brown, grey-brown or dark light clay to medium clay A11 horizon over neutral to alkaline, grey-brown, brown or grey, medium to heavy clay B2 horizon to 1.5m. Melonhole gilgai, vertical interval 0.4 to 1m	Grey clay, brown clay	Ug5.24 Ug5.35 Ug5.34 Ug5.25	1500
Dg	Durong	0.02 to 0.05m grey-brown or dark light clay to medium clay A11 horizon over neutral to alkaline, grey-brown, grey, yellow-brown or brown medium heavy to heavy clay B2 horizon to 1.5m. Normal gilgai, vertical interval 0.1 to 0.3m	Grey clay	Ug5.24 Ug5.16 Ug5.35	1470
Nl	Nail	0.05 to 0.1m brown on dark light clay to light medium clay A11 horizon over neutral to alkaline, brown or red-brown medium to heavy clay B2 horizon to 1.5m	Brown clay, red clay	Ug5.34 Ug5.38	440
Ab	Auburn	0.05 to 0.2m grey-brown, dark or brown clay loam to clay loam sandy A1/Ap horizon over conspicuously bleached A2 horizon over alkaline, brown, yellow-brown or grey-brown light medium to heavy clay B2 horizon to 1.5m	Solodic soil	Dy2.43 Dy3.43 Db1.43	1335
AbRv	Auburn red variant	As above. B2 horizon to 0.6 to 1.3m over alkaline, red-brown or brown medium to heavy clay D horizon to 1.5m			300
By	Boyne	0.1 to 0.25m brown or red-brown sandy loam to clay loam A1/Ap horizon frequently over paler A2 horizon to 0.2-0.5m over neutral to alkaline, red or red-brown light clay to medium clay B2 horizon to 1.5m	Red-brown earth	Gn3.12 Dr2.23 Dr2.13 Dr2.12 Dr3.12	945
SOILS OF THE ALLUVIAL FANS AND RELICT RIVER DEPOSITS					
		UPPER SLOPES			
Gr	Glenrock	0.05 to 0.2m red-brown or red sandy clay loam, clay loam, clay loam sandy A1/Ap horizon over acid to neutral, red clay loam to light clay B2 horizon to 1.5m	Red earth	Gn2.12 Gn2.11 Um5.52	695
GrSv	Glenrock structured variant	0.15 to 0.25m red clay loam, light clay to light medium clay Ap horizon over acid to neutral, red light medium to medium clay B2 horizon	No suitable group; intergrade to krasnozem/euchrozem	Uf6.31 Gn3.11 Gn3.12	85
GrGv	Glenrock grey variant	Grey-brown sandy loam A horizon over grey sandy clay loam B horizon	Grey earth	Gn2	15
GrSp	Glenrock shallow phase	0.15m red-brown clay loam to clay loam sandy Ap horizon over acid to neutral, red-brown clay loam sandy to light medium clay B2 horizon to 0.4 to 0.65m over rock	Red earth	Gn2.11 Um5.51	60
Eg	Evergreen	0.05 to 0.1m grey-brown or dark loamy sand to sandy loam A1 horizon frequently over paler A2 horizon to 0.2 to 0.7m over acid, red-brown or brown sand to loamy sand B2 horizon to 0.6 to 1.05m over acid red light sandy clay loam to sandy clay loam 2B horizon to 1.5m	(Rudimentary) podzol, (red) earthy sand	Uc2.21 Uc4.21 Uc5.22	220
		MID TO LOWER SLOPES			
Cb	Chessborough	0.1 to 0.25m red-brown or brown sandy clay loam, clay loam, clay loam sandy A1/Ap horizon over acid to neutral, red-brown clay loam to light clay B2 horizon to 0.35 to 0.7m over acid to alkaline, mottled yellow-brown or yellow light clay to medium clay 2B horizon to 1.5m	Red earth	Um5.52 Gn2.12 Gn2.11	400
Wv	Wivenhoe	0.1 to 0.15m dark or grey-brown loam fine sandy, sandy clay loam, clay loam or clay loam sandy A1 horizon over paler A2 horizon to 0.2 to 0.35m over neutral, mottled brown, yellow-brown or yellow light clay to medium clay B2 horizon to 0.7 to 0.9m	No suitable group; affinities with solodic soil	Gn3.75 Gn3.82	485
Sb	Shurback	0.15 to 0.2m grey-brown clay loam Ap horizon over conspicuously bleached A2 horizon to 0.4 to 0.6m over neutral to alkaline, mottled yellow or yellow-brown medium to heavy clay B2 horizon to 1.5m	Solodic soil	Dy3.42 Gn3.06	155
Pl	Pearlinga	0.05 to 0.15m grey-brown or dark loamy sand to light sandy clay loam A1 horizon over conspicuously bleached A2 horizon to 0.4 to 0.7m over acid to alkaline, mottled yellow-brown, grey, brown or grey-brown sandy clay to medium clay B2 horizon to 1.5m	Solodic soil, solodized solonetz, soloth	Dy5.42 Dy5.43 Dy5.41 Dy3.42 Dy3.41	370
SOILS OF RISES AND LOW HILLS ON SEDIMENTARY ROCKS AND ANDESITE					
Br	Beeron	0.05 to 0.2m dark or grey-brown clay loam, clay loam sandy or sandy clay loam A1/Ap horizon over conspicuously bleached A2 horizon to 0.15 to 0.35m over alkaline, yellow-brown, brown or yellow medium to heavy clay B2 horizon to 0.5 to 1.5m over weathered rock	Solodic soil	Dy3.43 Dy2.43 Db1.43 Dy3.13p[2] Db1.13p	2820
BrRp	Beeron rocky phase	As above with >20% rock fragments			15
BrEp	Beeron eroded phase	As above, severely eroded			25
Wp	Washpool	0.05 to 0.2m grey-brown or dark, fine gravelly, loamy sand to sandy clay loam A1 horizon, over conspicuously bleached A2 horizon to 0.25 to 0.45m over neutral to alkaline, frequently mottled, yellow-brown or yellow, light medium clay to heavy clay B2 horizon to 0.6 to 1m over weathered rock	Solodic soil	Dy3.42 Dy3.43 Dy2.43	390
Bw	Boynewood	0.03 to 0.1m brown or dark, clay loam, light clay to light medium clay A1 horizon over neutral, red-brown, red, or brown light medium clay to heavy clay B2 horizon to 0.3 to 0.75m over weathered rock	Prairie soil	Uf6.31 Uf6.34 Gn3.12	780
BwRp	Boynewood rocky phase	As above with >20% rock fragments.			765
Lc	Lacon	0.03 to 0.06m dark, brown or grey-brown light clay to medium clay A11 horizon over neutral to alkaline, brown, dark, grey-brown or grey medium to heavy clay B21 horizon to 0.5 to 1.1m over alkaline, brown or yellow-brown medium to heavy clay B22 horizon to 0.8 to 1.5m over weathered rock	Brown clay, black earth, grey clay	Ug5.32 Ug5.34 Ug5.13 Ug5.22 Ug5.14	635
Td	Toondoon	0.05 to 0.2m brown or dark, clay loam A1/Ap horizon over conspicuously bleached A2 horizon to 0.25 to 0.45m over neutral to alkaline, frequently mottled, grey-brown or brown medium to heavy clay B2 horizon to 0.65 to 1m over weathered rock	Solodic soil	Dy3.43 Dy3.42 Dy2.42 Db1.43	420
Hw	Hawkwood	0.1 to 0.15m brown or grey-brown sandy loam, fine sandy loam to clay loam A1 horizon over conspicuously bleached A2 horizon to 0.25 to 0.4m over acid to neutral, mottled yellow, yellow-brown or red-brown medium to medium heavy clay B2 horizon to 0.5 to 1.2m over weathered rock	Solodic soil, soloth	Dy3.42 Dy3.41 Dr3.42 Dr3.41	2500
Ob	O'Bil Bil	0.1 to 0.2m brown or dark light clay to light medium clay A1/Ap horizon over neutral, frequently mottled, brown or red-brown light medium to medium heavy clay B21 horizon to 0.2 to 0.55m over neutral to alkaline, frequently mottled, yellow-brown or brown, light medium to medium heavy B22 horizon to 0.4 to 0.7m over rock fragments	No suitable group; affinities with prairie soil	Uf6.4 Uf6.31	590
MISCELLANEOUS UNITS					
H	Hills				6790
SC	Stream channels				1730
Ub	Urban				175

(179) Unique map area number

1 Bracketed qualifiers are not an official part of the Great Soil Group terminology
2 p = ploughed

SOIL BOUNDARY CONFIDENCE LEVEL

____ Observed

------- Approximate

INTENSITY STATEMENT

This is a medium intensity soil survey. It is based on aerial photograph interpretation and ground observations at a density of one per 30 hectares approximately.

Cartography by M.B. Carroll

SURVEY by P.R. Wilson and P. Sorby, Land Resources Branch, Queensland Department of Primary Industries, Brisbane.

CARTOGRAPHY by M.B. Carroll, Land Resources Branch, Queensland Department of Primary Industries, Brisbane.

BASE MAP compiled from Cadastral Maps 1 : 50000 Sheets 9146-2, 9146-3, 9146-4 and 1 : 25000 Sheets 9146-13, 9146-14 supplied by the Queensland Department of Lands and reproduced with the permission of the Surveyor General, Brisbane.

PRINTED at GOPRINT, Brisbane, 1990.

PROUDLY PRINTED IN QUEENSLAND

D.P.I. Ref. No. 90-122-P2822