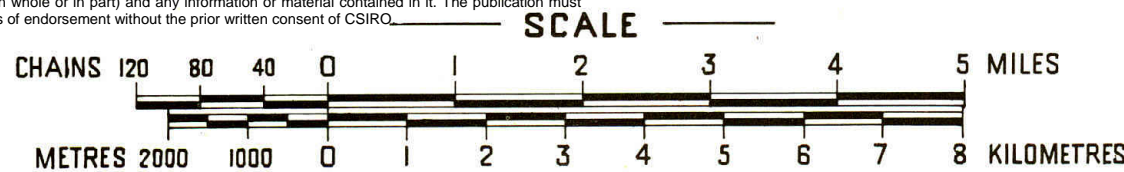


This map is a scanned image and some detail may be illegible or lost. All rights are reserved and no part of this publication covered by copyright may be reproduced or copied in any form or by any means except with the written permission of CSIRO Division of Land and Water. To the extent permitted by law, CSIRO excludes all liability to any person or organisation for expenses, losses, liability and costs arising directly or indirectly from using this publication (in whole or in part) and any information or material contained in it. The publication must not be used as a means of endorsement without the prior written consent of CSIRO.



# SOIL ASSOCIATION MAP

## TOOWOOMBA AREA, DARLING DOWNS

PART COUNTIES OF AUBIGNY AND CHURCHILL

QUEENSLAND

NOTE

Soil Association boundaries

Parish & County

Rivers & creeks

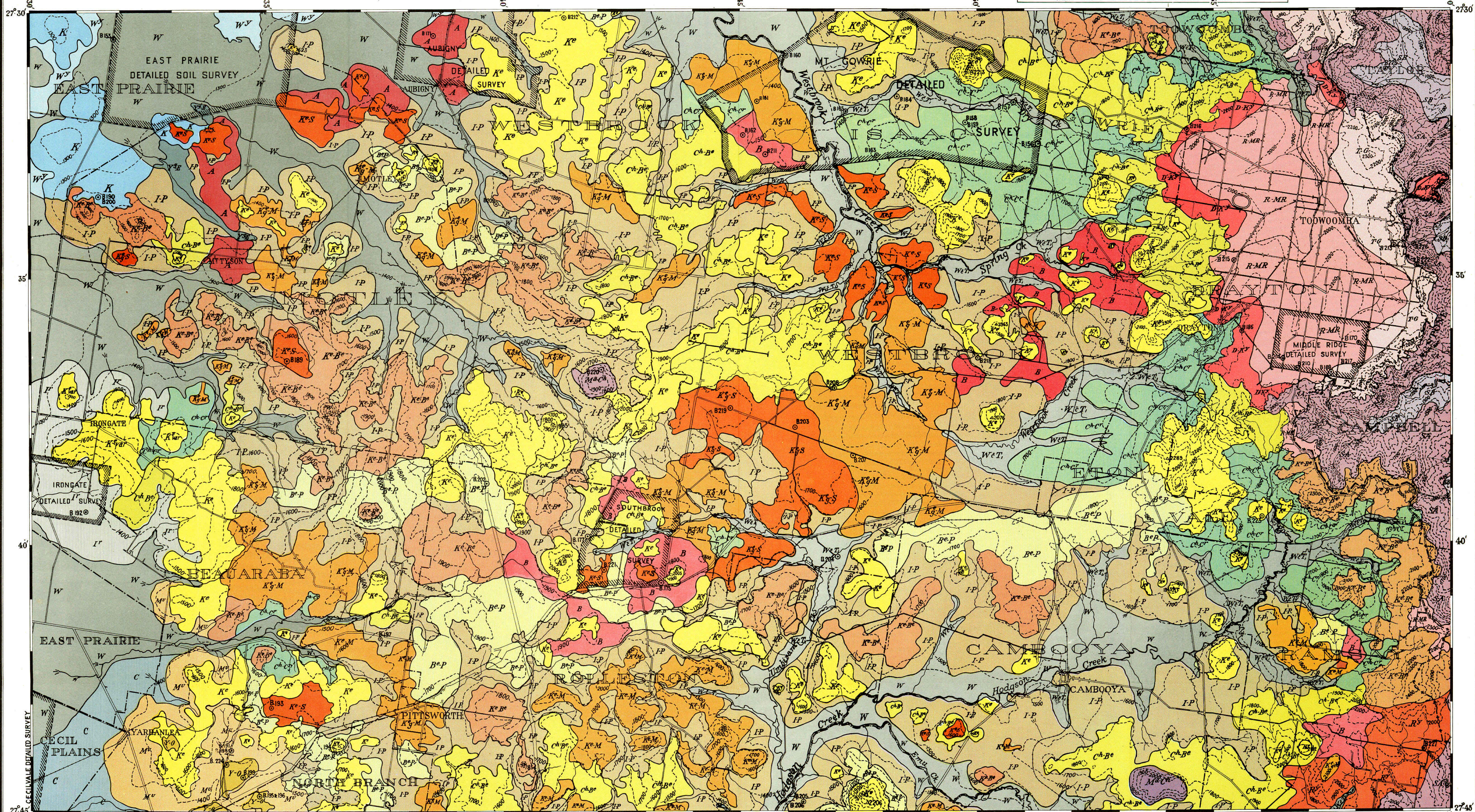
Railways

Contours at 100 foot intervals

Trig. stations & heights

Sample sites & numbers

Main roads



### THE BASALTIC UPLANDS

TOPOGRAPHY	SOIL ASSOCIATION	GENERAL SOIL CHARACTERISTICS
Crests and steep slopes of flat-topped and rounded hills.	KENMUIR (stony)	Very shallow stony brown loam to clay loam soils over basalt.
"	KENMUIR (variant)	Shallow and gravelly light grey-brown loam to clay loam soils on basalt.
"	KENMUIR-BEAUARABA	Shallow, stony brown clay loams and very dark grey clay soils on basalt.
"	MAJUBA-CHARLTON	Very dark grey heavy clay soils; very shallow to moderately deep over basalt.
Gentle slopes on flat-topped hills and broad ridges, generally lower elevation than above group.	KENMUIR (stony)-MALLARD	Very shallow stony brown clay loam soils; and shallow soils with red and mottled red-brown clay subsoils over basalt.
"	KENMUIR (gravelly)-MALLARD	"
"	KENMUIR (stony)-SOUTHBROOK	"
"	KENMUIR (gravelly)-SOUTHBROOK	"
Gently sloping flat-topped ridges; steps and knolls.	CHARLTON-BEAUARABA	Very shallow to moderately deep very dark grey and very dark brown heavy clay soils; neutral to alkaline reaction.
"	BEAUARABA-PURRAWUNDA	"

### LEGEND

TOPOGRAPHY	SOIL ASSOCIATION	GENERAL SOIL CHARACTERISTICS
Long gentle slopes (2-5°) of broad valleys.	AUBIGNY	Red clay soils with brown clay surface horizon; shallow to moderate depth, alkaline subsoils.
"	BURTON	Deep red soils with brown clay loam surface; neutral to alkaline subsoils.
"	IRVING-PURRAWUNDA	Shallow and deep heavy clay soils, some with linear gilgai; very dark brown and very dark grey in colour, alkaline reaction.
"	CHARLTON-CRAIGMORE	"
"	KNAPDALE	"
"	IRONGATE	Deep very dark grey heavy clay soils with some linear gilgai; alkaline throughout.
"	MURLAGGAN	"
"	RAMSAY	"
Low rounded hills, saddles, and gentle slopes.	YARRANLEA-OAKVIEW	Deep dark grey-brown heavy clays with yellow-grey subsoils; linear gilgai.
"	WACO (with Type I)	Soils with differentiated texture profiles; sandy clay loams over grey-brown clays, and loamy sands to sandy loams over red-brown clays.
Narrow plains of minor drainage lines.		Very dark grey brown deep heavy clay soils; gilgai micro-relief.

### THE STEEP EASTERN SLOPES OF THE RANGE

TOPOGRAPHY	SOIL ASSOCIATION	GENERAL SOIL CHARACTERISTICS
Slopes (20-25°) of scarp of deeply dissected plateau.	Association A (unnamed)	Shallow basaltic soils; grey clay loams with brown clay subsoils.
As above with some more gentle lower slopes.	Association B (unnamed)	Sandy soils with bleached subsurface over red and yellow-brown mottled clay subsoils on sandstone; acid reaction.
Crest of ridges and upper slopes (2-5°) of moderately dissected plateau surface.	TOOWOOMBA-GABBINBAR	Deep red lateritic clay soils with "earthy" surface horizons; acid reaction.
Crests of low ridges, middle and lower slopes (2-5°) of moderately dissected plateau surface.	DRAYTON-KYNOCH	Shallow to moderately deep red clay soils on basalt; neutral to alkaline subsoils.
"	RUTHVEN-MIDDLE RIDGE	Deep red clay soils with lateritic fragments; acid throughout.
Very gently undulating plains with ill-defined drainage lines.	WACO	Deep heavy clay soils; very dark greyish brown and very dark grey in colour; gilgai micro-relief.
"	WAVERLEY	"
"	CECILVALE	Deep dark grey heavy clay soils with thin grey sandy clay surface; gilgai micro-relief.
Slightly raised areas in undulating plain.	YARGULLEN-EDGECOMBE	Shallow grey to very dark grey clay loam and clay soils over limestone and marly clay.

SOIL SURVEYORS:  
G. G. Beckmann  
C. H. Thompson

DRAUGHTSMAN:  
Peter D. Hooper  
1957

Field Operations  
DIVISION OF SOILS  
1951-53