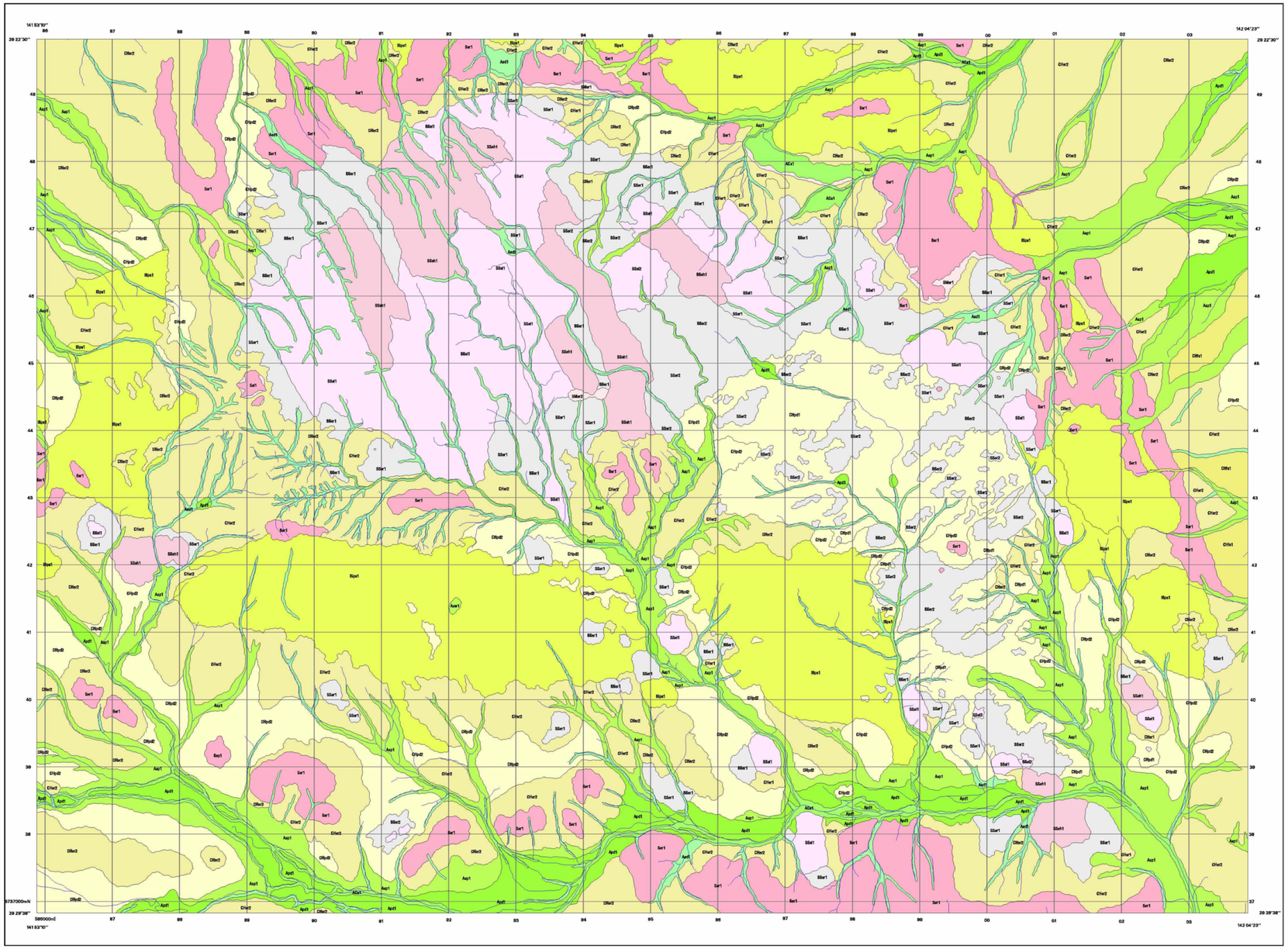
TIBOOBURRA INLIER
NEW SOUTH WALES

SCALE 1:25 000



TRANSPORTED REGOLITH

Alluvial sediments

Alluvial sediments

Aep1 — *Red-brown to grey-brown quartzose silt and sand on a low relief land surface with minor incised channels and drainage depressions. Minor subangular to rounded milky quartz and lithic clasts (20-60 mm in diameter). Vegetation consists of chenopod shrublands dominated by Atriplex vesicaria, Maireana pyramidata and M. sedifolia. Cassia spp. are also present.*

Aswe1 — *Red-brown quartzose silt and sand, and rare subangular to rounded milky quartz and lithic gravels, on a low relief land surface with minor incised channels and drainage depressions. Vegetation is dominated by Eucalyptus microtheca with minor Acacia spp.*

Aed1 — *Red-brown quartzose silt and sand , and rare subangular to rounded milky quartz and lithic clasts, in elongate drainage depressions (20-50 m wide). Vegetation is dominated by Acacia victoriae and Acacia tetragonophylla.*

Aed2 — *Grey-brown quartzose silt and sand, and angular lithic clasts (< 50 mm in diameter), in extensive elongate drainage depressions (25-50 m wide). Bounded by high relief bedrock hills. Consists of small channel flanked by narrow alluvial plains. Bedrock typically exposed in channels. Vegetation dominated by Eucalyptus terminalis, Myoporum montanum and Acacia tetragonophylla.*

Aed1 — *Light brown to red-brown quartzose, slightly micaceous, silt and sand on a low relief land surface with minor incised channels and drainage depressions. Includes minor subangular to rounded milky quartz and lithic clasts (< 40 mm in diameter) and fragments of ferruginous regolith. Vegetation includes Pittosporum spp., Acacia victoriae, Myoporum montanum, Cassia spp., chenopod shrubs and Astrebla spp.*

Channel deposits

ACs1 — *Major channels (40-100 m wide) consisting of grey-brown to red-brown quartzose silt and sand, angular to subangular lithic clasts and subangular to rounded milky quartz clasts (10-200 mm in diameter). Braided channel forms, with vegetated sand bars, are typical. Vegetation is dominated by Eucalyptus camaldulensis, with minor E. microtheca and E. terminalis.*

ACs2 — *Minor channels (30-50 m wide) consisting of grey-brown to red-brown quartzose silt and sand, angular to subangular lithic clasts and subangular to rounded milky quartz clasts (10-200 mm in diameter). Vegetation dominated by Myoporum montanum, Acacia cana, A. victoriae and A. tetragonophylla.*

Aeolian sediments

Aeolian sand

Rpe1 — *Red, rounded quartzose sand on a low relief land surface with minor incised channels and drainage depressions. Subangular to rounded milky quartz and quartzite clasts (10-50 mm in diameter) are locally abundant. Low bedrock exposures are common in depressions. Vegetation is dominated by Acacia aneura, with minor A. olivacea and A. tetragonophylla. Eremophila spp. are locally abundant.*

Colluvial sediments

Sheet flow deposit

Cfse1 — *Grey-brown quartzose silt and sand, and angular to subangular lithic clasts, on a moderate relief land surface with inclined drainage depressions. Angular vein quartz is locally abundant. Vegetation consists of chenopod shrublands dominated by Bassia spp.*

Cfse2 — *Red-brown quartzose silt and sand, and abundant subangular to rounded milky quartz clasts and minor rounded quartzite clasts (< 50 mm in diameter), on a moderate relief land surface with minor inclined drainage depressions. Planar fragments of ferruginised regolith are locally abundant. Contour banding of gravels is well developed on some units. Vegetation is typically sparse chenopod shrublands with minor Acacia cana.*

Cfrs1 — *Light brown to red-brown silt and sand, and angular to rounded milky quartz clasts and minor quartzite clasts (< 50 mm in diameter) on a low relief land surface. Contour banding of gravels is well developed. Vegetation consists of chenopod shrublands dominated by Atriplex vesicaria and Bassia spp.*

Cfsp1 — *Red-brown, micaceous, quartzose silt and sand, and subangular to rounded milky quartz and quartzite clasts (< 50 mm in diameter) on a low relief land surface with minor inclined channels and drainage depressions. Minor bedrock exposures. Vegetation is dominated by Sida petrophila, with minor chenopod shrubs, Solanum spp. and Cassia spp.*

Cfsp2 — *Light brown to red-brown quartzose silt and sand on a low relief land surface with minor inclined channels and drainage depressions. Subangular to rounded clasts of milky quartz and quartzite (50-100 mm in diameter), and planar fragments of ferruginised regolith, are common. Contour banding of gravels is well developed on some units. Vegetation consists of chenopod shrublands dominated by Atriplex vesicaria.*

IN-SITU REGOLITH

Saprolith

Saprolith

Se1 — *Weathered bedrock, with light brown, slightly micaceous, quartzose silt and sand, on a moderate to high relief land surface with minor inclined drainage depressions. Subangular to rounded milky quartz clasts (< 50 mm in diameter), angular lithic clasts and planey fragments of ferruginised regolith are common. Vegetation consists of chenopod shrublands, with Cassia spp., Acacia tetragonophylla, Pittosta obovatus and A. aneura.*

Sep1 — *Weathered bedrock, with light brown, slightly micaceous, quartzose silt and sand, on a low relief land surface with minor inclined drainage depressions. Subangular to rounded milky quartz clasts (< 50 mm in diameter), angular lithic clasts and planey fragments of ferruginised regolith are common. Vegetation consists of chenopod shrublands dominated by Bassia spp. and Atriplex vesicaria.*

Ser1 — *Weathered bedrock, with light brown, slightly micaceous, quartzose silt and sand, on a moderate relief land surface with minor inclined drainage depressions. Subangular to rounded milky quartz clasts (< 50 mm in diameter), angular lithic clasts and planey fragments of ferruginised regolith are common. Vegetation consists of chenopod shrublands, with Cassia spp., Acacia tetragonophylla, Pittosta obovatus and A. aneura.*

Moderately weathered bedrock

SMer1 — *Moderately weathered bedrock, with green-grey to light brown clay and silt and angular lithic clasts, on a moderate relief land surface. Vegetation is sparse, consisting of chenopod shrublands dominated by Atriplex vesicaria.*

SMer2 — *Moderately weathered bedrock, with light grey silt and sand and angular lithic clasts, on a moderate relief land surface. Subangular to rounded milky quartz clasts and fragments of ferruginised regolith are common. Vegetation consists of sparse chenopod shrublands dominated by Atriplex vesicaria and Bassia spp.*

SMer3 — *Moderately weathered bedrock, with red-brown, micaceous, coarse, angular quartzose sand, on a moderate relief land surface. Poorly consolidated clasts are common. Vegetation includes chenopod shrubs, Solanum spp., Sida petrophila and minor Eremophila spp.*

Saprock

SSer1 — *Slightly weathered bedrock, with red-brown to grey-brown silt and sand and angular lithic clasts, on a high relief land surface with minor channels drainage depressions. Angular vein quartz is locally abundant. Hardpan regolith carbonate accumulations are common on bedrock exposures. Vegetation includes Eremophila spp., and chenopod shrublands dominated by Bassia spp.*

SSer1 — *Slightly weathered bedrock, with red-brown to grey-brown silt and sand and angular lithic clasts, on a moderate to high relief land surface with minor inclined drainage depressions. Angular vein quartz and angular to subangular lithic clasts are locally abundant. Hardpan regolith carbonate accumulations are common on bedrock exposures. Vegetation consists of sparse chenopod shrublands dominated by Bassia spp.*

SSer2 — *Slightly weathered bedrock, with red-brown, micaceous, coarse, angular quartzose sand, on a moderate to high relief land surface. Hills are typically dominated by rounded boulders. Vegetation is dominated by Sida petrophila, with chenopod shrubs, Solanum spp., Cassia spp., Acacia tetragonophylla, A. victoriae and minor Eremophila spp.*

SSer1 — *Slightly weathered bedrock, with red-brown to grey-brown silt and sand and angular lithic clasts, on a moderate relief land surface with minor inclined channels and drainage depressions. Angular vein quartz clasts are locally abundant. Hardpan regolith carbonate accumulations are common on bedrock exposures. Vegetation consists of sparse chenopod shrublands dominated by Bassia spp.*

SSer2 — *Slightly weathered bedrock, with red-brown, micaceous, coarse, angular quartzose sand, on a moderate relief land surface. Rises are typically dominated by rounded boulders. Vegetation is dominated by Sida petrophila, with chenopod shrubs, Solanum spp., Cassia spp., Acacia tetragonophylla, A. victoriae and minor Eremophila spp.*

LANDFORMS

a - Alluvial landform
ap - Alluvial plain
aw - Alluvial swamp
fe - Sheet-flood fan
pd - Depositional plain
ps - Sand plain
ep - Erosional plain
er - Erosional rise
el - Erosional low hill
eh - Erosional hill

SCALE 1:25 000

0.5 0 0.5 1.0 1.5 2.0 2.5 Kilometres

UNIVERSAL TRANSVERSE MERCATOR PROJECTION
LATITUDE OF ORIGIN: 0°, LONGITUDE OF ORIGIN: 141°
HORIZONTAL DATUM: GDA94, UTM ZONE 54

Compiled by T. Chamberlain (CRC LEME/UC) and S. M. Hill (CRC LEME/UC), 2001

Cartography and GIS by T. Chamberlain (CRC LEME/UA), I. Roach (CRC LEME/UC) and K. A. Foster (CRC LEME/UA).

It is recommended that this map be referred to as:

Chamberlain, T. & Hill, S. M., 2002, Tibooburra Regolith-Landform Map (1:25,000 scale). Cooperative Research Centre for Landscape, Environments and Mineral Exploration (CRC LEME), Canberra/Perth.

The regolith-landform polygons on this map are based on interpretation of 1:50 000 aerial photographs, and extensive field mapping. It is the intention of this map to identify and characterise surface materials and processes in a prospective area relatively void of exposed bedrock.

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Published by CRC LEME, Canberra, Australia.

Drainage information digitised from 1:50 000 aerial photographs

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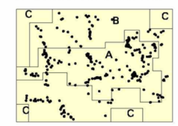
MINERAL RESOURCES
Geological Survey of New South Wales

CRC LEME
Cooperative Research Centre for LANDSCAPE ENVIRONMENTS and MINERAL EXPLORATION

TIBOOBURRA INLIER
REGOLITH-LANDFORMS
FIRST EDITION 2002
SUBJECT TO REVISION

SAMPLE SITE LOCATIONS AND DATASETS USED



A Aerial photograph interpretation, with detailed field mapping and characterisation

B Aerial photograph interpretation, with limited field mapping and characterisation

C Aerial photograph interpretation only

Areas A, B and C were initially mapped by Tessa Chamberlain as part of a University of Canberra Honours thesis, during 2001.
Reference: Chamberlain, T. 2001, Regolith Geology and Landscape Evolution of the Tibooburra Inlier, north-west New South Wales, Honours thesis, University of Canberra.

INDEX TO ADJOINING 1:100,000 MAPS

MAP LOCALITY