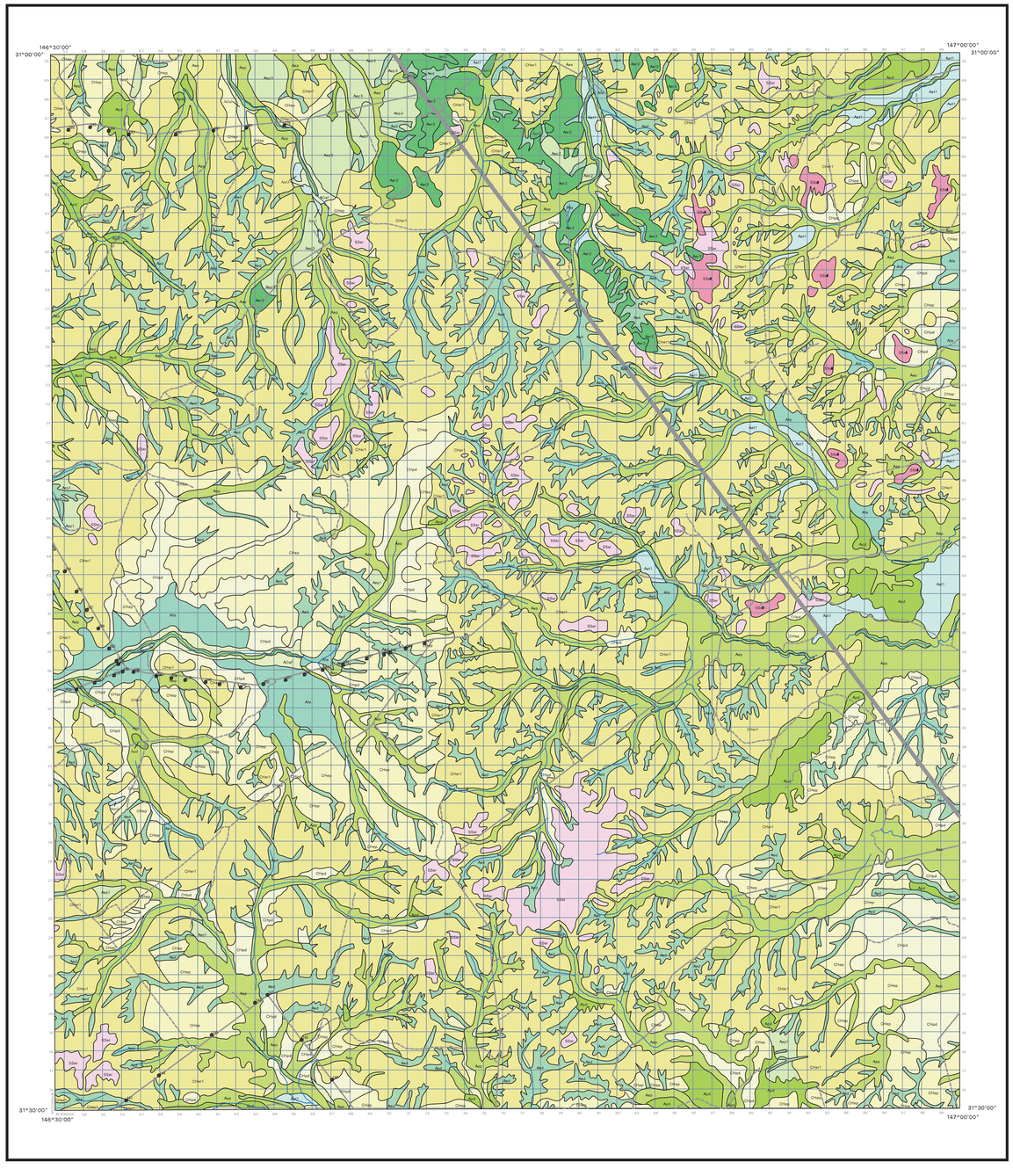
COOLABAH

REGOLITH-LANDFORMS

NEW SOUTH WALES

SCALE 1:100 000



TRANSPORTED REGOLITH

Alluvial sediments

Alluvial sediments

- Aap — *Alluvial plains with intermittent deposition, including floodouts, of alluvial sediments, predominantly quartzose and lithic silts, sands and gravels. Minor tributary alluvial plains often have steeper gradients than trunk streams and major tributaries. Alluvial sediments overlie palaeosediments in places.*
- Apd — *Depositional plains with diffuse alluvial sediments on planed saprolith (variably weathered bedrock) or palaeosediments substrate within trunk stream valleys or on very low interfluves between trunk distributary valleys.*
- Aat1 — *Alluvial terraces in trunk stream valleys with aggradational alluvial sediments and minor colluvial sediments which overlie palaeosediments in places.*
- Aat2 — *Alluvial strath terraces with degradational alluvial sediments on down-stream sloping planar quartzose-rich palaeosediments substrate.*
- Afa — *Alluvial fans, both individual and coalescing, on variable gradients with fan deposits fining distally.*
- Aas — *Stagnant alluvial plains associated with confluent trunk streams with alluvial sediments and underlying palaeosediments, especially associated with Mulga Creek and its tributaries.*
- Aed — *Erosional depressions associated with headwater tributaries with alluvial sediments along valley thalweg and saprolith valley sides. Palaeosediments form substrate in places.*
- Aep1 — *Erosional plains with widespread palaeoalluvial sediments containing ferruginous pisoliths and fragments as a surface lag or buried at depth.*
- Aep2 — *Erosional plains with widespread palaeoalluvial sediments containing quartz-lithic sandstones and conglomerates and rounded quartz pebble to cobble size lag.*
- Aep3 — *Erosional plains with widespread ferruginous- and quartzose-rich palaeoalluvial sediments which may occur as a lag in places.*
- Aer2 — *Rises with widespread palaeoalluvial sediments containing quartz-lithic sandstones and conglomerates and rounded quartz pebble to cobble size lag.*
- Aer3 — *Rises with quartzose-rich palaeosediments between saprock (slightly weathered bedrock) ridges on top of rises.*

Channel deposits

- ACar — *Alluvial ephemeral meandering channels with intermittent deposition of channel sediments which overlie palaeosediments in places.*

Overbank deposits

- AOaf — *Alluvial flood plains with intermittent deposition of overbank sediments which overlie palaeosediments in places.*

Colluvial sediments

Sheet-flow deposits

- Cfpd — *Depositional plains, including minor colluvial fans, with sheet-flow deposits of predominantly lithic and quartz sands and gravels, which thicken down slope and cover palaeosediments in places.*
- Cfep — *Erosional plains with rounded to angular crests with sheet-flow deposits of predominantly lithic and quartz sands and gravels, thickening downslope and which overlie palaeosediments in places. Saprolith subcrop and outcrop common on crests and upper slopes.*
- Cfer1 — *Rises with subrounded to angular crests with sheet-flow deposits thickening downslope which overlie palaeosediments in places. Less weathered bedrock (saprock) crests and upper slopes, commonly with lag, including silicified bedrock clasts and ferruginous pisoliths in places. Extensive quartzose-rich sediments in the north, possibly derived from Ark2. Dry valleys crossing drainage divides are common.*

IN-SITU REGOLITH

Saprolith

Saprock

- SSer — *Rises, commonly with angular ridge crests, with saprock outcrop and lithosols.*
- SSal — *Low hills, commonly with angular ridge crests, with saprock outcrop and lithosols.*

LANDFORMS

pd	Depositional plain	aw	Swamp
ap	Alluvial plain	ed	Drainage depression
af	Flood plain	ep	Erosional plain
as	Stagnant alluvial plain	er	Rise
at	Alluvial terrace	dl	Low hill
fa	Alluvial fan	vp	Volcanic plateau
ar	Alluvial channel		

Regolith-landform unit boundary
Highway
Secondary road
Vehicle track
River or creek
Aircore drill hole (CBAC)

MAP LOCALITY

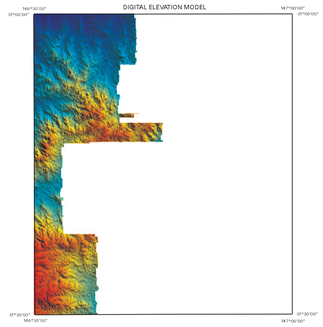
INDEX TO 1:100 000 MAPS

1:250 000 MAP SHOWN IN BLUE

SCALE 1:100 000

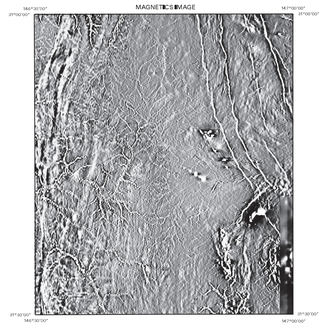
UNIVERSAL TRANSVERSE MERCATOR PROJECTION
Latitude of Origin 30° Longitude of Origin 143°
Datum GDA94 MGA grid zone 55

DIGITAL ELEVATION MODEL



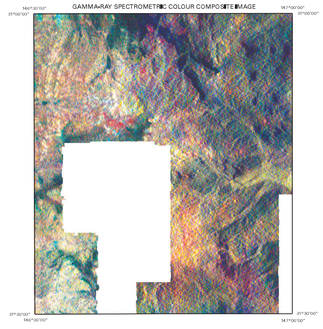
False colour Digital Elevation Model of the Coolabah area. Maximum elevations shown in red and minimum elevations shown in blue with a range from 285m asl to 160m asl.

MAGNETICS IMAGE



Fractional vertical derivative (1.5) of total magnetic intensity reduced to pole, greyscale: white high, black low

GAMMARAY SPECTROMETRIC COLOUR COMPOSITE IMAGE



Three-band gammaray spectrometric image (potassium in red, thorium in green, uranium in blue) of the Coolabah area.

Compiled by RJ.Ei.R, Maly. R.A, Chan (CRC LEME / GA). and A. Senior (CRC LEME / ANU), 2003-04.

Cartography and GIS by G. Tolkin, GAV Unit, Geoscience Australia.

It is recommended that this map be referred to as:
Maly, R.A.Ei.R., Chan, R.A., and Senior, A., 2004, Coolabah Regolith-Landform Map (1:100 000 scale). Cooperative Research Centre for Landscape Environments and Mineral Exploration.

Regolith-Landform Mapping Scheme)
The regolith-landform units portray dominant regolith-landform associations and their inherent geomorphic settings as outlined in RTMAP mapping procedures. For more information on RTMAP, see CRC LEME Report 139 (or CRC LEME Report 139) see CRC LEME Web Site). The regolith-landform letter symbols are hierarchic, such that the capital letter symbol indicates dominant regolith type and the lower-case letter symbol indicates dominant landform type (see also Landforms table in map explanation). Thus, for example, Cfep indicates a subcrop of an erosional regolith-landform association. Map unit boundaries are stored in RTMAP national database at Geoscience Australia.

The regolith-landform polygons on this map are based on interpretation of Landsat TM imagery, SRTM 1 second digital elevation model, airborne gamma-spectrometric, magnetics and digital elevation model data, with limited field truthing. It is the intention of this map to identify and characterise surficial materials and processes likely to be known, but potentially prospective, areas with widespread regolith cover.

Source of data: The geophysical imagery, drainage and culture data were obtained from the New South Wales Department of Mineral Resources as part of the Discovery Initiative. The drainage and culture data are taken from 1:250 000 scale topographic mapping.

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Published by CRC LEME, Canberra, Australia.

CRC LEME acknowledges the collaboration of Geoscience Australia and the support of the New South Wales Department of Mineral Resources in the production of this map.

CRC LEME is an unincorporated joint venture between the Australian National University, University of Adelaide, Curtin University of Technology, CSIRO Exploration and Mining, Geoscience Australia, CSIRO Land and Water, Primary Industries and Resources SA, NSW Department of Mineral Resources Geological Survey, and the Minerals Council of Australia, established and supported under the Australian Government's Cooperative Research Centres Program.

Copies of this map may be obtained from:

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Horizontal coordinates on this map are based on the new earth-centered GEOCENTRIC DATUM OF AUSTRALIA (GDA)
To convert GDA to AGD (around 10 metre accuracy):
Subtract the following from GDA: AGD66 Grid and ellipsoid
Longitude 0.0043" East, 0.0047" South
UTM or AGD coordinates: (from MGA94 to AMG66/84) + subtract 124m from Northing/ subtract 113m from Easting

COOLABAH

REGOLITH-LANDFORMS

FIRST EDITION 2004

SUBJECT TO REVISION

CRCLEME
Cooperative Research Centre for LANDSCAPE ENVIRONMENTS and MINERAL EXPLORATION

MINERAL RESOURCES NEW SOUTH WALES