568000 mE 569000 ml 570000 mE

Aerial orthophoto mosaic of Conners Paddock compiled from 1:50,000 scale colour aerial photographs of the Bancannia (acquired 16.08.99) and Fowlers Gap (acquired 11.08.1999 and 03.09.1995) 1:100.000 sheets by the New South Wales Department of Lands. Photographs were orthorectified using camera parameters, the SRTM DEM and ground control points collected using hand-held GPS receivers during field work. The final ground pixel resolution of the orthophoto mosaic is approximately 3 m.



Gamma-ray spectrometric image of Conners Paddock from the Broken Hill Exploration Initiative 2nd edition (BHEI-2) dataset of the Geological Survey, NSW Department of Primary Industries. Potassium (K), Thorium (eTh) and Uranium (eU) are displayed as red, green and blue respectively, with an 80 m pixel ground resolution. This image highlights the Neoproterozoic rocks that dominate the west and centre of the map sheet as white-green-pink colours signifying moderate saturation of varying amounts of K, eTh and eU in outcropping Sturts Meadows Siltstone and Fe-oxyhydroxide-rich surface lag. A prominent, low-emissivity ridge of the Faraway Hills Quartzite strikes north-north-west to south-southeast in the central west of the area. Dolomitic Neoproterozoic rocks outcropping parallel to Picnic Creek, including green shales and pods of the Torrowangee Basalt, have slightly higher red saturation reflecting overall higher K abundance compared to other Neoproterozoic rocks. Devonian sandstones are shown as dark green wedges in the northeast and southeast of the image, signifying low dominantly eTh saturation in the data. Mesozoic and Cenozoic sediments in the east tend to have slightly higher overall eTh saturation and are dominated by guartzose sediment and aeolian dust. Modern sediments in Fowlers Creek, running diagonally from southwest to the centre east of the image, and the Fowlers Creek alluvial fan, emanating from Fowlers Gap, have higher K saturation reflecting at least partial derivation from Paleoproterozoic rocks of the Willyama Supergroup some tens of kilometres to the west.





Conners Paddock 1:12,500 regolith-landform map

Regolith-landform units compiled by Dr S.M. Hill (CRC LEME, University of Adelaide) and Dr I.C. Roach (CRC LEME/Australian National University), cartography and images compiled by Dr I.C. Roach. It is recommended that this map be referred to as:

The regolith-landform polygons on this map are based on an interpretation of 1:10,000 scale aerial photographs, airborne geophysical imagery (gamma-ray spectrometrics and magnetics) and extensive field mapping. The intent is to identify and characterise surface materials and landforms for the purposes of landscape evolution studies, natural resource management and mineral exploration.

CRC LEME acknowledges the support of Dr David Croft, Director, University of New South Wales' Fowlers Gap Arid Zone Research Station, in the production of this map. Shuttle Radar Topography Mission Digital Elevation Model (SRTM DEM) courtesy of NASA. Geophysical images courtesy of the Geological Survey, NSW Department of Primary Industries.

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- CRC LEME is an unincorporated joint venture between the Australian National University, The University of Adelaide, The Curtin University of Technology, CSIRO Exploration and Mining, CSIRO Land and Water, Primary Industries and Resources South Australia, The New South Wales Department of Primary Industry 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: CRC LEME c/o CSIRO Division of Exploration and Mining PO Box 1130 Bentley WA 6102 http://crcleme.org.au/





FOWLERS GAP

Hill S.M. & Roach I.C. 2008. Conners Paddock 1:12,500 regolith-landform map. Cooperative Research Centre for Landscape Environments and Mineral Exploration, Perth, WA.

Most information is digitised from 1:10,000 scale aerial photographs or is taken directly from digital track logs of hand-held GPS devices. A small proportion of information is taken from the New South Wales Department

THE UNIVERSITY **FADELAIDE**



THE AUSTRALIAN NATIONAL UNIVERSITY







TRANSPORTED REGOLITH

Alluvial sodiments

Aap1	Red-brown, rounded to angular lithic and quartzose sand, gravel and silt. Low relief (< 9 m) landforms containing a mixture of incised channels and overbank deposits, typically associated with local depocentres and floodouts of alluvial channels and drainage depressions. Chenopod shrubland dominated by <i>Atriplex vesicaria</i> and <i>Myoporum montanum</i> .
Aap2	Red-brown, rounded to angular lithic and quartzose sand, gravel and silt. Low relief (< 9 m) landforms containing a mixture of incised channels and overbank deposits, typically associated with flanks of alluvial channels. Chenopod shrubland dominated by <i>Atriplex vesicaria</i> and <i>Myoporum montanum</i> .
Aaw1	Rounded and minor angular sand and silt with sparse gravel composed of lithic fragments, quartz and minor silicified sediment clasts. Low-lying depressions holding ephemeral standing water within stream channels. Woodland dominated by <i>Eucalyptus camaldulensis</i> trees.
A	Rounded and minor angular sand and silt with scattered gravel composed of lithic fragments, quartz, and minor silicified
Aawz	sediment clasts. Low-lying depressions forming pools with ephemeral standing water, typically associated with station dams. Sedges and forbs on exposed sediments with dense shrubland around margins dominated by <i>Acacia victoriae</i> and <i>Myopo</i> -
	rum montanum.
ACah1	Rounded and angular lithic and quartzose sand, gravel and minor silt. Sandy meandering and braided channels. Riparian woodland dominated by <i>Eucalyptus camaldulensis</i> and minor <i>Grevillea striata</i> trees.
ACah2	Rounded and angular lithic and quartzose sand, gravel and minor silt. Sandy meandering and braided channels. Riparian woodland dominated by Acacia victoriae and Myoporum montanum small trees and shrubs
	Rounded to minor angular gravel, sand and silt composed of vein quartz and lithic fragments with minor silicified sediment
Aed1	clasts and some weathered bedrock exposures. Incised channels and gullies and flanking valley-sides. Chenopod shrubland dominated by <i>Atriplex spp.</i> and <i>Maireana spp.</i> with riparian shrubland of <i>Acacia victoriae, Myoporum montanum, Hakea leucoptera, Xanthium spp.</i> and grasses including <i>Cymbopogon ambiguus.</i>
	Rounded to minor angular gravel, sand and silt composed of sandstone lithic fragments, minor quartz and silicified sediment
Aed2	clasts and some weathered bedrock exposures. Incised channels and gullies and flanking valley-sides. Chenopod shrubland dominated by <i>Atriplex spp.</i> and <i>Maireana spp.</i> with riparian shrubland of <i>Acacia victoriae</i> , <i>Myoporum montanum</i> , <i>Hakea</i>
	leucoptera and Xanthium spp. and grasses including Cymbopogon ambiguus.
Aed3	Rounded to sub-angular gravel of quartzose and silicified sediment clasts and sand with quartz and muscovite. Minor red- brown quartzose sand and silt. Incised channels and gullies and flanking valley-sides. Chenopod shrubland dominated by Atriplex spp. and Maireana spp. with riparian shrubland of <i>Acacia victoriae</i> , <i>Myoporum montanum</i> , <i>Hakea leucoptera</i> and <i>Xanthium spp</i> . and grasses including <i>Cymbopogon ambiguus</i> .
Apd4	Rounded and angular gravel of quartzose, silicified sediment, ferruginised sediment and saprolite clasts and sand with
Aeu4	muscovite. Minor red-brown quartzose sand and silt. Incised channels and gullies and flanking valley-sides. Chenopod shrubland dominated by <i>Atriplex spp</i> . and <i>Maireana spp</i> . with riparian shrubland of <i>Acacia victoriae</i> , <i>Myoporum montanum</i> , <i>Hakea leucoptera</i> and <i>Xanthium spp</i> . and grasses including <i>Cymbopogon ambiguus</i> .
Aen1	Rounded and minor angular quartzose sand and gravel with localised accumulations of plant impressions indurated by
	shedding sediment into flanking channels and drainage depressions. Sparse chenopod shrubland dominated by <i>Atriplex</i> vesicaria and <i>Sclerolaena spp</i> .
Aor1	Rounded and minor angular quartzose sand and gravel with localised accumulations of plant impressions indurated by
Aeri	micro-crystalline quartzose and minor micro-crystalline anatase and hematite. Slight topographic relief (< 9 m), locally shedding sediment into flanking channels and drainage depressions. Sparse chenopod shrubland dominated by <i>Atriplex vesicaria</i> and <i>Sclerolaena spp</i> .
	Red-brown sub-rounded to sub-angular quartzose and lithic sand, gravel and silt. Smooth, low relief (< 9 m) landforms
Apd1	typically associated with intersection point floodouts of alluvial channels and drainage depressions. Chenopod shrublands dominated by <i>Maireana spp.</i> , <i>Atriplex spp.</i> , <i>Sclerolaena spp.</i> and <i>Xanthium spp.</i>
Apd2	typically associated with flanks of alluvial channels. Chenopod shrublands dominated by <i>Maireana spp.</i> and <i>Atriplex spp.</i>
Colluvi	al sediments
Cel1	Angular, lithic and quartzose gravel with red-brown quartzose sand and silt. High topographic relief (30-90 m). Chenopod
Cen1	Angular gravel of variably kaolinitic and ferruginised weathered bedrock clasts, minor regolith carbonates and vein quartz
	shedding sediment into flanking channels and drainage depressions. Sparse chenopod shrubland dominated by <i>Atriplex</i> vesicaria and <i>Sclerolaena spp</i> .
Cer1	$-\mathbf{A} = \mathbf{A} =$
CHed1	Angular, lithic (mostly quartzite clasts but also variably kaolinised and ferruginised bedrock clasts) and quartzose gravel with red-brown quartzose sand and silt. Slight topographic relief (9-30 m). Chenopod shrubland dominated by <i>Atriplex vesicaria</i> and <i>Sclerolaena spp</i> .
	Angular, lithic (mostly quartzite clasts but also variably kaolinised and ferruginised bedrock clasts) and quartzose gravel with red-brown quartzose sand and silt. Slight topographic relief (9-30 m). Chenopod shrubland dominated by <i>Atriplex vesicaria</i> and <i>Sclerolaena spp</i> . Angular, lithic (mostly quartzite clasts but also variably kaolinised and ferruginised bedrock clasts) and quartzose gravel with red-brown quartzose sand and silt. Slight topographic relief (9-30 m). Chenopod shrubland dominated by <i>Atriplex vesicaria</i> and <i>Sclerolaena spp</i> .
CHod2	Angular, littlic (mostly quartzite clasts but also variably kaolinised and ferruginised bedrock clasts) and quartzose gravel with red-brown quartzose sand and silt. Slight topographic relief (9-30 m). Chenopod shrubland dominated by <i>Atriplex vesicaria</i> and <i>Sclerolaena spp</i> . Angular, lithic (mostly quartzite clasts but also variably kaolinised and ferruginised bedrock clasts) and quartzose gravel with red-brown quartzose sand and silt. Slight topographic relief (9-30 m). Chenopod shrubland dominated by <i>Atriplex vesicaria</i> and <i>Sclerolaena spp</i> . Rounded to minor angular gravel, sand and silt composed of sandstone lithic fragments, minor quartz and silicified sediment
CHed2	Angular, littic (mostly quartzite clasts but also variably kaolinised and ferruginised bedrock clasts) and quartzose gravel with red-brown quartzose sand and silt. Slight topographic relief (9-30 m). Chenopod shrubland dominated by <i>Atriplex vesicaria</i> and <i>Sclerolaena spp</i> . Angular, lithic (mostly quartzite clasts but also variably kaolinised and ferruginised bedrock clasts) and quartzose gravel with red-brown quartzose sand and silt. Slight topographic relief (9-30 m). Chenopod shrubland dominated by <i>Atriplex vesicaria</i> and <i>Sclerolaena spp</i> . Rounded to minor angular gravel, sand and silt composed of sandstone lithic fragments, minor quartz and silicified sediment clasts, and some weathered bedrock exposures. Elongate incised depressions and valleys with irregular 'contour banding' surface lag patterns. Circular depressions ('melonholes') along the long axis of depressions. Chenopod shrubland dominated by <i>Maireana spp</i> ., <i>Atriplex spp</i> . and <i>Sclerolaena spp</i> .
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CHed2 CHed4	Angular, lithic (mostly quartzite clasts but also variably kaolinised and ferruginised bedrock clasts) and quartzose gravel with red-brown quartzose sand and silt. Slight topographic relief (9-30 m). Chenopod shrubland dominated by <i>Atriplex vesicaria</i> and <i>Sclerolaena spp</i> . Angular, lithic (mostly quartzite clasts but also variably kaolinised and ferruginised bedrock clasts) and quartzose gravel with red-brown quartzose sand and silt. Slight topographic relief (9-30 m). Chenopod shrubland dominated by <i>Atriplex vesicaria</i> and <i>Sclerolaena spp</i> . Rounded to minor angular gravel, sand and silt composed of sandstone lithic fragments, minor quartz and silicified sediment clasts, and some weathered bedrock exposures. Elongate incised depressions and valleys with irregular 'contour banding' surface lag patterns. Circular depressions ('melonholes') along the long axis of depressions. Chenopod shrubland dominated by <i>Maireana spp.</i> , <i>Atriplex spp</i> . and <i>Sclerolaena spp</i> . Rounded and angular quartzose, silicified sediment, ferruginised sediment and saprolite clast gravel and sand with muscovite. Minor red-brown quartzose sand and silt. Elongate incised depressions and valleys with irregular 'contour banding' surface lag patterns. Circular depressions ('melonholes') along the long axis of depressions. Chenopod shrubland dominated by <i>Maireana spp.</i> , <i>Atriplex spp</i> . and <i>Sclerolaena spp</i> .
CHed2 CHed4 CHel1	Angular, lithic (mostly quartzite clasts but also variably kaolinised and ferruginised bedrock clasts) and quartzose gravel with red-brown quartzose sand and silt. Slight topographic relief (9-30 m). Chenopod shrubland dominated by <i>Atriplex vesicaria</i> and <i>Sclerolaena spp</i> . Angular, lithic (mostly quartzite clasts but also variably kaolinised and ferruginised bedrock clasts) and quartzose gravel with red-brown quartzose sand and silt. Slight topographic relief (9-30 m). Chenopod shrubland dominated by <i>Atriplex vesicaria</i> and <i>Sclerolaena spp</i> . Rounded to minor angular gravel, sand and silt composed of sandstone lithic fragments, minor quartz and silicified sediment clasts, and some weathered bedrock exposures. Elongate incised depressions and valleys with irregular 'contour banding' surface lag patterns. Circular depressions ('melonholes') along the long axis of depressions. Chenopod shrubland dominated by <i>Maireana spp.</i> , <i>Atriplex spp</i> . and <i>Sclerolaena spp</i> . Rounded and angular quartzose, silicified sediment, ferruginised sediment and saprolite clast gravel and sand with muscovite. Minor red-brown quartzose sand and silt. Elongate incised depressions and valleys with irregular 'contour banding' surface lag patterns. Circular depressions ('melonholes') along the long axis of depressions. Chenopod shrubland dominated by <i>Maireana spp.</i> , <i>Atriplex spp</i> . and <i>Sclerolaena spp</i> . Rounded and angular quartzose, silicified sediment, ferruginised sediment and saprolite clast gravel and sand with muscovite. Minor red-brown quartzose sand and silt. Elongate incised depressions and valleys with irregular 'contour banding' surface lag patterns. Circular depressions ('melonholes') along the long axis of depressions. Chenopod shrubland dominated by <i>Maireana spp.</i> , <i>Atriplex spp</i> . and <i>Sclerolaena spp</i> .
CHed2 CHed4 CHel1 CHep1	Angular, lithic (mostly quartzite clasts but also variably kaolinised and ferruginised bedrock clasts) and quartzose gravel with red-brown quartzose sand and silt. Slight topographic relief (9-30 m). Chenopod shrubland dominated by <i>Atriplex vesicaria</i> and <i>Sclerolaena spp</i> . Angular, lithic (mostly quartzite clasts but also variably kaolinised and ferruginised bedrock clasts) and quartzose gravel with red-brown quartzose sand and silt. Slight topographic relief (9-30 m). Chenopod shrubland dominated by <i>Atriplex vesicaria</i> and <i>Sclerolaena spp</i> . Rounded to minor angular gravel, sand and silt composed of sandstone lithic fragments, minor quartz and silicified sediment clasts, and some weathered bedrock exposures. Elongate incised depressions and valleys with irregular 'contour banding' surface lag patterns. Circular depressions ('melonholes') along the long axis of depressions. Chenopod shrubland dominated by <i>Maireana spp</i> . Rounded and angular quartzose sand and silt. Elongate incised depressions and valleys with irregular 'contour banding' surface lag patterns. Circular depressions ('melonholes') along the long axis of depressions. Chenopod shrubland dominated by <i>Maireana spp</i> . Atriplex spp. and <i>Sclerolaena spp</i> . Rounded and angular quartzose, silicified sediment, ferruginised sediment and saprolite clast gravel and sand with musco-vite. Minor red-brown quartzose sand and silt. Elongate incised depressions and valleys with irregular 'contour banding' surface lag patterns. Circular depressions ('melonholes') along the long axis of depressions. Chenopod shrubland dominated by <i>Maireana spp</i> . Atriplex spp. and <i>Sclerolaena spp</i> . Angular lithic (dominantly quartzite clasts) and quartzose gravel and red-brown quartzose sand and silt. Shallow bedrock subcrop. High topographic relief (30-90 m), shedding sediment. Chenopod shrubland dominated by <i>Atriplex vesicaria</i> and open woodland with <i>Acacia aneura</i> trees. Angular lithic (dominantly quartzite clasts) and quartzose gravel and red-brown quartzose sand and silt. S
CHed2 CHed4 CHel1 CHep1	Angular, lithic (mostly quartzite clasts but also variably kaolinised and ferruginised bedrock clasts) and quartzose gravel with red-brown quartzose sand and silt. Slight topographic relief (9-30 m). Chenopod shrubland dominated by <i>Atriplex vesicaria</i> and <i>Sclerolaena spp</i> . Angular, lithic (mostly quartzite clasts but also variably kaolinised and ferruginised bedrock clasts) and quartzose gravel with red-brown quartzose sand and silt. Slight topographic relief (9-30 m). Chenopod shrubland dominated by <i>Atriplex vesicaria</i> and <i>Sclerolaena spp</i> . Rounded to minor angular gravel, sand and silt composed of sandstone lithic fragments, minor quartz and silicified sediment clasts, and some weathered bedrock exposures. Elongate incised depressions and valleys with irregular 'contour banding' surface lag patterns. Circular depressions ('melonholes') along the long axis of depressions. Chenopod shrubland dominated by <i>Maireana spp.</i> , <i>Atriplex spp.</i> and <i>Sclerolaena spp</i> . Rounded and angular quartzose, silicified sediment, ferruginised sediment and saprolite clast gravel and sand with muscovite. Minor red-brown quartzose sand and silt. Elongate incised depressions and valleys with irregular 'contour banding' surface lag patterns. Circular depressions ('melonholes') along the long axis of depressions. Chenopod shrubland dominated by <i>Maireana spp.</i> , <i>Atriplex spp.</i> and <i>Sclerolaena spp</i> . Angular lithic (dominantly quartzite clasts) and quartzose gravel and red-brown quartzose sand and silt. Shallow bedrock subcrop. High topographic relief (30-90 m), shedding sediment. Chenopod shrubland dominated by <i>Atriplex vesicaria</i> and open woodland with <i>Acacia aneura</i> trees. Angular lithic (dominantly quartzite clasts) and quartzose gravel and red-brown quartzose sand and silt. Shallow bedrock subcrop. Low-relief (<9 m), low gradient, locally shedding sediment. Chenopod shrubland dominated by <i>Atriplex vesicaria</i> and open woodland with <i>Acacia aneura</i> trees.
CHed2 CHed4 CHel1 CHep1 CHep2	Angular, lithic (mostly quartzite clasts but also variably kaolinised and ferruginised bedrock clasts) and quartzose gravel with red-brown quartzose sand and silt. Slight topographic relief (9-30 m). Chenopod shrubland dominated by <i>Atriplex vesicaria</i> and <i>Sclerolaena spp</i> . Angular, lithic (mostly quartzite clasts but also variably kaolinised and ferruginised bedrock clasts) and quartzose gravel with red-brown quartzose sand and silt. Slight topographic relief (9-30 m). Chenopod shrubland dominated by <i>Atriplex vesicaria</i> and <i>Sclerolaena spp</i> . Rounded to minor angular gravel, sand and silt composed of sandstone lithic fragments, minor quartz and silicified sediment clasts, and some weathered bedrock exposures. Elongate incised depressions and valleys with irregular 'contour banding' surface lag patterns. Circular depressions ('melonholes') along the long axis of depressions. Chenopod shrubland dominated by <i>Maireana spp.</i> , <i>Atriplex spp</i> . and <i>Sclerolaena spp</i> . Rounded and angular quartzose, silicified sediment, ferruginised sediment and saprolite clast gravel and sand with musco-vite. Minor red-brown quartzose sand and silt. Elongate incised depressions and valleys with irregular 'contour banding' surface lag patterns. Circular depressions ('melonholes') along the long axis of depressions. Chenopod shrubland dominated by <i>Maireana spp.</i> , <i>Atriplex spp</i> . and <i>Sclerolaena spp</i> . Angular lithic (dominantly quartzite clasts) and quartzose gravel and red-brown quartzose sand and silt. Shallow bedrock subcrop. High topographic relief (30-90 m), shedding sediment. Chenopod shrubland dominated by <i>Atriplex vesicaria</i> and open woodland with <i>Acacia aneura</i> trees. Angular lithic (dominantly quartzite clasts) and quartzose gravel and red-brown quartzose sand and silt. Shallow bedrock subcrop. Low-relief (< 9 m), low gradient, locally shedding sediment. Chenopod shrubland dominated by <i>Atriplex vesicaria</i> , <i>Maireana spp</i> . and grasses.
CHed2 CHed4 CHel1 CHep1 CHep2 CHep3	Angular, liftlic (mostly quartzite clasts but also variably kaolinised and terruginised bedrock clasts) and quartzose gravel with red-brown quartzose sand and silt. Slight topographic relief (9-30 m). Chenopod shrubland dominated by <i>Atriplex vesicaria</i> and <i>Sclerolaena spp</i> . Angular, lithic (mostly quartzite clasts but also variably kaolinised and ferruginised bedrock clasts) and quartzose gravel with red-brown quartzose sand and silt. Slight topographic relief (9-30 m). Chenopod shrubland dominated by <i>Atriplex vesicaria</i> and <i>Sclerolaena spp</i> . Rounded to minor angular gravel, sand and silt composed of sandstone lithic fragments, minor quartz and silicified sediment clasts, and some weathered bedrock exposures. Elongate incised depressions and valleys with irregular 'contour banding' surface lag patterns. Circular depressions ('melonholes') along the long axis of depressions. Chenopod shrubland dominated by <i>Maireana spp.</i> , <i>Atriplex spp</i> . and <i>Sclerolaena spp</i> . Rounded and angular quartzose, silicified sediment, ferruginised sediment and saprolite clast gravel and sand with muscovite. Minor red-brown quartzose sand and silt. Elongate incised depressions and valleys with irregular 'contour banding' surface lag patterns. Circular depressions ('melonholes') along the long axis of depressions. Chenopod shrubland dominated by <i>Maireana spp</i> ., <i>Atriplex spp</i> . and <i>Sclerolaena spp</i> . Angular lithic (dominantly quartzite clasts) and quartzose gravel and red-brown quartzose sand and silt. Shallow bedrock subcrop. High topographic relief (30-90 m), shedding sediment. Chenopod shrubland dominated by <i>Atriplex vesicaria</i> and open woodland with <i>Acacia aneura</i> trees. Angular lithic (dominantly quartzite clasts) and quartzose gravel and red-brown quartzose sand and silt. Shallow bedrock subcrop. Low-relief (< 9 m), low gradient, locally shedding sediment. Chenopod shrubland dominated by <i>Atriplex vesicaria</i> , <i>Maireana spp</i> . and grasses. Angular lithic (dominantly sandstone clasts) gravel and red-brown quartzose sand and si
CHed2 CHed4 CHel1 CHep1 CHep2 CHep3 CHep4	Angular, lithic (mostly quartize clasts but also variably kaolinised and ferruginised bedrock clasts) and quartices gravel with red-brown quartizes sand and silt. Slight topographic relief (9-30 m). Chenopod shrubland dominated by <i>Atriplex vesicaria</i> and <i>Sclerolaena spp</i> . Angular, lithic (mostly quartize clasts but also variably kaolinised and ferruginised bedrock clasts) and quartizes gravel with red-brown quartizes and and silt. Slight topographic relief (9-30 m). Chenopod shrubland dominated by <i>Atriplex vesicaria</i> and <i>Sclerolaena spp</i> . Rounded to minor angular gravel, sand and silt composed of sandstone lithic fragments, minor quartz and silicified sediment clasts, and some weathered bedrock exposures. Elongate incised depressions and valleys with irregular 'contour banding' surface lag patterns. Circular depressions ('melonholes') along the long axis of depressions. Chenopod shrubland dominated by <i>Maireana spp.</i> . Rounded and angular quartzose, silicified sediment, ferruginised sediment and saprolite clast gravel and sand with muscovite. Minor red-brown quartzose sand and silt. Elongate incised depressions and valleys with irregular 'contour banding' surface lag patterns. Circular depressions ('melonholes') along the long axis of depressions. Chenopod shrubland dominated by <i>Maireana spp.</i> , <i>Atriplex spp</i> . and <i>Sclerolaena spp</i> . Angular lithic (dominantly quartzite clasts) and quartzose gravel and red-brown quartzose sand and silt. Shallow bedrock subcrop. High topographic relief (30-90 m), shedding sediment. Chenopod shrubland dominated by <i>Atriplex vesicaria</i> and open woodland with <i>Acacia aneura</i> trees. Angular lithic (dominantly quartzite clasts) gravel and red-brown quartzose sand and silt. Shallow bedrock subcrop. Low-relief (< 9 m), low gradient, locally shedding sediment. Chenopod shrubland dominated by <i>Atriplex vesicaria</i> , <i>Maireana spp</i> . and grasses. Rounded to sub-angular quartzose and silicified sediment clast gravel and sand with muscovite. Minor red-brown quartzose sand and silit. Low-rel
CHed2 CHed4 CHel1 CHep1 CHep2 CHep3 CHep4	Angular, lithic (mostly quarztie clasts but also variably kaolinised and ferruginised bedrock clasts) and quarzose gravel with red-brown quarzose sand and silt. Slight topographic relief (9-30 m). Chenopod shrubland dominated by <i>Atriplex vesicaria</i> and <i>Sclerolaena spp</i> . Angular, lithic (mostly quarztite clasts but also variably kaolinised and ferruginised bedrock clasts) and quarzose gravel with red-brown quarzose sand and silt. Slight topographic relief (9-30 m). Chenopod shrubland dominated by <i>Atriplex vesicaria</i> and <i>Sclerolaena spp</i> . Rounded to minor angular gravel, sand and silt composed of sandstone lithic fragments, minor quarz and silicified sediment clasts, and some weathered bedrock exposures. Elongate incised depressions and valleys with irregular 'contour banding' surface lag patterns. Circular depressions (melonholes') along the long axis of depressions. Chenopod shrubland dominated by <i>Maireana spp., Atriplex spp.</i> and <i>Sclerolaena spp</i> . Rounded an angular quarzose sand and silt. Elongate incised depressions and valleys with irregular 'contour banding' surface lag patterns. Circular depressions (melonholes') along the long axis of depressions. Chenopod shrubland dominated by <i>Maireana spp., Atriplex spp.</i> and <i>Sclerolaena spp</i> . Atriplex spp. and <i>Sclerolaena spp</i> . Angular lithic (dominantly quarzite clasts) and quarzose gravel and red-brown quarzose sand and silt. Shallow bedrock subcrop. High topographic relief (30-90 m), shedding sediment. Chenopod shrubland dominated by <i>Atriplex vesicaria</i> , <i>Maireana spp</i> . and grasses. Angular lithic (dominantly quarzite clasts) and quarzose gravel and red-brown quarzose sand and silt. Shallow bedrock subcrop. Low-relief (< 9 m), low gradient, locally shedding sediment. Chenopod shrubland dominated by <i>Atriplex vesicaria</i> , <i>Maireana spp</i> . and grasses. Band at red-brown quarzose sand and silt carbonates. Low-relief (< 9 m), low gradient, locally she
CHed2 CHed4 CHel1 CHep1 CHep2 CHep3 CHep4 CHep5 CHer1	Angular, lithic (mostly quartzite clasts but also variably kaolinised and terruginised bedrock clasts) and quartzose gravel with red-brown quartzose sand and silt. Slight topographic relief (9-30 m). Chenopod shrubland dominated by <i>Atriplex vesicaria</i> and <i>Sclerolaena spp</i> . Rounded to minor angular gravel, sand and silt composed of sandstone lithic fragments, minor quartz and silicified sediment clasts, and some weathered bedrock exposures. Elongate incised depressions and valleys with irregular 'contour banding' surface lag patterns. Circular depressions (melonholes') along the long axis of depressions. Chenopod shrubland dominated by <i>Maireana spp.</i> . <i>Atriplex spp.</i> and <i>Sclerolaena spp.</i> Rounded and angular quartzose, silicified sediment, ferruginised sediment and saprolite clast gravel and sand with musco- vite. Minor red-brown quartzose sand and silt. Elongate incised depressions and valleys with irregular 'contour banding' surface lag patterns. Circular depressions ('melonholes') along the long axis of depressions. Chenopod shrubland dominated by <i>Maireana spp.</i> . <i>Atriplex spp.</i> and <i>Sclerolaena spp.</i> Angular lithic (dominantity quartzite clasts) and quartzose gravel and red-brown quartzose sand and silt. Shallow bedrock subcrop. High topographic relief (30-90 m), shedding sediment. Chenopod shrubland dominated by <i>Atriplex vesicaria</i> and open woodland with <i>Acacia aneura</i> trees. Angular lithic (dominantity quartzite clasts) and quartzose gravel and red-brown quartzose sand and silt. Shallow bedrock subcrop. Low-relief (< 9 m), low gradient, locally shedding sediment. Chenopod shrubland dominated by <i>Atriplex vesicaria</i> , <i>Maireana spp.</i> and grasses. Angular lithic (dominantity quartzite clasts) gravel and red-brown quartzose sand and silt. Shallow bedrock subcrop. Low-relief (< 9 m), low gradient, locally shedding sediment. Chenopod shrubland dominated by <i>Atriplex vesicaria</i> , <i>Maireana spp.</i> and grasses. Angular lithic (dominantity sandstone clasts) gravel and red-brown quartzose sand

Maireana spp. and scattered Casuarina pauper trees. Rounded and angular, quartzose, silicified sediment and ferruginised sediment and saprolite clast gravel and sand with CHer4 muscovite. Minor red-brown quartzose sand and silt. Moderate relief (9-30 m), locally shedding sediment. Chenopod shrubland dominated by Atriplex vesicaria and Maireana spp. Rounded and minor sub-angular quartzose and silicified sediment clast gravel. Minor red-brown quartzose sand and silt. Moderate relief (9-30 m), locally shedding sediment. Open chenopod shrubland dominated by Atriplex vesicaria and Sclerol-

aena spp. Angular lithic (dominantly quartzite clasts) and quartzose gravel and red-brown quartzose sand and silt. Moderate relief (9-30 CHfc1 m) broad fan. Chenopod shrubland dominated by Atriplex vesicaria, Sclerolaena spp. and Maireana spp. and an open woodland of Casuarina pauper and scattered Alectron oleifolius trees.



purple colours in the centre represent dolomitic Neoproterozoic metasediments, including pods of the Torrowangee Basalt, separated from the eastern units by the Nundooka Range Fault. Dark greenish colours in the west represent Neoproterozoic rocks of the Faraway Hills Quartzite and the Sturts Meadows Siltstone. Green vegetation, including Eucalyptus camaldulensis (river red gum) and Eucalyptus gillii (curly mallee) growing along Fowlers Creek and Picnic Creek, is depicted as bright red in this image.

Fill

Rounded and angular quartzose, silicified sediment and ferruginised sediment and saprolite clast gravel and sand with CHfs4 muscovite. Minor red-brown guartzose sand and silt. Low relief (< 9 m) broad fan with 'contour band' surface lag pattern Chenopod shrubland dominated by Atriplex vesicaria and Maireana spp.

Angular lithic (dominantly quartzite clasts) and quartzose gravel and red-brown quartzose sand and silt. Shallow bedrock CHpd1 subcrop. Low-relief (< 9 m), with surficial contour band patterns and receiving sediment. Chenopod shrubland dominated by Atriplex vesicaria, Maireana spp. and Sclerolaena spp.

Rounded to sub-angular quartzose and silicified sediment clast gravel and sand with muscovite. Minor red-brown quartzose CHpd3 sand and silt. Low-relief (< 9 m), with surficial contour band patterns and receiving sediment. Chenopod shrubland dominated by Atriplex vesicaria, Maireana spp. and scattered Casuarina pauper trees. Rounded and angular, quartzose, silicified sediment and ferruginised sediment and saprolite clast gravel and sand with

CHpd4 muscovite. Minor red-brown quartzose sand and silt. Low-relief (< 9 m), with surficial contour band patterns and receiving sediment. Chenopod shrubland dominated by Atriplex vesicaria, Maireana spp. and Sclerolaena spp. Rounded and minor sub-angular quartzose and silicified sediment clast gravel. Minor red-brown quartzose sand and silt. CHpd5 Low-relief (< 9 m), with surficial contour band patterns and receiving sediment. Open chenopod shrubland dominated by Atriplex vesicaria.

Regolith disturbed by machinery and construction. Irregular landforms. Sparse vegetation, often introduced weed species, Fm1 to barren.

IN SITU REGOLITH

Saprolite Variably kaolinitic and ferruginised weathered bedrock with or without prominent cleavage planes. Highly friable where not SHep1 indurated. Minor regolith carbonates and quartz veins. Low-relief (< 9 m), low gradient, locally shedding sediment. Sparse chenopod shrubland dominated by Atriplex vesicaria and Sclerolaena spp. with rare Casuarina pauper trees. Variably kaolinitic and ferruginised weathered bedrock with prominent bedding planes and minor regolith carbonates and SHep2 quartz veins. Highly friable where not indurated. Low-relief (< 9 m), low gradient, locally shedding sediment. Sparse cheno-

pod shrubland dominated by Atriplex vesicaria, Maireana spp. and Sclerolaena spp. with scattered Casuarina pauper trees. Variably kaolinitic and ferruginised weathered bedrock with or without prominent cleavage planes. Highly friable where not indurated. Minor regolith carbonates and quartz veins. Moderate relief (9-30 m), locally shedding sediment. Sparse chenopod shrubland dominated by Atriplex vesicaria and Sclerolaena spp. and rare Casuarina pauper trees. Kaolinitic and friable quartzose weathered bedrock. Slight surficial ferruginisation and hardpan regolith carbonates. High

SMel2 topographic relief (30-90 m). Chenopod shrubland dominated by Atriplex spp., Maireana spp. and Sclerolaena spp. with Acacia aneura and Alectryon oleifolius trees and Acacia tetragonophylla and Eremophila spp. shrubs. Kaolinitic and micaceous weathered bedrock with prominent cleavage planes and minor quartz veins. Slight surficial SMep1 ferruginisation. Low-relief (< 9 m), low gradient, locally shedding sediment. Chenopod shrublands dominated by Atriplex

vesicaria and Sclerolaena spp. with scattered Casuarina pauper trees. Kaolinitic and friable guartzose weathered bedrock. Slight surficial ferruginisation and hardpan regolith carbonates. Low-SMep2 relief (< 9 m), low gradient, locally shedding sediment. Chenopod shrubland dominated by Atriplex spp., Maireana spp. and Sclerolaena spp. with Acacia aneura and Alectryon oleifolius trees and Acacia tetragonophylla and Eremophila spp. shrubs. Kaolinitic and micaceous weathered bedrock with prominent cleavage planes and minor guartz veins. Moderate relief (9-30

SMer1 m), locally shedding sediment. Chenopod shrublands dominated by Atriplex vesicaria and Sclerolaena spp. with scattered Casuarina pauper trees Kaolinitic and friable quartzose weathered bedrock. Slight surficial ferruginisation. Hardpan regolith carbonates. Moderate SMer2 relief (9-30 m), locally shedding sediment. Chenopod shrubland dominated by Atriplex spp., Maireana spp. and Sclerolaena

Saprock

Hard, guartzose, slightly weathered bedrock. Prominent conchoidal fractures and tight joint sets. High topographic relief SSel1 (30-90 m). Chenopod shrublands dominated by Atriplex vesicaria and Sclerolaena spp. with scattered Acacia aneura trees. Hard, quartzose, slightly weathered bedrock. Prominent conchoidal fractures and tight joint sets. Low-relief (< 9 m), low SSep1 gradient, locally shedding sediment. Chenopod shrublands dominated by Atriplex vesicaria and Sclerolaena spp. with scattered Acacia aneura trees. Hard, quartzose, slightly weathered bedrock with prominent bedding planes. Low-relief (< 9 m), low gradient, locally SSep2 shedding sediment. Chenopod shrubland dominated by Atriplex spp., Maireana spp. and Sclerolaena spp. with Acacia aneura and Alectryon oleifolius trees and Acacia tetragonophylla and Eremophila spp. shrubs

spp. with Acacia aneura and Alectryon oleifolius trees and Acacia tetragonophylla and Eremophila spp. shrubs.

Hard, guartzose, slightly weathered bedrock. Prominent conchoidal fractures and tight joint sets. Moderate relief (9-30 m), SSer1 locally shedding sediment. Chenopod shrublands dominated by Atriplex vesicaria and Sclerolaena spp. with sparse Acacia aneura trees

Hard, quartzose, slightly weathered bedrock with prominent bedding planes. Moderate relief (9-30 m), locally shedding SSer2 sediment. Chenopod shrubland dominated by Atriplex spp., Maireana spp. and Sclerolaena spp. with Acacia aneura and Alectryon oleifolius trees and Acacia tetragonophylla and Eremophila spp. shrubs.

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RLU key descriptions for Conners Paddock regolith-landform map

The Regolith-Landform Unit (RLU) polygon codes provide a framework to present the regolith materials and associated landforms on the map sheet across the area. They are designed to first list the regolith lithology in capital letter codes, then landform in lower case codes The modifier number following each RLU code allows for discrimination of variations within broader regolith-landform assemblages (typically due to differences in composition, vegetation assemblages or other attributes). The RLU codes are largely based upon interpretation of the dominant regolith-landform process responsible for their formation (i.e., genetic process), following the scheme of Pain et al. (2007). Lithological and other RLU attributes are described in the map legend descriptions and accompanying map report.

B		B 111		
RLU codes for regolith materials used here are:			RLU codes for landforms used here are:	
A	Alluvial sediments	ah	alluvial channel	
AC	Alluvial channel sediments	ар	alluvial plain	
С	Colluvial sediments	aw	alluvial swamp	
CH	Sheetflow sediments	ed	drainage depression	
F	Fill	ер	erosional plain (0-9 m relief)	
SS	Slightly weathered bedrock (saprock)	er	erosional rise (9-30 m relief)	
SM	Moderately weathered bedrock (saprolite)	el	erosional low hill (30-90 m relief	
SH	Highly weathered bedrock (saprolite)	fc	colluvial fan	
		fs	sheetflood fan	
		m	man-made	

Publications related to the this map:

Cooper P.F., Tuckwell K.D., Gilligan L.B. & Meares R.M.D. 1975. Torrowangee Fowlers Gap 1:100,000 geological sheet. Geological Survey of New South Wales. Sydney Hill S.M. & Roach I. C. 2003. The regolith-landforms of Sandstone Paddock, Fowlers Gap, western NSW. In: Roach I.C. ed. Advances in

depositional plain (0-9 m relief)

Regolith. CRC LEME, pp. 193-200. Hill S.M. & Roach I.C. 2005. Regolith-landforms of northern Lake Paddock, Fowlers Gap Arid Zone Research Station, Western NSW. In: Roach I.C. ed. Regolith 2005 - Ten Years of CRC LEME. CRC LEME, pp. 139-145. Pain C., Chan R., Craig M., Gibson D., Kilgour P. & Wilford J. 2007. RTMAP regolith database field book and users guide. Canberra. CRC LEME Report **No. 231**, 101 p.



Digital Elevation Model (DEM) of Conners Paddock derived from hand-digitised Fowlers Gap Field Station 1:25.000 scale topographic contours at 5 m vertical contour interval and the Shuttle Radar Topography Mission (SRTM) 90 m ground resolution pixel DEM. SRTM heights were used to fill in the topographic contours where gaps of more than 50 m existed horizontally between adjacent contours. The image is sunshaded from the northeast with a sun elevation of 30 degrees. The speckled appearance on areas of low relief is due to digital noise and levelling errors in the SRTM data and 'steps' in the model are artefacts introduced by the modeling process along topographic contours in low-relief areas