Title

Australian Soil Classification (ASC) soil type map of NSW

Abstract

This map identifies the dominant soil types across NSW using the Australian Soils Classification (ASC) at Order level. It uses the best available soil resource mapping coverage incorporating over 55 different datasets of multiple scales across NSW.

The formal ASC classification has been slightly modified in this map to further identify 2 extra sub-classes - soils with alluvial origins in the Rudosol order and soils with sodium-rich subsoils in the Kurosol order category.

Soil types are representative of the dominant facet (sub-landscape) of each map unit and allocated using a lookup table system, linking a Great Soil Group classification soil type to the most appropriate Australian Soil Classification (ASC) class (see LUT table in data package). In some areas (north coast region and Cobargo area), an ASC classification has been assigned to map units directly without using a lookup system. These areas are identified in the ASC confidence map found within in the data package. While the ASC classification commonly equates to a particular GSG soil type classification, this is is not always the case and therefore ASC classifications allocated manually, will have a higher accuracy.

Online Maps: This dataset can be viewed using eSPADE (NSW's soil spatial viewer), which contains a suite of soil and landscape information including soil profile data. Many of these datasets have hot-linked soil reports. An alternative viewer is the SEED Map; an ideal way to see what other natural resources datasets (e.g. vegetation) are available for this map area.

Reference: Department of Planning, Industry and Environment, 2021, *Australian Soil Classification (ASC) Soil Type map of NSW*, Version 4.5, Department of Planning, Industry and Environment, Parramatta.

Resource locator

Show on SEED Web Map	Name: Show on SEED Web Map Protocol: WWW:DOWNLOAD-1.0-http--download Description: Display dataset on SEED's map Function: download
Data quality statement	Name: Data quality statement Protocol: WWW:DOWNLOAD-1.0-http--download Description: DQS - Australian Soil Classification (ASC) Soil Type map of NSW Function: download
Show on eSPADE Web Map	Name: Show on eSPADE Web Map Protocol: WWW:DOWNLOAD-1.0-http--download Description: View dataset on eSPADE spatial viewer. Function: download
ASC data package	Name: ASC data package Protocol: WWW:DOWNLOAD-1.0-http--download Description: Download package: shapefiles, ESRI layer files and metadata documents. Function: download
ASC metadata table and figure	Name: ASC metadata table and figure Protocol: WWW:DOWNLOAD-1.0-http--download Description:

	Download GSG to ASC conversion table and data confidence map Function: download
ArcGIS REST Map Services	Name: ArcGIS REST Map Services Protocol: WWW:DOWNLOAD-1.0-http--download Description: Connect to REST map services using ArcGIS or ArcGIS online map viewer. Function: download
Land and soil information web page	Name: Land and soil information web page Protocol: WWW:DOWNLOAD-1.0-http--download Description: About land and soil information in NSW - DPIE's data systems and map products. Function: download
DPIE's Land and soil website	Name: DPIE's Land and soil website Protocol: WWW:DOWNLOAD-1.0-http--download Description: Soil information, mapping & management; land degradation & geodiversity. Function: download
Web Map Service (WMS)	Name: Web Map Service (WMS) Protocol: WWW:DOWNLOAD-1.0-http--download Description: Connect to WMS using your GIS. Function: download
KML Service	Name: KML Service Protocol: WWW:DOWNLOAD-1.0-http--download Description: Download KML for use in Google Earth. Function: download
Web Map Tile Service (WMTS)	Name: Web Map Tile Service (WMTS) Protocol: WWW:DOWNLOAD-1.0-http--download Description: Connect to WMTS service using your GIS. Function: download

Unique resource identifier

Code	86c6ee62-c127-4f09-84dd-655d36efb234
Presentation form	Map digital
Edition	4.5
Dataset language	English

Metadata standard

Name	ISO 19115
Edition	2016

Dataset URI	https://datasets.seed.nsw.gov.au/dataset/86c6ee62-c127-4f09-84dd-655d36efb234
Purpose	Support natural resource management and decision making. It communicates the dominant soil types that occur throughout NSW using Australia's primary soil classification system called the Australian Soils Classification.
Status	Completed

Spatial representation

Type	vector
Geometric Object Type	surface
Geometric Object Count	58

Spatial reference system

Code identifying the spatial reference system	4283

Equivalent scale	1:None

Additional information source

Version changes

Improvements incorporated into version 4.5 include:

- Attribution of ASC classifications for Far North Coast and Cobargo 1:100,000 sheet map units without use of a Great Soil Group lookup table.
- Minor adjustments to linework and attributes for the Hunter Region (version 2)
- Updated linework and attributes for Camden Haven 1:100,000 map sheet area
- Changes to spelling and groupings of some ASC names and codes in the attribute table.
- Minor linework edge-matching in North Coast area along with small fixups to linework and associated attributes across NSW

GIS field name descriptions

ASC_order - Dominant Australian Soil Classification Order name.

ASC_code - Dominant Australian Soil Classification Order code.

Version - Version of dataset.

References:

Isbell, R.F. (2016) *The Australian Soil Classification*, Second Edition, CSIRO Publishing, Collingwood VIC.

Topic category

Keyword set

keyword value	AGRICULTURE BOUNDARIES-Biophysical GEOSCIENCES-Geomorphology SOIL
Originating controlled vocabulary	
Title	ANZLIC Search Words
Reference date	2008-05-16

Geographic location

West bounding longitude	141
East bounding longitude	154
North bounding latitude	-38
South bounding latitude	-28
NSW Place Name	NSW

Vertical extent information

Minimum value	-100
Maximum value	2228
Coordinate reference system	
Authority code	urn:ogc:def:cs:EPSG::
Code identifying the coordinate reference system	5711

Temporal extent

Begin position	2011-04-01
End position	N/A

Dataset reference date

Resource maintenance

Maintenance and update frequency	As needed
Contact info	
Contact position	Data Broker
Organisation name	NSW Department of Climate Change, Energy, the Environment and Water
Telephone number	131555
Email address	data.broker@environment.nsw.gov.au
Web address	https://www.nsw.gov.au/departments-and-agencies/dcceew
Responsible party role	pointOfContact

Lineage

The best available soils datasets were sourced to provide a single (seamless where possible) layer across NSW. Datasets collated to derive this map included:

- published and draft 1:100,000 soil landscape mapping [1:100,000 scale]
- published and draft 1:250,000 soil landscape mapping [1:250,000 scale]
- Soil and Land Resources of the Hawkesbury Nepean Catchment [1:100,000 scale]
- Soil and Land Resources of the Hunter Region [1:100,000 scale]
- Soil and Land Resources of the Moree Plains [1:100,000 scale]
- Soil and Land Resources of the Merriwa Plateau [1:100,000 scale]
- Soil and Land Resources of the Liverpool Plains Catchment [1:100,000 scale]
- Reconnaissance Soil and Land Resources of the Murray CMA Catchment [1:100,000 & 1:250,000 scale]
- Soil Landscapes of the SCA Hydrological Catchments [1:100,000 scale]
- Soils landscapes of the Comprehensive Coastal Assessment (Bare Point, Jervis Bay, Batemans Bay and Ulladulla) [1:100,000 scale]
- Southern Comprehensive Regional Assessment [1:100,000 scale]
- Northern Comprehensive Regional Assessment [1:100,000 scale]
- Reconnaissance soil landscapes of the Namoi CMA [1:100,000 scale]
- Reconnaissance soil landscapes of the Upper Riverina (HSHL) [1:100,000 scale]
- Reconnaissance soil landscapes of the Border Rivers/Gwydir CMA [1:100,000 scale]
- Brigalow Belt South Western Regional Assessment [1:100,000 scale]
- Reconnaissance Soil Landscapes of the Upper Macleay Catchment [1:100,000 scale]
- Upper Murrumbidgee Soil Benchmarking project [1:100,000 scale]
- Glen Innes Data Gap Reconnaissance Soils Mapping [1:100,000 scale]
- Soil Information for the Nyngan 1:250,000 sheet [1:250,000 scale]
- Soil Information for the Walgett 1:250,000 sheet [1:250,000 scale]
- Soil Information for the Gilgandra 1:250,000 sheet [1:250,000 scale]
- Reconnaissance soil landscapes of the Riverine Plains [1:500,000 scale]
- Land Systems of the Western Division [1:250,000 scale]
- Land Systems of the Cobar Peniplain Bioregion [1:250,000 scale]

Each map unit polygon was assigned a dominant soil type (Great Soil Group classification), from which an Australian Soil Classification value (Isbell 1996) was derived using a lookup table (see Table 1 in data package). It is known that the link between the two classifications does not always have a one to one relationship so the most common ASC class was selected. For example Red Brown Earths (GSG) are most commonly classified as a Chromosol (ASC) but may sometimes occur as a Sodosol (ASC). It is also likely that multiple soil types will exist in most if not all polygons. Thus the map gives only a guide to the most likely soil types present.

In some areas (north coast region and Cobargo area), an ASC classification was assigned to each map unit directly without using a lookup system. These areas are identified in the ASC confidence map found within in the data package. While the ASC classification commonly equates to a particular GSG soil type classification, this is is not always the case and therefore ASC classifications allocated manually, will have a higher accuracy.

The ASC classifications used in this map have been slightly modified from the published classification to provide 2 additional classes. Rudosols have been split to identify Rudosols derived from alluvial process (Rudosols - alluvial) and the Kurosol class has been split to include an additional class identifying this sodic/natric subsoil property (Kurosols - natric).

Limitations on public access

Scope	dataset

DQ Completeness Commission

Effective date	2020-09-24
Explanation	All polygons were labelled with a soil type class as per the classification except for the following units below which have been labelled accordingly: Water = Water and rock and Disturbed Terrain = Not assessed. An internal desktop review has been completed for the Great Soil Group soil type field, used in the production of this map along with limited checking of the ASC classification.

DQ Topological Consistency

Effective date	2020-09-24
Explanation	ArcGIS was used to ensure all polygons in the feature class are topologically correct. (cluster tolerance 0.000003 DDeg).

DQ Absolute External Positional Accuracy

Effective date	2020-09-24
Explanation	The accuracy of this map coverage varies across NSW, as map polygon boundaries were derived from many different sources and scales (see lineage). Soil boundaries using published and draft 1:100,000 scale mapping by DPIE are generally accurate to within 100 m. Soil boundaries using published or draft 1:250,000 scale, SCA and reconnaissance 1:100,000 - 1:250,000 level soil landscape mapping are generally accurate to within 250 m. Land Systems is a different style of mapping however is published at a scale of 1:250,000 and is generally accurate to within 250m. Some small alignment issues may occur for Land Systems mapping from issues with the digitizing process when first captured years ago into a digital format.

DQ Non Quantitative Attribute Correctness

Effective date	2020-09-24
Explanation	The accuracy of attributes used to derive this map coverage varies across NSW, as map polygon boundaries were derived from many different sources and map scales. A data source diagram (see figure one in data package) shows these different datasets and their quality according to the data confidence classification outlined below: • High (1) - All necessary soil and landscape data is available at a catchment scale (1:100,000) to undertake the assessment of LSC and other soil thematic maps. • Moderate (2) - Most soil and landscape data is available at a catchment scale (1:100,000 - 1:250,000) to undertake the assessment of LSC and other soil thematic maps. • Low (3) - Limited soil and landscape data is available at a reconnaissance catchment scale (1:100,000 & 1:250,000) which limits the quality of the assessment of LSC and other soil thematic maps. • Very low (4) - Very limited soil and landscape data is available at a broad catchment scale (1:250,000 or 1:500,000) and the LSC and other soil thematic maps should be used as a guide only.

Responsible party

Contact position	Data Broker
Organisation name	NSW Department of Climate Change, Energy, the Environment and Water
Telephone number	131555
Email address	data.broker@environment.nsw.gov.au
Web address	https://www.nsw.gov.au/departments-and-agencies/dcceew
Responsible party role	pointOfContact

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Metadata date

2024-02-26T12:44:05.923281

Metadata language