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

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

## Unique resource identifier

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

## Metadata standard

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|---|---|
| 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

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| Type | vector |
| Geometric Object Type | surface |
| Geometric Object Count | 58 |

## Spatial reference system

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| Code identifying the spatial reference system | 4283 |

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| 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

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

## Geographic location

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

## Vertical extent information

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|---|---|
| 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

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

## Dataset reference date

## Resource maintenance

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|---|---|
| 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

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| Scope | dataset |

DQ Completeness Commission

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|---|---|
| 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.<br><br>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

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|---|---|
| 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

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|---|---|
| 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

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|---|---|
| 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:<br><br>• 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.<br><br>• 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.<br><br>• 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.<br><br>• 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 |

## Metadata point of contact

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| Email address | data.broker@environment.nsw.gov.au |
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| Responsible party role | pointOfContact |

## Metadata date

2025-03-26T00:47:02.621392

## Metadata language