Title

Soil and Land Resources of the Australian Capital Territory (ACT)

Abstract

This digital soil landscape product contains natural resource mapping for the Australian Capital Territory. The project was funded by the ACT Government to enhance knowledge of soils, landscapes and physical constraints to land use in the urban and rural environment. The information will assist in informed decision making, planning and environmental modelling throughout the catchment.

Fifty-five soil landscape map units have been described for the ACT. Each unit is an inventory of soil and landscape information with relatively uniform land management requirements, allowing major soil and landscape qualities and constraints to be identified. Soils are described using the Australian Soil Classification and the Great Soil Groups systems.

Related datasets: Part of this area is also covered by the Soil Landscape 1:100 000 mapping series for the mapsheets of Canberra and Michelago.

Online Maps: This and related datasets 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: NSW Office of Environment and Heritage & ACT Government (2016) *Soil and Land Resources of the Australian Capital Territory (ACT)*. Office of Environment and Heritage, Sydney.

Resource locator

Data quality statement

Name: Data quality statement

Protocol: WWW:DOWNLOAD-1.0-http--download

Description:

DQS - Soil and Land Resources of the Australian Capital Territory (ACT)

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

Soil and land resource data package

Name: Soil and land resource data package

Protocol: WWW:DOWNLOAD-1.0-http--download

Description:

Download data package: shapefile, report and excel data spreadsheet.

Function: download

Soil map information

Name: Soil map information

Protocol: WWW:DOWNLOAD-1.0-http--download

Description:

Web page about soil maps in NSW.

Function: download

Land and soil information

Name: Land and soil information

Protocol: WWW:DOWNLOAD-1.0-http--download

Description:

Web page about land and soil information in NSW.

Function: download

Unique resource identifier

Code	ce509c3f-46fd-4e3b-8d1c-c31f88ec64fa

Presentation form	Map digital
Edition	version 1 - 161109
Dataset language	English

Metadata standard

Name	ISO 19115
Edition	2016

Dataset URI	https://datasets.seed.nsw.gov.au/dataset/ce509c3f-46fd-4e3b-8d1c-c31f88ec64fa
Purpose	Management and planning purposes by the ACT Government
Status	Completed

Spatial representation

Type	vector
Geometric Object Type	surface

Spatial reference system

Code identifying the spatial reference system	4283

Equivalent scale	1:None
Additional information source	Products availability: Vector data and map unit reports are available through [eSPADE] (http://www.espade.environment.nsw.gov.au) spatial viewer and ACT Government's ACTMAPi spatial viewer. Soil profile information also available through eSPADE. Vector linework and reports can be downloaded from SEED

Topic category

Keyword set

keyword value	SOIL
	SOIL-Erosion
	LAND-Topography
	HAZARDS-Landslip
	GEOSCIENCES-Geology
	GEOSCIENCES-Geomorphology
	HAZARDS-Flood
	SOIL-Chemistry

	SOIL-Physics
	VEGETATION
Originating controlled vocabulary	
Title	ANZLIC Search Words
Reference date	2008-05-16

Geographic location

West bounding longitude	148.76279
East bounding longitude	149.39929
North bounding latitude	-35.92053
South bounding latitude	-35.12442
NSW Place Name	Australian Captial Territory (ACT)

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	2013-05-01
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 mapping undertaken by the NSW Government was created using:

- existing published soil landscape mapping (Canberra and Michelago 1:100,000 map sheets)
- new soil landscape mapping (part Brindabella and Tantangara 1:100,000 map sheets).

For all datasets, provisional soil landscapes were established firstly on the dominant geomorphic processes responsible for the formation of the landscape and secondly on the geological parent material. Elevation, aspect, vegetation patterns and human disturbance were other factors considered when defining units. For existing mapping, the boundaries of these provisional soil landscapes were mapped using stereoscopic interpretation of 1:40,000 scale black and white and 1:25,000 scale colour aerial photographs (Canberra) and 1:40,000 scale black and white aerial photographs only for Michelago. LANDSAT thematic mapper and radiometric imagery were used to assist with perception and charting of provisional soil landscapes. These boundaries were transferred onto 1:25 000 topographic base maps. After field checking boundaries and detailed investigations of the soil, the provisional landscapes were confirmed, amalgamated or sub-divided.

For new mapping on the Brindabella and Tantangara sheets, the boundaries were captured by digitizing directly to screen at around 1:10,000 scale using ArcGIS. Ultra-high resolution (10 cm) aerial photographic imagery provided a base layer during the capture process. In addition the following data were used to assist delineate soil landscapes boundaries: ADS digital aerial imagery, radiometric imagery, SPOT 5 satellite imagery, climate data, 1 second DSM and DEM elevation data from the Shuttle Radar Topographic Mission (SRTM), 1:100,000 scale geological mapping, 1:25,000 topographic maps and DTDB digital terrain models.

Soils have been examined and described in detail at over 500 sites in the ACT. This includes 79 new detailed sites to fill data gaps for this project. At each site, soil morphological data and site information were recorded on Soil and Land Information System (SALIS) cards or digitally collected via the eDIRT field data collection system. Sufficient field work was undertaken within each soil landscape to identify the range of soils present and to enable their distribution within the landscape to be described. To best knowledge none of the sites were randomly sampled. Sample intervals were selected to be morphologically representative examples of each soil material present in each type profile i.e. soil horizons.

A comprehensive suite of soil tests have been analysed for many of the representative type soil profiles within the ACT.

A desktop review of published soil landscape units has occurred resulting in some minor amendments to the existing linework.

Limitations on public access

Scope	dataset

DQ Completeness Omission

Effective date	2018-03-14
Explanation	All polygons in the GIS layer are labeled with a unique soil landscape MasterCode (Code) and MasterName (Name), Dominant Geomorphic process group (Process_D) and subdominant geomorphic process group (Process_SD). Pdf report are available for each map unit. Water polygons have been removed from the GIS layer.

DQ Conceptual Consistency

Effective date	2016-11-09
Explanation	Map unit concepts and polygons, major soil types and soil landscape descriptions have been field verified by a peer soil scientist for many mapping area.

DQ Topological Consistency

Effective date	2016-11-09
Explanation	ArcGIS was used to ensure all polygons in the shape file are topologically correct. All polygons have attributes.

DQ Absolute External Positional Accuracy

Effective date	2016-11-09
Explanation	Observations and soil profiles were located using handheld GPS or using 1:25,000 topographic maps. Soil boundaries on this 1:100,000 scale map are generally accurate generally within 100 m.

DQ Non Quantitative Attribute Correctness

Effective date	2016-11-09
Explanation	Soil landscape map units are individualised by unique combinations of soil type, topography, geology, geomorphic process containing variations in vegetation, land use, existing erosion/land degradation and constraints to development. The land and soil attributes in this product were predominately assessed using field observations, remote sensing interpretation (satellite, radiometric and ADS40) and limited laboratory analysis where available.

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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Metadata date

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Metadata language