Title	Soil and Land Resources of the Hawkesbury-Nepean Catchment

Abstract

This product contains natural resource mapping for the Hawkesbury-Nepean Catchment. The project was undertaken 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 and planning throughout the catchment.

Each soil landscape 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 Group systems.

Related Datasets: The dataset area is also covered by the mapping of the Soil landscape 1:100 000 and 1:250 000 mapping series for the mapsheets of Bathurst, Braidwood, Dubbo, Gosford, Goulburn, Katoomba, Kiama, Penrith, Singleton, St Albans, Sydney, Wallerawang and Wollongong. Part of this area is also covered by the mapping of Hydrogeological landscapes of NSW and Acid Sulphate Soil Risk Mapping.

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: Department of Environment and Climate Change, 2008, *Soil and Land Resources of the Hawkesbury-Nepean Catchment*, Department of Environment and Climate Change, Sydney.

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 - Soil and Land Resources of the Hawkesbury-Nepean Catchment 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 Resources data package	Name: Soil and Land Resources data package Protocol: WWW:DOWNLOAD-1.0-http--download Description: Download complete package: GIS data, reports and maps. Function: download
GIS data	Name: GIS data Protocol: WWW:DOWNLOAD-1.0-http--download Description: Download shapefiles and ESRI layer files

	Function: download
Soil and Land Resources reports	Name: Soil and Land Resources reports Protocol: WWW:DOWNLOAD-1.0-http--download Description: Download soil landscape map unit reports 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	2ea220d3-d396-4a61-8cc8-7c9c1cd9a7bc

Presentation form	Map digital

Edition	1.1
Dataset language	English

Metadata standard

Name	ISO 19115
Edition	2016

Dataset URI	https://datasets.seed.nsw.gov.au/dataset/2ea220d3-d396-4a61-8cc8-7c9c1cd9a7bc
Purpose	This product was funded by the Hawkesbury Nepean Catchment Management Authority to assist them with their natural resource management planning and decision making. For example in Catchment Action Plans.
Status	Completed

Spatial representation

Type	vector
Geometric Object Type	surface
Geometric Object Count	10745

Spatial reference system

Code identifying the spatial reference system	4283
Equivalent scale	1:None

Additional information source

GIS Field name descriptions

S_NSWcode – unique soil map unit code using the NSW mastered naming convention.

S_NSWname - unique soil map unit name using the NSW mastered naming convention.

Process_D – Dominant geomorphic process group of the soil landscape.

Groups are named after either recent or current land-forming processes, or conditions that influence soil parent material or soil type. Descriptions of these groups are available within soil landscape reports, glossary and on the DPIE website.

Process_SD – Sub-dominant geomorphic process group of the soil landscape.

Version - Version number of dataset

STEEP_SLOP – Steep slopes hazard

MASS_MOVEM – Mass Movement hazard

ROCK_OUTCR – Rock outcrop limitation

FOUNDATION – Foundation hazard

SHALLOW_SO – Shallow soils

HIGH_RUN_O – High run-on

POOR_DRAIN – Poor drainage

WATERLOGGI – Permanent waterlogging hazard

FLOOD_HAZA – Flood hazard

GULLY_EROS – Gully erosion risk

SHEET_EROS – Sheet erosion risk

SALINITY_H – Salinity hazard

RURAL_LAND – Rural Land Capability (RLC) classification

SEASONAL_W – Seasonal waterlogging hazard

URBAN_CAPA – Urban capability classification

STREAMBANK – Streambank erosion hazard

PROD_AG – Productive agricultural potential

FERT_LOW – Low fertility limitation

SUB_SODIC – subsoil sodicity hazard

REGOLITH_D – Dominant soil regolith stability classification

Available Formats

- View online using eSPADE spatial viewer
- Download JPG map, report or GIS ESRI shapefiles(.shp) & layer files (.lyr) from SEED data portal.
- Purchase a DVD data package from Shop.DPIE
- Soil profile points data is also available in MS spreadsheet format by contacting the data custodians at soils@environment.nsw.gov.au

Topic category

Keyword set

keyword value	AGRICULTURE
	GEOSCIENCES-Geology
	GEOSCIENCES-Geomorphology
	HAZARDS-Flood
	HAZARDS-Landslip
	LAND-Topography
	SOIL
	SOIL-Chemistry
	SOIL-Erosion
	SOIL-Physics
	VEGETATION
Originating controlled vocabulary	
Title	ANZLIC Search Words
Reference date	2008-05-16

Geographic location

West bounding longitude	149.41
East bounding longitude	151.4778
North bounding latitude	-35.1645
South bounding latitude	-32.6974

NSW Place Name	Hawkesbury Nepean CMA catchment

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	2005-01-01
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 (Department of Land and Water Conservation, Department of Infrastructure Planning and Natural Resources and Department of Natural Resources) was created using:

- existing published soil landscape mapping (Braidwood, Sydney, Wallerawang, St Albans, Katoomba and Gosford/Lake Macquarie 1:100,000 map sheets)
- unpublished 1:100,000 scale mapping undertaken previously and co-funded by the Sydney Catchment Authority
- new mapping and upgrading of existing mapping undertaken and co-funded by the Natural Heritage Trust. Includes parts of Oberon, Bathurst, Wollongong, Penrith, Moss Vale, Mt Pomany, Cessnock, Mudgee and Howes Valley 1;100,000 sheets within the Hawkesbusry Nepean Catchment.

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. The boundaries of these provisional soil landscapes were mapped using stereoscopic interpretation of 1:40,000 scale black and white and/or 1:25,000 scale colour aerial photographs. 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.

Soils have been examined and described in detail at over 3000 sites. At each site, soil morphological data and site information were recorded on Soil and Land Information System (SALIS) cards. Sufficient field work was undertaken within each soil landscape to identify the range of soil materials present and to enable their distribution within the landscape to be described.

Limitations on public access

Scope dataset

DQ Completeness Commission

Effective date 2020-10-09

Explanation All polygons in the GIS layer are labeled with a core group of fields: unique soil landscape code (S_NSWcode) and name (S_NSWname), dominant process group (Process_D), subdominant process group if applicable (Process_SD) and dataset version number (Version). Landscape limitations and capability classification also are present. Pdf report are available for each map unit. Water polygons are identified as 'Water' and disturbed terrain and rock polygons are tagged as 'Not assessed' for limitation attribution.

A shapefile of physiographic regions (HkPhysRegFinal) for the Hawkesbury Nepean catchment is provied in the SEED data package and on the DVD.

DQ Conceptual Consistency

Effective date 2008-08-01

Explanation Map unit concepts and polygons, major soil types and soil landscape descriptions have been field verified by a peer soil surveyor or soils quality officer. Soil landscape boundaries have been checked and refined using iterative field and aerial photo checks

DQ Topological Consistency

Effective date 2008-08-01

Explanation ArcGIS was used to ensure all polygons in the shape file are topologically correct. All polygons have a unique identifier.

DQ Absolute External Positional Accuracy

Effective date 2008-08-01

Explanation Observations and soil profiles were located using handheld GPS (accurate to 50m) or using 1:25,000 topographic maps. Soil boundaries on this 1:100,000 scale map is generally accurate to within 100m on the ground but variations will occur especially where soil boundaries are gradual.

DQ Non Quantitative Attribute Correctness

Effective date 2008-08-01

Explanation Soil landscape map units are individualised by unique combinations of soil type, topography, geology, 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 aerial photos) and laboratory analysis of some dominant soil type profiles.

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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Responsible party role	pointOfContact

Metadata date

2024-02-26T13:36:31.967499

Metadata language