

## 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
<b>Metadata standard</b>	
Name	ISO 19115
Edition	2016
Dataset URI	<a href="https://datasets.seed.nsw.gov.au/dataset/2ea220d3-d396-4a61-8cc8-7c9c1cd9a7bc">https://datasets.seed.nsw.gov.au/dataset/2ea220d3-d396-4a61-8cc8-7c9c1cd9a7bc</a>
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
<b>Spatial representation</b>	
Type	vector
Geometric Object Type	surface
Geometric Object Count	10745
<b>Spatial reference system</b>	
Code identifying the spatial reference system	4283
Equivalent scale	1:None
Additional information source	<p><b>GIS Field name descriptions</b></p> <p>S_NSWcode - unique soil map unit code using the NSW mastered naming convention.</p> <p>S_NSWname - unique soil map unit name using the NSW mastered naming convention.</p> <p>Process_D - Dominant geomorphic process group of the soil landscape.</p> <p>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.</p> <p>Process_SD - Sub-dominant geomorphic process group of the soil landscape.</p> <p>Version - Version number of dataset</p> <p>STEEP_SLOP - Steep slopes hazard</p> <p>MASS_MOVEM - Mass Movement hazard</p> <p>ROCK_OUTCR - Rock outcrop limitation</p> <p>FOUNDATION - Foundation hazard</p> <p>SHALLOW_SO - Shallow soils</p> <p>HIGH_RUN_O - High run-on</p> <p>POOR_DRAIN - Poor drainage</p> <p>WATERLOGGI - Permanent waterlogging hazard</p>

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](mailto: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

**Vertical extent information**

Minimum value	-100
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Maximum value	2228
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**Coordinate reference system**

Authority code	urn:ogc:def:cs:EPSG::
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Code identifying the coordinate reference system	5711
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**Temporal extent**

Begin position	2005-01-01
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End position	N/A
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**Dataset reference date****Resource maintenance**

Maintenance and update frequency	As needed
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**Contact info**

Contact position	Data Broker
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Organisation name	NSW Department of Climate Change, Energy, the Environment and Water
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Telephone number	131555
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Email address	<a href="mailto:data.broker@environment.nsw.gov.au">data.broker@environment.nsw.gov.au</a>
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Web address	<a href="https://www.nsw.gov.au/departments-and-agencies/dcceew">https://www.nsw.gov.au/departments-and-agencies/dcceew</a>
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Responsible party role	pointOfContact
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**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 provided 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](mailto: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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Responsible party role	pointOfContact

**Metadata date** 2024-02-26T13:36:31.967499

**Metadata language**