Title	Soil and Land Resources of the Hunter Region

Abstract

This digital soil landscape product contains natural resource mapping for the Hunter and Central Rivers sub-catchments plus extends to also include the Hunter Local Land Services (LLS) government boundary.

The dataset upgrades 1:250,000 soil landscape mapping for the Singleton area providing a standardised and seamless land and soil information across the region at 1:100,000 scale. Mapping covers an area of 37,639 km2 from Yarrowitch and Murrurundi in the north to around Rylstone and Woy Woy in the south and extends west to just past Ulan.

The project was partially funded by the Hunter LLS and will assist decision making, planning and environmental modelling throughout the region. It also supports improved decision making and management of highly productive agricultural area (e.g. Biophysical Strategic Agricultural Land) under the NSW Government's Strategic Regional Land Use Policy (SRLUP) and Mining Sepp.

Four hundred and sixty soil landscape map units have been described within the Hunter Region. 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. Many representative type profiles are supported by laboratory analysis and soils are described using the Australian Soil Classification and the Great Soil Groups 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 map sheets of Murrurundi, Blackville, Dungog, Newcastle, Port Stephens, Gosford/Lake Macquarie, Sydney, Wallerawang, St Albans, Dubbo and Singleton. 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 Planning, Industry and Environment, 2020, *Soil and Land Resources of the Hunter Region*, version 1.5, NSW Department of Planning, Industry and Environment, Parramatta.

Resource locator

Data quality statement	Name: Data quality statement Protocol: WWW:DOWNLOAD-1.0-http--download Description: DQS - Soil and Land Resources of the Hunter Region. 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 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
Soil and Land Resources data package	Name: Soil and Land Resources data package Protocol: WWW:DOWNLOAD-1.0-http--download Description: Download data package: shapefile and ESRI layer file and PDF map unit reports. Function: download
Soil and Land Resources reports	Name: Soil and Land Resources reports Protocol: WWW:DOWNLOAD-1.0-http--download Description: Download PDF map unit reports Function: download
Soil and Land Resources GIS data	Name: Soil and Land Resources GIS data Protocol: WWW:DOWNLOAD-1.0-http--download Description: Download shapefile and ESRI layer file Function: download

Unique resource identifier

Code	0be1f7e3-24c9-4897-b31f-3ffce6c2ed56

Presentation form	Map digital
Edition	1.5 (v200803)
Dataset language	English

Metadata standard

Name	ISO 19115
Edition	2016

Dataset URI	https://datasets.seed.nsw.gov.au/dataset/0be1f7e3-24c9-4897-b31f-3ffce6c2ed56
Purpose	This dataset was partially funded by Hunter Local Land Services (LLS) to assist decision making, planning and environmental modelling throughout the catchment. It provides improved soil and land information to upgrade Land and Soil Capability and Soil Fertility mapping supporting the Government's SRLUP and mining SEPP policies.
Status	Completed

Spatial representation

Type	vector
Geometric Object Type	surface
Geometric	16170

Object Count

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

Version information

Version 1.5 - Upgrades made to this version were minor. Changes related to linework rectificaiton over the Carboniferous sediment areas around Wingham and Camden Haven. A few codes were also updated to match new information for Camden Haven 1:100,000 sheet.

Available Formats

- View online using eSPADE spatial viewer
- Download reports or GIS ESRI shapefiles(.shp) & layer files (.lyr) from SEED data portal.
- 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	SOIL
	SOIL-Erosion
	SOIL-Physics
	LAND-Topography
	LAND-Geography
	HAZARDS-Flood
	HAZARDS-Landslip
	LAND-Use
	VEGETATION
	SOIL-Chemistry

Originating controlled vocabulary

Title	ANZLIC Search Words

Reference date	2008-05-16

Geographic location

West bounding longitude	149.6689
East bounding longitude	152.80518
North bounding latitude	-33.55684
South bounding latitude	-31.27719
NSW Place Name	Hunter-Central Rivers Catchment and Hunter Local Land Services

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	2012-01-01
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 was upgraded to Soil and Land Resource 1:100,000 scale standard by the NSW Government using: * existing published 1:100,000 soil landscape mapping (Blackville, Dungog, Murrurundi, Port Stephens, Sydney, Newcastle, St Albans, Wallerawang, Gosford/Lake Macquarie 1:100,000 map sheets). Some linework and attribute changes were made in these mapping areas; * existing published 1:100,000 soil and land resources mapping (Hawkesbury Nepean Catchment, Merriwa Plateau and Liverpool Plains) Some linework and attribute changes were made in these mapping areas; * new mapping for partial or entire Gulgong, Merriwa, Muswellbrook, Camberwell, Ellerston, Upper Manning, Wingham, Camden Haven, Bulahdelah, Foster, Mudgee, Mount Pomany, Howes Valley, Cessnock 1:100,000 map sheets. Other existing mapping including Soil Landscapes of the Dubbo and Singleton 1:250,000 sheets and Soil Landscapes of the Hunter Councils Region where also used when upgrading mapping for the catchment.

Traditional soil survey methods and standards were used to produce this soil map product. Information from previous soil and geology surveys were used. Linework was captured by digitizing on screen at approximately 1:10,000 using ArcGIS. Provisional soil landscapes were established on the dominant geomorphic processes responsible for the formation of the landscape and on the geological parent material. The boundaries of these soil landscapes were mapped using the interpretation of ADS40 photography, SPOT satellite imagery, DEM and radiometric imagery.

Fieldwork was conducted to assess a suite of soil and landscape properties and collect type profiles. Facets (sub landscapes) classes, their dominant soill types were identified and soil landscape hazards assessed. Over 1710 additional detailed soil profiles and observations were collected across the project area to fill knowledge and data gaps. Many of these profiles include laboratory analysis to support the survey.

The minimum suite of soil properties laboratory tested includes pH 1:5 water, Electrical Conductivity (EC) and Emerson Aggregate however a sizeable proportion also includes a much greater suite of testing aligning with that of the soil landscape mapping series.

Limitations on public access

Scope	dataset

DQ Completeness Commission

Effective date	2018-01-22
Explanation	All polygons in the GIS layer are labeled with a unique soil landscape code(S_NSWcode) and name (S_NSWname) and dominant geomorphic process group (Process_D). A subdominant process group class, if applicable is also provided (Process_SD). PDF reports are available for each map unit.

DQ Conceptual Consistency

Effective date	2018-01-22
Explanation	Map unit concepts and polygons, major soil types and soil landscape descriptions have been field verified by a peer soil scientist for all map units.

DQ Topological Consistency

Effective date	2018-01-22
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	2018-01-22
Explanation	Observations and soil profiles were located using a handheld GPS. Soil boundaries of this 1:100,000 scale map product are generally accurate to within 100 m on the ground but variations will occur especially where soil boundaries are gradual.

DQ Non Quantitative Attribute Correctness

Effective date	2018-01-22
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 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