NSW Natural Resources Data Directory
Metadata Entry Form

The name given to the dataset by the custodial organisation. It should be easily understood by any general enquirer (ie avoid use of acronymns).

Title: Land and Soil Capability mapping of NSW, version 2.5

The business name of the custodial organisation or responsible party associated with the dataset.

Custodian: Office of Environment and Heritage (OEH), Department of Premier and Cabinet

The State or country in which the custodian of the dataset is domiciled

Jurisdiction: New South Wales

A narrative summary (ie complete sentences) of the content of the dataset. The abstract should contain enough information to enable a general enquirer to determine the relevance of the dataset for their needs. (Maximum 2000 characters)

Abstract:

This Land and Soil Capability (LSC) dataset uses the best available soils natural resource mapping across New South Wales. It provides a broad-scale, regional view as to the dominant LSC class present for over 3000 individual mapping units through the assessment of eight key soil and landscape limitations (water erosion, wind erosion, salinity, topsoil acidification, shallow soils/rockiness, soil structure decline, waterlogging and mass movement).

The assessment of LSC is based on the mapping method and rule set developed by OEH (2012). It builds on the rural land capability classification and mapping undertaken for the central and eastern divisions of the state by the former Soil Conservation Service of NSW (Emery 1986) but with more emphasis on a broader range of soil and landscape properties.

The mapping is based on an eight class system with values ranging between 1 and 8 which represent a decreasing capability of the land to sustain landuse. Class 1 represents land capable of sustaining most landuses including those that have a high impact on the soil (e.g., regular cultivation), whilst class 8 represents land that can only sustain very low impact landuses (e.g., nature conservation).

Words likely to be used by a non-expert to find the dataset. They must be selected from the list published in the ANZLIC Metadata Guidelines.

Search Words:

- LAND Topography
- SOIL Classification
- SOIL Surveys
- SOIL Erosion
- LAND Use management
- LAND Management
- LAND sustainability

Geographic Extent Name(s):

New South Wales

Datum and Projection: GDA 1994, Geographics.

Geographic Extent Polygon(s):

NSW Natural Resources Data Directory
Metadata Entry Form

	In decimal degrees West: 141.001 East: 153.66 North: -27.998 South: -37.507
The earliest date for a record in the dataset, or use Not known	**Beginning Date:** 09/01/2009 ☐ Not known
The last date for a record in the dataset, or use Not known or Current	**Ending date:** 28/01/2013 ☐ Not known ☒ Current
The status of the process of creation of the dataset	**Progress:** ☒ Complete ☐ In progress ☐ Planned ☐ Not known
Tick the word or phrase which best describes the frequency of changes or additions to the data that are made after the initial completion of the dataset.	**Maintenance and Update Frequency:** ☐ Continual ☐ Annually ☐ Not known ☐ Daily ☐ Bi-annually ☐ Weekly ☒ As required ☐ Monthly ☐ Irregular ☐ Quarterly ☐ Not planned
Tick the format in which the data is stored, Digital or Non-digital. This element should also include a free text description of the format, eg paper, microfiche, Oracle database and any other information which helps describe it.	**Stored Data Format:** ☒ DIGITAL • Vector data stored as ESRI geodatabase ☐ NONDIGITAL
Tick the format in which the data is available, Digital and/or Non-digital. This element also includes an optional free text extension for additional relevant information.	**Available Format Type(s):** ☒ DIGITAL • A3 PDF map • Digital ESRI shapefile (currently only available for Upper Hunter and NENW Strategic Regional Land Use priority areas) ☐ NONDIGITAL
Enter any restrictions or legal prerequisites that may apply to use of the dataset, eg requiring the user to enter into a licence/royalty agreement. Also state if there are no restrictions.	**Access Constraints:** A PDF map is available on the OEH website. The digital shapefile is publicly available from OEH Spatial Data Download Site (http://mapdata.environment.nsw.gov.au/)
Document information about both the source data and the processing steps used to produce the dataset. For example, information about the source	**Lineage:** The best available soils datasets were sourced to provide a single

data generally includes a description, scale, media types and dates. Processing steps should include method of data capture. Use Not Known, Not Documented or Not Relevant if no information is available. (Maximum 2000 characters)

(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 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 [1:250,000-1:500,000 scale]
• Land Systems of the Cobar Peniplain Bioregion [1:250,000-1:500,000 scale]

All map units were assigned a unique master landscape code and then assessed for eight soil or landscape limitations: topsoil acidification, salinity, water erosion, wind erosion, mass movement, shallow soils/rock outcrop, soil structure decline and waterlogging. This information was stored and interpreted using a rule set (http://www.environment.nsw.gov.au/soils/20120394lsc2spubslandingpage.htm) in the Access Based Data Utility for Land and soil capability (ABDUL) expert system. The system allows for a manual override to modify LSC values when required. The most limiting LSC of the 8 hazards represents the overall LSC result for each map

	unit The overall LSC was linked to the geodatabase to produce the final map.
A brief assessment of the closeness of the location of spatial objects in the dataset in relation to their true position on the Earth. Use Not Known, Not Documented or Not Relevant if no information is available (Maximum 2000 characters)	**Positional Accuracy:** The accuracy of other attributes on this map coverage also varies across NSW, as map polygon boundaries were derived from many different sources and scales. A data source diagram included shows these different datasets and their quality according to the LSC confidence classification outlined below: Soil boundaries using published and draft 1:100,000 scale mapping by OEH 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. Other small scale datasets (e.g., up to Reconnaissance 1:500,000) are approximate and generally accurate to within 500 – 2,000 m.
A brief assessment of the reliability assigned to features in the dataset in relation to their "real world" values. Use Not Known, Not Documented or Not Relevant if no information is available. (Maximum 2000 characters)	**Attribute Accuracy:** 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 included shows these different datasets and their quality according to the soils confidence classification outlined below: 1 - All necessary soil and landscape data is available at a regional scale (1:100,000) to undertake the assessment of LSC and derived Soil Fertility maps. 2 - Most soil and landscape data is available at a catchment scale (1:250,000) to undertake the assessment of LSC and derived Soil Fertility maps. 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 LSC and derived Soil Fertility maps. 4 - Very limited soil and landscape data is available at the state scale (1:100,000 - 1:500,000) and the LSC and derived Soil Fertility maps should be used as a guide only.
A brief assessment of how well the logical relationships between items in the dataset, or spatial objects in the dataset, are maintained. Use Not Known, Not Documented or Not Relevant if no information is available. (Maximum 2000 characters)	**Logical Consistency:** ArcGIS was used to ensure all polygons in the shapefile are topologically correct (cluster tolerance 0.000003 DDeg).
A brief assessment of the completeness of coverage of the dataset, completeness of classification and completeness of verification (ie work carried out to validate the correct representation of "real world" features contained within the dataset. Use Not	**Completeness:** All polygons were labeled with a LSC class (1-8) except for the following units below which have been labeled accordingly:

NSW Natural Resources Data Directory
Metadata Entry Form

Known, Not Documented or Not Relevant if no information is available. (Maximum 2000 characters)	Water = Water (99) Rock, Disturbed Terrain, Montague Island = Not Assessed (98) A minimal desktop and limited field review has been completed for the dominant LSC field of targeted map units used in the production of this map. In addition a more thorough desktop triage quality check has been completed for all individual LSC hazard fields of map units covered within the New England/North West, Upper Hunter, Central West, Sydney Canberra Corridor and Greater Southern Highlands Strategic Regional Land use Priority areas.
The business name of the organisation from which the dataset may be obtained. It need not be the same organisation as the Custodian.	**Contact Organisation:** Office of Environment and Heritage (OEH)
The position title of the person in the contact organisation who will answer questions about the dataset. Personal names of contacts are not acceptable.	**Contact Position:** Senior Scientist - Geo Spatial Assessment
The mail address for the contact position. Include street name and number or post office box or bag number.	**Mail Address:** P.O. Box 3720
The name of the suburb or town associated with the mail address for the contact position.	**Locality:** Parramatta
The name of the State or Territory, in acronym form (eg NSW), where the contact position is located.	**State:** New South Wales
The name of the country where the contact position is located.	**Country:** Australia
The official postcode for the address of the contact position.	**Postcode:** 2124
The telephone number of the contact position. Include the STD code.	**Telephone:** (02) 9895 6507
The fax number of the contact position. Include the STD code.	**Facsimile:**
The electronic mail address of the contact position. If an email address is not available, use Not Known or None.	**Electronic Mail Address:** mark.young@environment.nsw.gov.au
Include additional metadata that supports documentation of the dataset, for example attribute information, an Internet address, reference to another directory or a suggestion that more information should be sought from the contact position.	**Additional Metadata:** **LSC CLASSIFICATION SYSTEM** 1. Very slight to negligible limitations. Land capable of sustaining high impact land uses (e.g. cultivation) and no special land management practices required. 2. Slight but significant limitations. Land capable of sustaining high impact land uses which can be managed by readily available, and easily implemented management practices.

	3. Moderate limitations. Land capable of sustaining high impact land uses using more intensive, readily available and accepted management practices. 4. Moderate to severe limitations. Land generally not capable of sustaining high impact land uses unless using specialised management practices with high level of knowledge, expertise, inputs, investment and technology. Limitations are more easily managed for lower impact land uses (e.g. grazing). 5. Severe limitations. Land not capable of sustaining high impact land uses except where resources allow for highly specialised land management practices to overcome limitations (e.g. high value crops). Lower impact land uses (e.g. grazing) can be managed by readily available practices. 6. Very severe limitations. Land incapable of sustaining many land use practices (e.g. cultivation, moderate to high intensity grazing and horticulture). Highly specialised practices can overcome some limitations for some high value products. Land often used for low intensity land uses (low intensity grazing). 7. Extremely severe limitations. Land incapable of sustaining most land uses. Limitations cannot be overcome. 8. Extreme limitations. Land incapable of sustaining any land use and best left undisturbed and managed for conservation.

NSW Natural Resources Data Directory
Metadata Entry Form

Figure One: Data Confidence diagram