## Title Soil and land constraint assessment maps: Hawkesbury Nepean Catchment

### **Abstract**

This dataset contains maps and data on soil and land constraints that may impact on a range of land uses throughout the Hawkesbury Nepean Catchment. It reveals the physical capability of the land for different land uses, together with a broad indication of potential economic costs associated with overcoming the constraints. It should assist in many planning and natural resource management processes throughout the catchment. Land uses dealt with include: development – standard residential, medium density, high density and rural residential agriculture – cropping and grazing wastewater disposal – surface irrigation, trench absorption and pump-out methods. Background information and methodology is provided in the accompanying Technical Report DECCW (2010) Soil and land constraint assessment for urban and regional planning.

# Resource locator

<u>Data Quality</u> Statement Name: Data Quality Statement

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

Description:

Data quality statement for Soil and land constraint assessment maps: Hawkesbury

Nepean Catchment

Function: download

GIS maps: soil and land constraint assessment Name: GIS maps: soil and land constraint assessment

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

<u>ssment</u> Description:

GIS constraint maps of 9 land uses and management processes over Hawkesbury

Nepean Catchment (25 m raster)

Function: download

PDF maps: soil and land constraint

Name: PDF maps: soil and land constraint assessment

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

<u>assessment</u> Description:

PDF copies of the maps for 9 land uses and management processes over the

catchment

Function: download

Technical Report:
DECCW (2010),
Soil and land
constraint
assessment for

regional planning

Name: Technical Report: DECCW (2010), Soil and land constraint assessment for

urban and regional planning

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

assessment for Des

Description:

Technical report describing the background, methodology, use and interpretation of

the constraint assessment process

Function: download

Notes on map interpretation and other related publications Name: Notes on map interpretation and other related publications

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

Description:

(i) interpretation notes; (ii) Australian Planner journal paper (2011); (iii) conference

paper for domestic wastewater disposal

Function: download

# Unique resource identifier

Code d9a95086-870e-41a1-8f29-a42f4ddd57e2

Presentation form	Map digital	
Edition	1	
Dataset language	English	
Metadata standard		
Name	ISO 19115	
Edition	2016	
Dataset URI	https://datasets.seed.nsw.gov.au/dataset/d9a95086-870e-41a1-8f29-a42f4ddd57e2	
Purpose	Assist Local Councils and regional planning bodies in urban and regional planning in Hawkesbury-Nepean Catchment, including western Sydney	
Status	Completed	
Spatial representation type	grid	
Spatial reference system		
Code identifying the spatial reference system	4283	
Spatial resolution	25 m	
Topic category		

Keyword set			
keyword value	SOIL LAND		
	LAND-Use		
	HUMAN-ENVIRONMENT-Planning		
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 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	2000-01-01		
End position	N/A		
Dataset reference date			
Resource maintenance			
Maintenance and update frequency	Not planned		
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

Concepts and methodology of the product are presented in DECCW (2010) and Gray et al (2011). The product builds on the soil landscape data contained in Soil and Land Resources of the Hawkesbury Nepean Catchment (DECCW 2009). This contains descriptions of all soillandscape units in the Catchment, including details on their qualities and constraints, derived from mapping programs predominantly carried out at 1:25 000 scale but published at 1:100 000 scale.

Spatial modelling of the soil-landscape units down to facet level was achieved using GIS techniques with a 25 m digital elevation model (DEM) as described in Yang et al (2008). Erosion hazard mapping using methodology described in Yang et al. (2006) was also applied.

References Department of Environment and Climate Change, 2009, Soil and Land Resources of the Hawkesbury-Nepean Catchment interactive DVD, Department of Environment and Climate Change NSW, Sydney.

https://datasets.seed.nsw.gov.au/dataset/soil-and-land-resources-of-the-hawkesburynepean-catchment2bef0 DECCW 2010. Constraint Assessment for Urban and Regional Planning, DECCW Technical Report, prepared by JM Gray, GA Chapman, X Yang, M Young, NSW Department of Environment, Climate Change and Water, Sydney. Gray JM, Chapman GA, Yang X, Young M, 2011. Constraint Assessment for Urban and Regional Planning, Australian Planner, 48:1, 12-23 Yang, X, Chapman, GA, Gray, JM. and Young, MA (2007). Delineating soil-landscape facets from digital elevation models using compound topographic index and terrain analysis. Australian Journal of Soil Research, 45(8):569-576. Yang, X, Chapman, G and Heemstra, S 2006, Estimating soil erosion hazard for NSW coastal catchments using RUSLE in a GIS environment, in 10th Annual SIA Conference on Urban Stormwater Management, Parramatta, 27-30 June 2006

### Limitations on public access

Scope dataset

### DQ Topological Consistency

Effective date

2011-06-01

The polygons of the original soil landscape products had been checked with GIS methods Explanation

#### DQ Absolute External Positional Accuracy

Effective

date

2011-06-01

Explanation

Observations and soil profiles used for original soil mapping 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. Extensive field checking of soil landscape boundaries had been undertaken prior to finalising the original mapping.

#### **DO Non Quantitative Attribute Correctness**

Effective

date

2011-06-01

Explanation

The land and soil constraints in the original soil-landscape map products were predominately assessed using field observations, remote sensing interpretation (satellite, radiometric and aerial photos) and laboratory analysis of dominant soil materials. Further checking of representative facet boundaries and final constraint results was undertaken prior to finalisation of the product

### Responsible party

Contact position Data Broker

Organisation name NSW Department of Climate Change, Energy, the Environment and Water

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Responsible party role pointOfContact Metadata point of contact

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Metadata date 2024-02-26T13:55:25.444160

Metadata language