Title Vegetation, Northern Hawkesbury LGA (Draft) 2008. VIS\_ID 4167

Alternative title(s)

HawkesburyNorthernDraft08\_E\_4167

#### **Abstract**

Vegetation mapping of the northern part of Hawkesbury LGA. For more information see DECC (2008). This report describes the outcomes of a joint project between the Hawkesbury-Nepean Catchment Management Authority (HNCMA) and the NSW Department of Environment and Climate Change (DECC) to deliver a consistent and seamless vegetation map for the northern Hawkesbury Local Government Area (LGA). The project has been designed to provide the HNCMA and DECC with baseline data on vegetation communities to facilitate the implementation and reporting of biodiversity targets and objectives set out in the Hawkesbury-Nepean Catchment Management Plan. The major driver for this project was recognition that the study area was without consistent classification and mapping data that covered private lands and crown land tenures between the mapping available for the Cumberland Plain and the Yengo, Wollemi and Parr reserve systems. The study area covers around 28,000 hectares of land around the Hornsby Plateau in north-western Sydney. It encompasses the interface between the extensive shale deposits of the Cumberland Plain and the dissected sandstone plateaux. It is a zone that is undergoing rapid transformation in land use with rural holdings being transformed to hobby farms and urban subdivision expanding into rural-urban zones. VIS ID 4167

#### 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:

Data quality statement for Vegetation, Northern Hawkesbury LGA (Draft) 2008. VIS ID

4167

Function: download

Download Package Name: Download Package

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

Description:

Data and Documents

Function: download

WMS Name: WMS

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

Description:

Web Map Service

Function: download

REST Service Nam

Name: REST Service

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

Description:

**ESRI REST Services directory** 

Function: download

Unique resource identifier		
Code	6450f5cd-c3e2-4a51-85f1-51749ba407d7	
Presentation form	Map digital	
Edition	unknown	
Dataset language	English	
Metadata stan	dard	
Name	ISO 19115	
Edition	2016	
Dataset URI	https://datasets.seed.nsw.gov.au/dataset/6450f5cd-c3e2-4a51-85f1-51749ba407d7	
Purpose	To map native vegetation of the northern part of Hawkesbury LGA.	
Status	Completed	
Spatial representation		
Туре	vector	
Spatial reference system		
Code identifying the spatial reference system	4283	
Equivalent scale	1:None	
Additional information source	DECC (2008) The Native Vegetation of Northern Hawkesbury Local Government Area Department of Environment and Climate Change NSW, Hurstville.	
Topic category	1	

Keyword set	
keyword value	VEGETATION
	FLORA
Originating controlled vocabulary	
Title	ANZLIC Search Words
Reference date	2008-05-16
Geographic location	
West bounding longitude	150.65649
East bounding longitude	150.92672
North bounding latitude	-33.539717
South bounding latitude	-33.25876
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	1990-01-01
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

Two stages were undertaken as part of the data analysis. Firstly, all species abundance raw data from sites available from the study area was analysed using the PATN program (Belbin 1994). The Bray-Curtis coefficient was generated to identify dissimilarity between survey sites. An association matrix displaying dissimilarity scores between all pairs of sites was produced. An unweighted pair group arithmetic averaging (UPGMA) clustering strategy was applied to the matrix to derive a hierarchical classification. The default beta value of -0.1 was used on all analyses. Homogeneity analysis (Bedward et al., 1992) was initially used to identify the number of groups that maximises returns to within-group floristic variation while minimising the total number of groups. A nearest neighbour analysis using a purpose built program "GDFcheck" was applied to identify possible misclassified sites within groups. A dendrogram was then produced to display the hierarchical relationships between individual sites and groups of sites. Recent analysis carried out for the vegetation communities Yengo and Parr reserves (DECC, 2008) and the Cumberland Plain (NPWS, 2000) provided an initial guide to allocation of sites shared by these studies to vegetation communities present in the northern Hawkesbury LGA. Each of the defined groups were then analysed to uncover finer scale floristic assemblages where these related to changes in substrate or canopy species dominance. New groups were created where distinct changes in substrate, vegetation structure or canopy species dominance matched consistent patterns observed in the field. A second analysis, using the same methods, was performed on a larger dataset that comprised site data held by DECC within the greater Sydney Basin Region. The purpose of this analysis was to examine relationships between the vegetation communities present in the study area and other sandstone environments in the Sydney Basin Region (NPWS, 2000; Bell, 1998; NPWS 2003a; NPWS 2003b, DEC, 2006 draft). Provisional allocation of sites to vegetation communities from the first analysis was used to track site allocation in the second analysis. The second analysis was supplemented by labels identifying site allocation to vegetation communities described in studies listed above for Wollemi NP, Warragamba Special Area; Blue Mountains NP and the Woronora Plateau as well as broader regional community classification available in Tozer et al (2006). Mapping of vegetation communities was achieved by examining the level of congruence between the vegetation community described by the location of sample sites and mapped vegetation patterns (API codes) defined during aerial photographic interpretation. Utility of available mapping of substrate (soil or geology classes) was confounded by different attribution, classification and mapping detail across the St Albans 1:100 000 sheet (McInnes, 1997) and Penrith 1:100 000 sheet

## Limitations on public access

# Responsible party

Contact position Data Broker

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

Telephone number 131555

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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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#### Metadata language