Title Assessment of Swamp Oak Floodplain Forest TEC on NSW Crown Forest Estate (South Coast Region)

Alternative title(s)

Swamp Oak Floodplain Forest: Survey, Classification and Mapping Completed for the NSW Environment Protection Authority

## **Abstract**

The operational map for Swamp Oak Floodplain Forest (SOFF) was constructed to resolve long-standing issues surrounding its identification, location and extent within the NSW State Forest estate covered by the coastal Integrated Forestry Operation Agreements. The map was constructed in two parts, with State Forests to the north of Sydney being mapped in a separate process to those to the south of Sydney. We did this to minimise the risk that relationships between regional vegetation communities and the TEC would be confounded or masked by geographical variation or other major ecological gradients, which might otherwise be a significant risk if we had treated the full latitudinal range of the TEC as a single study area. In total, we assessed 1,218,000 hectares of State Forest across coastal NSW. This consisted of 868,000 hectares of State Forest on the north coast and more than 350,000 hectares of State Forest on the south coast. In both study areas, the project's Threatened Ecological Community (TEC) Reference Panel (the Panel) preceded the assessment process by reviewing the determination for SOFF and agreeing upon a set of diagnostic parameters for its identification. The Panel found that SOFF is primarily defined by floristic plot data and that it is mostly located on coastal floodplains and associated alluvial landforms. Following on from these conclusions, we started the mapping process by mapping the distribution of floodplains and alluvial soils and thus identifying possible areas of SOFF. For both the north and the south coast we used an existing map of coastal landforms and geology in combination with several fine-scale models of alluvial landform features to determine the likely extent of floodplains and alluvial soils within our study areas. We used aerial photograph interpretation (API) to assess floristic and structural attributes of the vegetation cover on our modelled alluvial environments, and thus delineated polygons likely to contain SOFF. We also used API to modify the boundaries of the modelled alluvial areas using a prescribed list of casuarina and melaleuca species in combination with the interpretation of landform elements relevant to alluvial and floodplain environments. We then compiled floristic plot data for all State Forest areas within our modelled alluvial landforms and API polygons. For both the north and the south coast the floristic plot data was sourced from both existing flora surveys held in the OEH VIS database and from targeted flora surveys conducted specifically for this project. We compared these plots with those previously assigned to flora communities listed in the determination of SOFF. Both dissimilarity-based methods and multivariate regression methods were used for the comparison. The results of the comparison were then used to assess the likelihood that the plots in State forests belonged to one or more of the communities listed in the SOFF determination. To create the operational map, we assigned every mapped API polygon to SOFF based on the plot data, overstorey and understorey attributes, landform features and model output underlying each API polygon. In total, we mapped approximately 272 hectares of SOFF across our full study area.

Operational TEC Mapping have been derived by API at a viewing scale between 1-4000 using ADS40 50 cm pixel imagery and 1 m derived LIDAR DEM grids for floodplain EECs.

## Resource locator

Data Quality Statement Name: Data Quality Statement

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

Description:

NSW Government standards direct that data should be made available with a statement regarding its quality, a so-called "Data Quality statement (DQS)", to enable potential users to determine whether the data is suitable for their requirements.

Function: download

Assessment of
Swamp Oak
Floodplain
Forest TEC on
NSW Crown
Forest Estate
(South Coast

Region)

Name: Assessment of Swamp Oak Floodplain Forest TEC on NSW Crown Forest Estate (South Coast Region)

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

Description:

Report on the Assessment of Swamp Oak Floodplain Forest TEC on NSW Crown Forest Estate (South Coast Region)

Function: download

**Operational** Name: Operational Map for Swamp Oak Floodplain Forest Threatened Ecological Map for Community on NSW Crown Forest Estate Swamp Oak Protocol: WWW:DOWNLOAD-1.0-http--download Floodplain Forest Description: **Threatened Ecological** Shapefile - Operational map for the Assessment of Swamp Oak Floodplain Forest TEC on NSW Crown Forest Estate (South Coast Region) Community on NSW Crown Function: download Forest Estate Name: Operational and Indicative Maps for the Assessment of Threatened Ecological **Operational** Communities on NSW Crown Forest Estate and Indicative Maps for the Protocol: WWW:DOWNLOAD-1.0-http--download Assessment of Threatened Description: **Ecological** ESRI ArcGIS Layer file - Operational and Indicative Maps for the Assessment of **Communities** Threatened Ecological Communities on NSW Crown Forest Estate on NSW Crown **Forest Estate** Function: download Name: Native Forestry Map Viewer **Native Forestry** Map Viewer Protocol: WWW:DOWNLOAD-1.0-http--download Description: The EPA Native Forestry Map Viewer enables users to view our Koala and Threatened Ecological Community mapping without the need to access a GIS system. The map viewer allows users to perform searches to locate areas of interest and export resulting map views into various image file formats. Function: download Unique resource identifier Code e5d35377-952d-4dbe-9614-885ab8dcb56d Presentation Map digital form Edition Version 1 **Dataset English** language Metadata standard ISO 19115 Name Edition 2016 https://datasets.seed.nsw.gov.au/dataset/e5d35377-952d-4dbe-9614-885ab8dcb56d **Dataset URI** Purpose Native Forestry Regulation on State Forests Completed Status Spatial representation Type vector Geometric curve Object Type

Spatial reference system

code identifying the spatial reference system	4283
Equivalent scale	1:None
Topic categor	

Keyword set	
keyword value	Threatened Ecological Community
	Endangered Ecological Community
	Vegetation
	State Forest
	Swamp Oak Floodplain Forest
	EEC
	TEC
	Environment Protection Authority
	EPA
Originating controlled vocabulary	
Title	ANZLIC Search Words
Reference date	2008-05-16
Geographic location	
West bounding longitude	149.81795
East bounding longitude	152.98365
North bounding latitude	-37.22477
South bounding latitude	-30.50141
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	2016-10-01
End position	N/A
Dataset reference date	
Resource maintenance	
Maintenance and update frequency	Irregular
Contact info	
Contact position	Data Broker
Organisation name	Environment Protection Authority (EPA)
Responsible party role	pointOfContact

## Lineage

Linework has been derived from manual interpretation of stereoscopic 3D ADS-40 imagery collected at a 50cm resolution. Date of photography varies across eastern NSW between 2009-2015. Interpretation has collected a range of floristic attributes including canopy species dominance, understorey attributes and assessment of landscape characteristics. Lines have been interpreted using a viewing scale between 1:2000- 1: 5000. Interpretation has been supported by field traverse (except bogs and saltmarsh), and existing field based observation data held by OEH. Final linework was assembled using combinations of aerial photo patterns, predictive TEC models, systematic plot data and where relevant fine scale topographic data derived from 1 metre resolution digital elevation model.

## Limitations on public access

Scope dataset

**DQ Conceptual Consistency** 

Explanation Standard API mapping pathways have been established for mappers to apply consistent

interpretation of vegetation features including, size criteria and polygon attribution.

**DQ Topological Consistency** 

Explanation Not assessed

DQ Absolute External Positional Accuracy

Explanation Positional accuracy for operational maps has been measured using independent

assessment of interpreted lines as a mean of 8.5 metres. Other influence on positional accuracy include the accuracy of field based GPS records currently tested at a mean of 9.2 metres. Some error with interpreted line from 2D to 3D environment can result in a

positional shift of up to 10 metres.

**DQ Non Quantitative Attribute Correctness** 

Explanation Attribution is consistent

Responsible party

Contact position Data Broker

Organisation name Environment Protection Authority (EPA)

Responsible party role pointOfContact

Metadata point of contact

Contact position Data Broker

Organisation name Environment Protection Authority (EPA)

Responsible party role pointOfContact

Metadata date 2024-02-26T14:16:30.940646

Metadata language