NSW Natural ResourcesData Directory- 1 - Metadata Entry Form

Title	**1:25000 Vegetation mapping Kempsey LGA East**
Custodian	Kempsey Shire Council
Jurisdiction	New South Wales
Abstract 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)	This polygon shapefile is a 1:25,000 vegetation mapping dataset combining 1999 CRAFTI mapping with 2006 Forest Ecosystem mapping undertaken by Kendall and Kendall Ecological Consultants and GECO Environmental. The dataset covers the entire Macleay Coastal subcatchment (as per DLWC Stressed Rivers) and all areas south of this within the Kempsey LGA but east of the Pacific Highway.
Search Words 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.	VEGETATION floristic mapping
Geographic Extent Name(s) Enter <u>EITHER</u> One or more predefined Geographic Extent Name(s) that best describe the geographic area. These must be selected from the categories published in the ANZLIC Metadata Guidelines. <u>OR</u> **Geographic Extent Polygon(s)** the Geographic Extent Polygon(s) for the area(s) covered by the dataset. This must be expressed as a closed set of coordinate pairs recorded in latitude and longitude, minimum four pairs to a set	**Local Government Area** **New South Wales** **Kempsey Shire Council**
Beginning Date The earliest date for a record in the dataset, or use Not known	2006/06/30
Ending date The last date for a record in the dataset, or use Not known or Current	2006/06/30 ☐ Not known ☐ Current
Progress The status of the process of creation of the dataset	☒ Complete ☐ In progress ☐ Planned ☐ Not known

Maintenance and UpdateFrequency 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.	☐ Continual ☐ Annually ☐ Daily ☐ Bi-annually ☐ Weekly ☐ As required ☐ Monthly ☐ Irregular ☐ Quarterly ☒ Not planned ☐ Not known
Stored Data Format 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.	☒ DIGITAL (include a free text description of the format) **Arcview shapefile format - polygon** ☐ NONDIGITAL (include a free text description of the format)
Available Format Type(s) 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.	☒ DIGITAL (include a free text description of the format) **Arcview shapefile format - polygon** ☐ NONDIGITAL (include a free text description of the format)
Access Constraints 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.	Apart from NSW DNR or NRCMA specific use, all requests for access must be made through contact with custodian.
Lineage Document information about both the source data and the processing steps used to produce the dataset. For example, information about the source 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)	This project is a rapid survey based primarily on remote sensing and is intended to provide an overview of the vegetation communities throughout the study area. This study <u>does not</u> comply with the DEC regional survey guidelines as outlined in the *DEC, 2004, Threatened Species Survey and Assessment: Guidelines for developments and activities (working draft), New South Wales Department of Environment and Conservation, Hurstville, NSW* or the *Draft Regional Biodiversity Survey & assessment Guidelines Draft 2001* Penny Kendall of *Kendall & Kendall Ecological Consultants* was subcontracted to undertake the Forest Ecosystem mapping for this Study. Forest Ecosystem mapping was undertaken wherever it was evident that vegetation areas in excess of 0.5Ha were not mapped, where post CRAFTI clearing had occurred, or where errors in the CRAFTI mapping were identified. Areas of National Park and State Forest were excluded from review. The mapping methodology used to improve the existing vegetation mapping dataset (as described above) and to map gaps in the existing dataset was as follows.

Air photo interpretation (API)

Stereoscopic interpretation of aerial photographs was undertaken across the study area. The photography used was 1:25 000 colour flown in August 2003. Clear overlays attached to the photos were marked using a fine (0.18mm) mapping pen. The line work was stereoscopically transferred onto A1 sized plastic overlays, scanned, and vectorised to produce a GIS coverage of the mapped polygons. Polygons were individually labelled and then attributed using ArcView GIS. The API Pathway is outlined in *Figure 2*.

Floristic mapping

The floristic mapping was the primary attribute used to define the polygon location and extent. The forest ecosystem vegetation classification developed by RACD 1999 and refined by DEC 2004 was used.

Structural mapping

Although the floristic composition of the polygons was the primary determinate for polygon location and extent, each polygon was also assigned a structural code based on several structural attributes. Structural mapping is important in determining the habitat and conservation values of vegetation communities. The structural attributes recorded include upper strata density and age, mid strata type and relative disturbance.

Ground truthing field survey

A preliminary over view was undertaken in January 2006. This involved an orientation drive around the study area to determine the broad vegetation and land use patterns and access constraints. Following API and polygon coding limited ground truthing was conducted along roads providing access to the study area.

No systematic flora survey was undertaken and this study does not comply with the recommended survey effort as outlined in *Threatened Species Survey &Assessment Guidelines for Developments and Activities Working Draft NSW NPWS* and SMEC Australia (2003) guidelines.

Integration of Existing Datasets

The integration of existing datasets with the new Forest Ecosystem mapping was undertaken using the GIS editing capabilities of ArcView 3.2a. The following steps were undertaken;

1. The existing CRAFTI dataset was reprojected to MGA94, clipped to the study area, and overlaid onto the August 2003 1:25,000 orthorectified aerial photographs.

2. The new Forest Ecosystem mapping was added to the GIS and areas of redundancy in the CRAFTI layer were deleted. Where the new mapping resulted in only a part of the existing CRAFTI mapping being redundant, the boundary of the CRAFTI data was adjusted. The two datasets were then joined and cleaned resulting in a single vegetation dataset for the Study Area.

3. Where an existing CRAFTI code for a vegetation type was directly transferable to the Forest Ecosystem classification, then the CRAFTI polygon was relabeled with the Forest Ecosystem code and label.

4. Where an existing CRAFTI code was **not** directly transferable to the Forest Ecosystem classification, the CRAFTI code and Description label was retained.

5. The full vegetation layer was then labeled with either the FE label or the CRAFTI label. The "Label" field of the vegetation dataset identifies all

CRAFTI labels through the use of the suffix "(c)".

The use of this process has allowed the effective integration of the older CRAFTI dataset with the new Forest Ecosystem mapping undertaken during this project. This purpose of this exercise was to;

1. Allow the display of all vegetation data as a single layer in a GIS system with clearly identified labels and data source.

2. Allow the interrogation of the single dataset to derive Candidate EECs for the study area by using the FE codes and labels, CRAFTI codes and labels, NPWS_Coast Veg codes and labels, and SF Lookup codes and labels.

Positional Accuracy

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)

In natural environments the composition and distribution of the various vegetation communities are complex and variable with often in-discrete boundaries. Mapping of vegetation communities, particularly by remote techniques, involves a large degree of professional judgment in both locating polygon boundaries and assigning appropriate floristic and structural classes. Even though considerable effort has been applied to this project to ensure the accuracy and objectivity of the mapping, errors will occur, especially when applying the mapping to small areas or parts of polygons.

Absolute accuracy of polygon position ± 100 m

Attribute Accuracy

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)

CRAFTI data attribute accuracy is unknown.
Forest Ecosystem data collected for this project was obtained through a remote sensing exercise using 1:25,000 aerial photograph interpretation. Limited ground-truthing was undertaken.

Logical Consistency

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)

All polygons close. Polygons have a one to one relationship with attribute table.

Completeness

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 Known, Not Documented or Not Relevant if no information is available.
(Maximum 2000 characters)

Vegetation mapping has occurred at a scale of 1:25 000 following their delineation on aerial photographs of similar scales. While quite small areas of special value can be readily identified in the field for individual management, generally areas less than 0.5 ha size, or 50 m in width were not represented.

Users of all maps are urged to consult the data attribute table and project report to obtain the detail of all polygons and methods of mapping and labeling of polygons.

Contact Organisation

The business name of the organisation from which the dataset may be obtained. It need not be the same organisation as the Custodian.

Kempsey Shire Council

NSW Natural ResourcesData Directory- 5 - Metadata Entry Form

Contact Position The position title of the person in the contact organisation who will answer questions about the dataset. Personal names of contacts are not acceptable.	Area Planner
Mail Address The mail address for the contact position. Include street name and number or post office box or bag number.	PO Box 78, West Kempsey NSW 2441.
Locality The name of the suburb or town associated with the mail address for the contact position.	KEMPSEY
State The name of the State or Territory, in acronym form (eg NSW), where the contact position is located.	NSW
Country The name of the country where the contact position is located.	AUSTRALIA
Postcode The official postcode for the address of the contact position.	2440
Telephone The telephone number of the contact position. Include the STD code.	02 65663200
Facsimile The fax number of the contact position. Include the STD code.	
Electronic Mail Address The electronic mail address of the contact position. If an email address is not available, use Not Known or None.	Not known
Additional Metadata 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.	Refer to project report titled: **Kempsey LGA East** **Native Vegetation and** **Candidate Endangered Ecological Community Mapping Report** May 2006 Report to Kempsey Shire Council By Damon Telfer (*GECO Environmental*), Penny Kendall (*Kendall & Kendall Ecological Consultants Pty Ltd*)

Please return this form to: The Resource Information Unit
Locked Bag 10
Grafton NSW 2460

Title	**1:25,000 <u>Candidate</u> Endangered Ecological Communities Kempsey LGA East**
Custodian	Kempsey Shire Council
Jurisdiction	New South Wales
Abstract 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)	This polygon shapefile is a 1:25,000 dataset showing **Candidate Endangered Ecological Communities** occurring within the study area as derived from the 1:25,000 Vegetation mapping undertaken by Kendall and Kendall Ecological Consultants and GECO Environmental. The dataset covers the entire Macleay Coastal subcatchment (as per DLWC Stressed Rivers) and all areas south of this within the Kempsey LGA but east of the Pacific Highway.
Search Words 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.	ECOLOGY Community mapping
Geographic Extent Name(s) Enter <u>EITHER</u> One or more predefined Geographic Extent Name(s) that best describe the geographic area. These must be selected from the categories published in the ANZLIC Metadata Guidelines. <u>OR</u> **Geographic Extent Polygon(s)** the Geographic Extent Polygon(s) for the area(s) covered by the dataset. This must be expressed as a closed set of coordinate pairs recorded in latitude and longitude, minimum four pairs to a set	**Local Government Area** **New South Wales** **Kempsey Shire Council**
Beginning Date The earliest date for a record in the dataset, or use Not known	2006/06/30
Ending date The last date for a record in the dataset, or use Not known or Current	2006/06/30 ☐ Not known ☐ Current
Progress The status of the process of creation of the dataset	

NSW Natural ResourcesData Directory- 2 - Metadata Entry Form

☒ Complete	☐ In progress	☐ Planned	☐ Not known

Maintenance and UpdateFrequency 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.	☐ Continual ☐ Daily ☐ Weekly ☐ Monthly ☐ Quarterly	☐ Annually ☐ Bi-annually ☐ As required ☐ Irregular ☒ Not planned	☐ Not known

Stored Data Format 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.	☒ DIGITAL (include a free text description of the format) **Arcview shapefile format - polygon** ☐ NONDIGITAL (include a free text description of the format)

Available Format Type(s) 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.	☒ DIGITAL (include a free text description of the format) **Arcview shapefile format - polygon** ☐ NONDIGITAL (include a free text description of the format)

Access Constraints 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.	All requests for access must be made through contact with custodian.

Lineage Document information about both the source data and the processing steps used to produce the dataset. For example, information about the source 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)	**Methodology for identification of Candidate EEC's** This dataset contains derived Candidate EECs for the Study Area. The methodology used attempts to identify Candidate EECs from broad scale vegetation mapping and is purposely inclusive, encompassing as many areas as possible given the constraints of resources for the Study. **It must be emphasised that the actual determination of an ecological community as an Endangered Ecological Community requires considerably more detailed investigation than that undertaken for this study. As such the Candidate EEC mapping should be considered to be indicative of the potential occurrence of an EEC in any geographic area rather than indicating the actual occurrence of an EEC at that site.** **Further, although the Candidate EEC mapping is intended to be inclusive of all potential ecological communities that may be EECs, it is likely that the mapping misidentifies some ecological communities as Candidate EECs**

when more detailed investigations would show otherwise, whilst in other cases does not identify some ecological communities as Candidate EECs when more detailed investigation would show that they should be.

The following steps outline the methodology used to derive the Candidate EEC datasets;

1. Identify all possible Forest Ecosystems and CRAFTI codes that are likely to contain species assemblages or floristic communities associated with each Candidate EEC as per the NSW Scientific Committee Determinations.

2. Using ARCView GIS, for each Candidate EEC occurring within the Study Area, select out the identified FE and CRAFTI vegetation types and form into a discrete dataset.

3. Use the Ecological Community descriptors and environmental determinants to classify each of the vegetation polygons in the new Candidate EEC dataset according to Probability of Occurrence (Very Low Likelihood, Low Likelihood, Moderate Likelihood, High Likelihood, and Very High Likelihood). The exact process used for each of the 10 Candidate EECs identified as potentially occurring within the study area is outlined in the full report titled: *Kempsey LGA East - Native Vegetation and Candidate Endangered Ecological Community Mapping Report, May 2006.* Additional datasets were used to assist this process including DNR 1:100,000 Soil Landscape mapping series (Macksville-Nambucca and Kempsey), and DPI Fisheries Aquatic Vegetation dataset 2005.

4. Merge the 10 individual Candidate EEC datasets into one dataset which allows the identification of Candidate EECs by individually selected vegetation polygon.

The precise method used to identify Candidate areas for each of the 10 potentially occurring EECs is outline in the report titled: *Kempsey LGA East - Native Vegetation and Candidate Endangered Ecological Community Mapping Report, May 2006.*

Disclaimer
When using the Candidate EEC dataset it must be remembered that the derivation of Candidate EECs is problematic as many of the Candidate EECs adjoin or intergrade with other Candidate EECs and the boundaries between vegetation communities are dynamic and may shift over time in response to climatic changes, hydrological regimes, or other factors. For this reason the Candidate EEC dataset should be considered indicative only and is not guaranteed to be free of errors or omissions.

Positional Accuracy
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)

In natural environments the composition and distribution of the various vegetation communities are complex and variable with often in-discrete boundaries. Mapping of vegetation communities, particularly by remote techniques, involves a large degree of professional judgment in both locating polygon boundaries and assigning appropriate floristic and structural classes. Even though considerable effort has been applied to this project to ensure the accuracy and objectivity of the mapping, errors will occur, especially when applying the mapping to small areas or parts of polygons.

Absolute accuracy of polygon position ± 100 m

NSW Natural ResourcesData Directory- 4 - Metadata Entry Form

Attribute Accuracy 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)	No ground-truthing of the Candidate EEC dataset has been undertaken as it is considered that only extensive field-based survey by trained professionals will allow the accurate determination of actual EEC.
Logical Consistency 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)	All polygons close. Polygons have a one to one relationship with attribute table.
Completeness 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 Known, Not Documented or Not Relevant if no information is available. (Maximum 2000 characters)	The Candidate EEC dataset is based on vegetation mapping that has occurred at a scale of 1:25 000 following their delineation on aerial photographs of similar scales. While quite small areas of special value can be readily identified in the field for individual management, generally areas less than 0.5 ha size, or 50 m in width were not represented. Users of all maps are urged to consult the data attribute table and project report to obtain the detail of all polygons and methods of mapping and labeling of polygons.
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Locality The name of the suburb or town associated with the mail address for the contact position.	KEMPSEY
State The name of the State or Territory, in acronym form (eg NSW), where the contact position is located.	NSW
Country The name of the country where the contact position is located.	AUSTRALIA
Postcode The official postcode for the address of the contact position.	2440

Telephone The telephone number of the contact position. Include the STD code.	02 65663200
Facsimile The fax number of the contact position. Include the STD code.	
Electronic Mail Address The electronic mail address of the contact position. If an email address is not available, use Not Known or None.	Not known
Additional Metadata 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.	Refer to project report titled: **Kempsey LGA East** **Native Vegetation and** **Candidate Endangered Ecological Community Mapping Report** May 2006 Report to Kempsey Shire Council By Damon Telfer (*GECO Environmental*), Penny Kendall (*Kendall & Kendall Ecological Consultants Pty Ltd*)

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