Title	Lord Howe Island Vegetation Map 2016 VIS_ID 4450
Alternative title(s)	LordHoweId_2016_E_4450
Abstract	Fine scale vegetation communities mapped at 1:1,000 resolution across the Lord Howe Island Group (LHIG) are based on 2012, ADS40 digital aerial imagery captured at 10 cm resolution (LPI). The updated vegetation data and report will assist the LHI Board to better manage vegetation communities across the World Heritage Area, particularly within the settlement area where spatial accuracy in the delineation of native vegetation is critical and will assist and inform actions undertaken in delivering biodiversity management. VIS_ID 4450

Resource locator

Data Quality Statement	Name: Data Quality Statement Protocol: WWW:DOWNLOAD-1.0-http--download Description: DQS for Lord Howe Island vegetation map, 2016 Function: download
Lord Howe Island Vegetation map data package	Name: Lord Howe Island Vegetation map data package Protocol: WWW:DOWNLOAD-1.0-http--download Description: Download ZIP Package Data Function: download

Unique resource identifier

Code	32be1f18-346b-42ab-b026-1d6821394806

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/32be1f18-346b-42ab-b026-1d6821394806
Purpose	To improve management of vegetation communities on Lord Howe Island
Status	Completed

Spatial representation

Type	vector
Geometric Object Type	curve

Spatial reference system	
Code identifying the spatial reference system	4283
Spatial resolution	1 m
Additional information source	Sheringham P., Richards P., Gilmour P., & Kemmerer E., 2016, A Systematic Flora Survey, Floristic Classification and High-Resolution Vegetation Map of Lord Howe Island. Lord Howe Island Board, Lord Howe Island, NSW.
Topic category	

Keyword set	
keyword value	VEGETATION-Floristic PHOTOGRAPHY-AND-IMAGERY-Aerial FLORA-Native
Originating controlled vocabulary	
Title	ANZLIC Search Words
Reference date	2008-05-16
Geographic location	
West bounding longitude	159.009933
East bounding longitude	159.122543
North bounding latitude	-31.604095
South bounding latitude	-31.484718
NSW Place Name	Lord Howe Island
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	2012-01-01
End position	N/A
Dataset reference date	
Resource maintenance	
Maintenance and update frequency	Not planned
Contact info	
Contact position	Data Broker
Organisation name	Lord Howe Island Board
Responsible party role	pointOfContact

Lineage

Airborne Digital Sensor (ADS40 by Leica Geosystems) data at 10cm resolution became available from NSW Land and Property Information (LPI) in January 2012. Aerial Photography Interpretation (API) was undertaken for this project using ArcGIS 9.0 and ArcGIS 10.1 with an orthorectified stereo image (or without a stereo view) in normal colour and an enhanced image which was stretched in the 600 to 700nm range to improve resolution of patterns in the vegetation. Using the digital version of the Pickard (1983) vegetation map as a template, the ADS40 imagery was used to refine the spatial accuracy of vegetation extent of Pickard's linework. This included trimming areas of the Pickard linework where it extended beyond extant vegetation or landmass, and adding areas such as isolated trees and smaller remnants of vegetation which were not originally mapped by Pickard. This produced a refined draft map incorporating Pickard's polygons and attributions. A stratified random sampling design was applied based upon the assumption that vegetation types broadly represent a surrogate for underlying environmental variables. The number of sites to be sampled within each vegetation type was weighted by area. A minimum of one site was allocated for vegetation types that occupied small areas, and up to seven full floristic sites and up to 10 rapid floristic sites were allocated to more extensive vegetation types. Not all sites that were selected were surveyed, and the actual number of sites completed in some vegetation types varied from the number allocated, due to access and time constraints. Sampling of floristic sites was undertaken during July 2013. Floristic data were gathered from 20m X 20m quadrats positioned as close as possible to the pre-selected site location. Biophysical information including slope, aspect, geology, lithology and evidence of disturbance were recorded. Vegetation structural information (height range, dominant species, foliage cover) was recorded for each discernible vegetation stratum, and all vascular plant species present within the quadrat were recorded and assigned a modified Braun-Blanquet (1932, cited in Conrad and Fuller 1983) cover-abundance score between 1 (<5%) and 6 (76-100%). Rapid floristic sites were similar to full floristic sites in positioning of the site and collection of locality information. However, the only floristic data recorded were up to six dominant species in the upper tree stratum, and up to three dominant species in each lower stratum, along with an estimate of the percentage foliage cover of each stratum. Data from 86 full floristic and 105 rapid floristic (canopy taxa only) sites were investigated using a hierarchical agglomerative clustering strategy available in PATN (Belbin 1990, 1995) to determine the main floristic groups for the study area. Separate full-floristic and canopy-only (combining canopy data from all sites) analyses were undertaken. Exotic taxa were included in the full floristic analysis. The Bray-Curtis (Bray & Curtis 1957) association measure was used to determine site similarity. A hierarchical classification of sites was derived from a clustering strategy using a Beta value of -1 in a flexible unweighted pair group arithmetic averaging (UPGMA). A nearest-neighbour analysis was then used to identify potentially misclassified sites, and a fidelity analysis applied to the resultant floristic groups, arising from the full floristic analysis, to identify diagnostic (indicator) species for each group (Bedward 1999). A complete vegetation community list for the LHIG was compiled by merging or splitting full floristic and canopy-only groups, and adding those vegetation types or mapping units that were not sampled during the current survey but were recognised and described in previous surveys, viz. Pickard (1983), Hutton (2001) and DECC (2007). Detailed profiles of each LHIG vegetation community sampled and recognised in this study, and for which floristic and physiognomic data are available, were prepared. 222 plant taxa were recorded in floristic sites, including three threatened species and 47 exotic species. Twenty-four plant communities were derived at a dissimilarity measure of 0.65. A twenty-fifth group was excluded as it represented recent post-disturbance regeneration (see Figure 2). Two major groupings, split on the basis of relative species richness, were apparent in the full floristic dendrogram. The first grouping comprised communities with low species richness, including coastal grasslands and sedgelands, swamp forests and saltmarsh, and fernlands and shrublands of exposed, rocky areas. The second grouping contained species-rich oceanic rainforests of the lowlands and southern and northern hills, and montane cloud forests of the southern mountains. Analysis of canopy-only data from all 191 floristic sites resulted in the recognition of three additional communities – Group 3 Grey Mangrove low estuarine forest, Group 4 River Mangrove low estuarine forest, and Group 19 Pandanus - Metrosideros riparian forest.
A saltmarsh (Community 7 Saltwater Couch saltmarsh of poorly drained, brackish flats) and two rainforest communities (Community 19 Maulwood-Kentia Palm- Cottonwood-Greybark lowland forest; Community 22 Hill Rose – Forky Tree forest of rocky creeks and slopes) that were not recognized in previous studies were identified and mapped in the current study. This survey resulted in the recognition of 39 mapping units for the LHIG. Including: • 33 described vegetation communities from the full floristic analysis, canopy-only analysis, and additional Pickard (1983), Hutton (2001) and DECC (2007)communities • 3 map units identifying non-specific native vegetation (Environmental Plantings, Native Regeneration and Native Remnant) • 2 map units identifying non-native vegetation (Plantations and Exotic) • 7 map units representing physiographic features (Estuary, Landslip, Rock, Beach, Water , Cliff, Dam) Waterfall communities are described as occurring on vertical cliffs on the north and west faces of Mount Gower, down to around 500m altitude (DECC 2007). but these communities are not included in this map and report, as they are of extremely restricted occurrence, generally inaccessible, and cannot be detected using Aerial Photography Interpretation (API).

Limitations on public access

Scope	dataset
DQ Topological Consistency	
Explanation	geometrically & topologically correct

Responsible party

Contact position	Data Broker
Organisation name	Lord Howe Island Board
Responsible party role	pointOfContact

Metadata point of contact

Contact position	Data Broker
Organisation name	Lord Howe Island Board
Responsible party role	pointOfContact

Metadata date

2024-02-26T14:03:13.938728

Metadata language