Title	Marine LiDAR classified point cloud data (LAS)
Alternative title(s)	Coastal marine topographic and bathymetric data classified point cloud data
Abstract	Remotely sensed topographic (elevation) and bathymetric (depth) information were acquired for the NSW coast (Point Danger to Cape Howe) and southern Queensland (Palm Beach to Point Danger) using Airborne LiDAR Bathymetry (ALB - a combination of Light Detection And Ranging (LiDAR) and Laser Airborne Depth Sounding (LADS) sensors) during July – December 2018. Data were acquired by Fugro Pty Ltd on behalf of NSW Office of Environment and Heritage using a Riegl VQ-820-G ALB (LiDAR) and Fugro LADS High-Definition sensors aboard sub-contracted Corporate Air Cessna C441 (VH-VEH). Funding was provided through the NSW Coastal Reforms package. The objective of the project was to provide high-resolution data better than 3-5 m spaced soundings (0.5 m spot spacing terrestrial; 3.4 m spot spacing marine) from the mean high-water mark to ~200m inland, and from the shore, seaward (LADS - bathymetry) to the point of laser extinction (~20-40m water depth depending on in-water conditions). Positioning data were collected on the ellipsoid ITRF 2014 GRS80 in UTM Z56 and post-processed using local base stations (CORSnet NSW) to provide a Post Processed Kinematic GNSS solution for final aircraft trajectory before being applied to all data. The data provided here are classified LAS format point clouds, subset into 1) 1 x 1 km tiles of classified height (combined topo-bathymetry) and 2)areas of reflectivity (strength of signal return) data, both in GDA 2020 (horizontal datum; Zones 55 or 56) at Australian Height Datum (vertical datum) with vertical precision to International Hydrographic Order (IHO) 1B. Point cloud data tied to GRS80 ellipsoid is also available. Reflectivity data is further subset into 1) LADS and 2) Riegel sensors. Data covers an area of 6862 km2 and is subdivided into 48 sub-datasets, the extents of which are generally defined in their alongshore extent by the boundaries of NSW Secondary Sediment Compartments (Geosciences Australia). Each data file is prefixed with the compartment name and year of collection. Data provided are available on the ELVIS website (Geosciences Australia - https://elevation.fsdf.org.au). Metadata, data quality statements and geographical data coverage ArcGIS shapefiles are available via SEED https://www.seed.nsw.gov.au/edphome/home.aspx, as are links to the datasets. The data are intended to inform coastal and marine management and should not be used for navigation without additional processing.

Resource locator

Data Quality Statement	Name: Data Quality Statement Protocol: WWW:DOWNLOAD-1.0-http--download Description: Data quality statement for Marine LiDAR classified point cloud data (LAS) Function: download
Marine LiDAR classified point cloud data (LAS) Coverage	Name: Marine LiDAR classified point cloud data (LAS) Coverage Protocol: WWW:DOWNLOAD-1.0-http--download Description: ESRI Coverage shape file for all Marine LiDAR classified point cloud data Function: download
ELVIS Application	Name: ELVIS Application Protocol: WWW:DOWNLOAD-1.0-http--download Description: Data can be downloaded from the ELVIS application Function: download

Unique resource identifier

Code	f3c2d3eb-f9b2-4193-be20-28e9156d50a6

Presentation	Multimedia digital

form	
Edition	v1.1
Dataset language	English

Metadata standard

Name	ISO 19115
Edition	2016

Dataset URI	https://datasets.seed.nsw.gov.au/dataset/f3c2d3eb-f9b2-4193-be20-28e9156d50a6
Purpose	Baseline data for coastal hazard management by state and local governments for Coastal Reforms
Status	Completed

Spatial representation

Type	vector

Spatial reference system

Code identifying the spatial reference system	4283
Spatial resolution	5 m
Additional information source	Extent along Australia's east coast if from Palm Beach in southeast Queensland to Cape Howe at the NSW/Victorian border from a minimum of 200m inland from the shore to point of LADS extinction (nominally 20-40m water depth) offshore.

Topic category

Keyword set

keyword value	GEOSCIENCES-Geomorphology
	MARINE-Coasts
	MARINE-Geology-and-Geophysics
	MARINE-Reefs
	LAND-Topography
	PHOTOGRAPHY-AND-IMAGERY-Remote-Sensing

Originating controlled vocabulary

Title	ANZLIC Search Words
Reference date	2008-05-16

Geographic location

West bounding longitude	149.414062
East bounding longitude	154.423828

North bounding latitude	-37.801968
South bounding latitude	-27.465385
NSW Place Name	NSW coast

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	2018-01-07
End position	N/A

Dataset reference date

Resource maintenance

Maintenance and update frequency	Unknown
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

Generally, the 2019 dataset is a ‘one-off’ collection but future collections may be added a later date, funding permitting. Some earlier LiDAR/LADS surveys collected 2008 and 2011 are also to be provided. Additional details on the systems, aircraft, specifications of sensors used, auxiliary data, processing, classification etc are provided in Report of Survey and associated reports. The final Report of Survey can be accessed via the OEH IAR, Geosciences Australia ELVIS website https://elevation.fsdf.org.au or upon request. System installation occurred at Goulburn airport 3-10 July 2018 followed by verification flights with surveys commencing from Ballina airport 11 July 2018. A total of 93 flights were conducted from 11 July 2018 to 20 October 2018 followed by demobilisation 21-24 October 2018 in Goulburn. Data are processed by Fugro (Adelaide) and provided to OEH Jan-Jun 2019.

Limitations on public access

Scope	dataset

DQ Completeness Commission

Effective date	2019-06-26
Explanation	This survey (2018) contains some data from southern Queensland. Additional datasets from earlier NSW Marine LiDAR surveys (2008, 2011) will be made available to compliment this data set.

DQ Absolute External Positional Accuracy

Effective date	2019-06-20
Explanation	1m

Responsible party

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

Metadata point of contact

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

Metadata date

2024-02-26T13:26:49.425963

Metadata language