Title	Review of Lagoon Entrance Modelling for Flood Studies
Abstract	Separate Flood studies have been undertaken for four coastal lagoons in the Gosford area, that is, Avoca, Cockrone, Terrigal and Wamberal Lagoons. Different analytical approaches have been used for Avoca-Cockrone and Terrigal-Wamberal Lagoons. The physical processes involved in the break-out of the lagoons through the beach are complex. Thus, there is a potential for the different analytical processes to produce significantly different results. For this study, separate MIKE-11 models were established for Terrigal-Wamberal Lagoons. These models were calibrated against the documented openings of August and September 1993. MIKE-11 models have been previously established for Avoca and Cockrone Lagoons as part of the Flood Studies. The Avoca Lagoon hydraulic model established for the flood study was modified to remove the source of numerical noise which resulted in the over-estimation of the volume of water discharged to the ocean during the opening calibration event. The re-calibration did not alter the parameters for initial breakout of the lagoon. The amendment of channel lengths in the Avoca model was also undertaken to remove a minor over-estimation of storage. The revised hydraulic model produced an estimated one percent AEP design flood level 20mm lower than that obtained in the flood study. This variation in estimated flood levels is not considered significant. It is noted that the critical duration storm (that is, the design storm that produces the greatest water level in the lagoon) was the 9 hour storm for each lagoon. The design flood level estimates for the one percent AEP flood in Terrigal Lagoon and Wamberal Lagoon determined by the review hydraulic model were within 30mm of the flood study estimates. This can be considered to provide independent verification of the flood study estimates.
Resource locator	
Gosford City Council - Review of Lagoon Entrance Modelling for Flood Studies	Name: Gosford City Council - Review of Lagoon Entrance Modelling for Flood Studies Protocol: WWW:DOWNLOAD-1.0-http--download Function: download
Unique resource identifier	
Code	592c55d5-2b86-4dd8-a89a-b078fd84f97e
Presentation form	
Edition	27/06/2017
Dataset language	English
Metadata standard	
Name	ISO 19115
Edition	2016
Dataset URI	https://datasets.seed.nsw.gov.au/dataset/592c55d5-2b86-4dd8-a89a-b078fd84f97e
Purpose	Land and Resource Management
Status	On going

Spatial representation

Type	vector

Spatial reference system

Code identifying the spatial reference system	4283

Topic category

Keyword set	
keyword value	
Originating controlled vocabulary	
Title	ANZLIC Search Words
Reference date	2008-05-16
Geographic location	
West bounding longitude	151.410828
East bounding longitude	151.460266
North bounding latitude	-33.495999
South bounding latitude	-33.408918
NSW Place Name	Gosford
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	
End position	N/A
Dataset reference date	
Resource maintenance	
Maintenance and update frequency	As needed
Contact info	
Contact position	Data Broker
Organisation name	Central Coast Council
Telephone number	1300 463 954
Email address	ask@centralcoast.nsw.gov.au
Web address	https://www.centralcoast.nsw.gov.au/
Responsible party role	pointOfContact
Limitations on public access	

Responsible party

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Metadata date

2024-03-25T09:56:20.614047

Metadata language