



Title Bathurst Channel Marine Habitat Layer-1:25000

Custodian Tasmanian Aquaculture and Fisheries Institute
Marine Research Laboratories, Tarooma

Jurisdiction Tasmania

Description

Abstract

The Bathurst Channel marine habitat layer1: 25,000 depicts marine habitats for the entire channel from the inside of the Breaksea Islands to Nixson Point [145° 55', -43° 18'] to [146° 08', -43° 21']. The habitat types depicted in the dataset include silt, silty sand, hard sand and low profile reef. The data was collected in October and November 2002 by marine researchers at the Tasmanian Aquaculture and Fisheries Institute. The use of underwater camera equipment, echo sounder data and a Differential GPS unit allowed for the extensive area to be surveyed. The dataset is intended to be used to fulfil coastal management objectives according to *The Living Marine Resources Act 1995*.

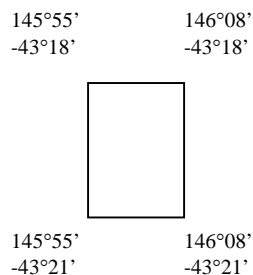
ANZLIC Search Words

Boundaries Biophysical
Fisheries
Fisheries Aquaculture
Fisheries Marine
Marine Coasts
Marine Reefs

Bounding Coordinates

Geographic Extent Name: Tasmania [-43.18 -43.21 145.55 146.5]

Geographic Extent Coordinates:



Dataset Currency

Beginning Date 01 10 2002

Ending Date 30 11 2002

Dataset Status

Progress: Not Planned

Maintenance and Update: Irregular

Dataset Access

Stored Data Format DIGITAL: GIS ESRI shapefiles, MAPINFO shapefiles

Available Format Type DIGITAL: GIS ESRI shapefiles, MAPINFO shapefiles

Access Constraints All graphical and digital data produced by the Tasmanian Aquaculture and Fisheries Institute are subject to Crown Copyright. Accordingly, it is a requirement that all digital data be distributed with a Digital Data Licence Agreement or a Memorandum of Understanding in the case of Government clients. These agreements will define the terms and conditions under which the client may use the data.

Data Content

Data Type GIS

Parameters Biological, Physical

Equipment Equipment employed to record and measure the data included [Furuno 600L colour sounder, Garmin 135 GPS map unit with a RACAL differential correction unit, Benthos Model 4208 8x zoom colour camera unit]

Habitat Description Habitats identified: [Low profile Reef, Patchy Reef, Sand, Hard Sand, Silty Sand, Silt].

Sample Method Areas were sampled following transects in from the 40metre contour line to the coastline. The sampling method resembled a “zigzag” pattern at 200m intervals.

Sample Intensity The GPS recorded depth and position regularly at 5second intervals to generate a point dataset of 200 000 points. Sampling effort was increased in areas that demonstrated complex habitat composition.

Data Quality

Lineage Depth and positional point data was captured using a Garmin 135 GPS unit coupled with a RACAL differential correction unit. A FURUNO 600L colour sounder was used to discriminate habitat type. Employing a specially designed program, *Seabed Mapping Tool Version 1.3*, point data was attributed with one of eleven habitat classifications. The point dataset was checked for extraneous data, cleaned and converted to a point coverage using *ESRI ARCVIEW Version 3.2*. The point data was used to interpret boundaries and formed the basis of a polygon coverage that was generated from the data. Selected aerial photographs were scanned at 600dpi and stored as 24bit colour TIFF images. Each was georeferenced using *ESRI ARC/INFO Version 7.2.1* to the Tasmanian Coastline coverage in AGD66. The point data was overlaid on the aerial photographs to check for continuity especially in generating the reef habitat polygons. The generated polygon coverage was edge matched to the 1:25000 coastline shape. The 1:25000 coastline was supplied by the Land Information Services Division of the Department of Primary Industry, Water and Environment Tasmania.

Positional Accuracy The accuracy of the GPS was assessed by recording at fixed points over extended time periods. It was found to vary by no more than 12meters over a three-hour period. Aerial photographs were rectified using a minimum of 15 ground control points for each image. The average root mean square error for the photographs was X8.157 and Y10.246.

Attribute Accuracy The attributes assigned to the 1:25000 Habitat Mapping Series were based on the interpretation of the readings given from the FURUNO colour scanner. These attributes were cross-referenced with underwater video information used to ground truth the sounder interpretations.

Logical Consistency All data has been checked for duplicate features, extraneous points, unclipped polygons and unattributed polygons by both visual and automated means.

Completeness The Bathurst Channel dataset is complete from the coastlines the eastern side of the Breaksea Islets to the entrance of Port Davey.

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