DRAFT REVISED MANAGEMENT PLAN FOR ROOKERY ISLANDS ANTARCTIC SPECIALLY PROTECTED AREA NO. 102 WILKES LAND, EAST ANTARCTICA

Introduction

The Rookery Islands (Map A) were originally designated as Specially Protected Area No. 2, in accordance with the Agreed Measures for the Conservation of Antarctic Fauna and Flora, through Recommendation IV-II (1966), after a proposal by Australia.

The Area was originally designated on the grounds that the Rookery Islands contain breeding colonies of all six bird species resident in the Mawson area, two of which, the southern giant petrel *(Macronectes giganteus)* and the Cape petrel *(Daption capensis),* occur nowhere else in the region, and that it is of scientific importance to safeguard this unusual assemblage of six species and to preserve a sample of the habitat.

A revised description and management plan for the Area was adopted by Recommendation XVII-2 (1992) to accord with the revised format for Area Descriptions and Management Plans of Article 5 of Annex V of the Protocol on Environmental Protection to the Antarctic Treaty, adopted under Recommendation XVI-10 (1991). In accordance with Resolution XX -5 (1996) the site was redesignated and renumbered as Antarctic Specially Protected Area (ASPA) No. 102.

This revised Management Plan reaffirms the scientific values of the original designation.

1. Description of Values to be Protected

The Rookery Islands are a group of small islands and rocks in the western part of Holme Bay, lying to the north of the Masson and David Ranges in Mac. Robertson Land, East Antarctica, at 67°36'36.7" S and 62°32'06.7" E.

The Rookery Islands contain breeding colonies of six bird species resident in the Mawson area: Adélie penguin (*Pygoscelis adeliae*), Cape petrel (*Daption capense*), snow petrel (*Pagodroma nivea*), southern giant petrel (Macronectes giganteus), Wilson's storm petrel (*Oceanites oceanicus*) and the Antarctic skua (*Catharacta maccormicki*). The southern giant petrel breeds nowhere else in the region. The designation of the Area aims to safeguard this unusual association of six species and ensure the preservation of a representative offshore island habitat (Map B).

The Rookey Islands provides a representative sample of the offshore island habitats occurring along the coast of Mac. Robertson land.

The southern giant petrel (*Macronectes giganteus)* has a world population of approximately 62,000 individuals and is inferred to have sustained a population reduction of at least 20% over the last 60 years. The species is in continued rapid decline. Giganteus Island in the Rookery Islands group is one of only four known breeding localities of southern giant petrels around the coastline of continental Antarctica. The other three continental breeding colonies are located near the Australian stations of Casey (66°13'S 110°11'E), (Frazier Islands) and Davis (68º35'S,

77°58′E) (Hawker Island), and near the French station Dumont d'Urville (66°40′S, 140°01′E) in Terre Adélie. The current population for continental Antarctica is estimated at approximately 290 pairs, comprised of 3 pairs on Giganteus Island, 25 pairs on Hawker Island, 16 pairs at Pointe Géologie archipelago (Terre Adélie) and 248 pairs on the Frazier Islands. Southern giant petrels on the Antarctic continent comprise less than 1% of the global breeding population.

Southern giant petrels are widespread in more northerly latitudes, breeding on islands to the north-west of the Antarctic Peninsula and on islands of the Scotia Ridge. However, it is important that it should be protected at the southern limit of its breeding range.

2. Aims and Objectives

Management of the Rookery Islands aims to:

- avoid degradation of, or substantial risk to, the values of the Area by preventing unnecessary human disturbance to the Area;
- allow scientific research on the ecosystem and physical environment, particularly on the avifauna, provided it is for compelling reasons which cannot be served elsewhere;
- minimise the possibility of introduction of pathogens which may cause disease in bird populations within the Area;
- minimise the possibility of introduction of alien plants, animals and microbes to the Area;
- minimise human disturbance to southern giant petrels on Giganteus Island to assist stabilisation and recovery of the population;
- conserve Giganteus Island as a reference area for future comparative studies with other breeding populations of southern giant petrels;
- preserve the Giganteus Island, henceforth, as a highly restricted area by limiting human visitation to the island during the southern giant petrel breeding season;
- gather data on the population status of the bird species on a regular basis; and on a restricted basis for southern giant petrels;
- allow visits for management purposes in support of the aims of the management plan.

3. Management Activities

The following management activities shall be undertaken to protect the values of the Area:

- information on the location of the Area (stating special restrictions that apply) shall be displayed prominently, and a copy of this Management Plan shall be

kept available, at adjacent operational research/field stations and will be provided to ships visiting the vicinity;

- markers, signs or structures erected within the Area for scientific or management purposes shall be secured and maintained in good condition and removed when no longer required;
- abandoned equipment or materials shall be removed to the maximum extent possible provided doing so does not adversely impact on the values of the Area;
- the Area shall be visited as necessary, and no less than once every five years to assess whether it continues to serve the purposes for which it was designated and to ensure that management activities are adequate:
- one research visit shall be allowed to Giganteus Island in each 5 year period, to enable census and monitoring of breeding populations. These visits are to be conducted by two people, one of whom should be a bird biologist associated with an approved national program(s) or who has had previous field experience with southern giant petrels;
- clothing, particularly footwear, and field equipment shall be appropriately cleaned before entering the Area; and
- the Management Plan shall be reviewed at least every five years.

4. Period of Designation

Designation is for an indefinite period.

5. Maps

Map A: East Antartica, Mac. Robertson Land, showing the location of the Rookery Islands Antarctic Specially Protected Area No 102, and protected areas within the region. The inset map indicates the location in relation to the Antarctic continent.

Map specifications

Projection: UTM Zone 49
Horizontal Datum: WGS84

Map B: East Antartica, Mac. Robertson Land, Rookery Islands Antarctic Specially Protected Area No 102. Distribution of nesting seabirds on the Rookery Islands

Map Specifications

Projection: UTM Zone 49
Horizontal Datum: WGS84

Map C: East Antartica, Mac. Robertson Land, Rookery Islands Antarctic Specially Protected Area No 102. Distribution of nesting seabirds on Giganteus Island.

Map Specifications

Projection: UTM Zone 49
Horizontal Datum: WGS84

6. Description of the Area

6(i) *Geographical co-ordinates, boundary markers and natural features*

The Rookery Islands are a small group of approximately 75 small islands and rocks in the south-west part of Holme Bay, Mac. Robertson Land, about 10 km to the west of the Australian station Mawson. The Area comprises the rocks and islands lying within a rectangle enclosed by following coordinates:

1	62°28'01"E	67°33'45"S
2	62°34'37"E	67°33'47"S
3	62°28'02"E	67°38'10"S
4	62°34'39"E	67°38'11"S

The general location of the Area is latitude 67°37'00.1"S, longitude 62°33'00.0"E, this is the midpoint of the area and is approximately 10 kilometres from Mawson station. There are no boundary markers delimiting the site.

Rookery Islands range in size from small rocks which barely remain above water at high tide to the larger members of the group which include Giganteus Island (approximately 400 m long, 400 m wide and 30 m high) and Rookery Island, the highest of the group, with an altitude of 62 m, and of similar area, but slightly more elongate. Raised beaches are evident on Giganteus Island.

Geology and soils

The Rookery Islands are outcrops of the Mawson charnockite, a rock type which occurs over an area of at least 2000 square kilometres along the coast of Mac. Robertson Land. The charnockites of the Rookery Islands are the fine grained variant and are comparatively poor in the mineral hypersthene but rich in garnet and biotite. The charnockites enclose abundant bands and lenses of hornfels, garnetiferous quartz and felspar-rich gneisses. There are also a number of pegmatic dykes which cut across the charnockite rocks.

Climate

Limited data exist for the meteorology of the Area. Conditions are probably similar to those of the Mawson station area where the mean monthly temperature ranges from +0.1°C in January to -18.8°C in August, with extreme temperatures ranging from +10.6°C to -36.0°C. The mean annual wind speed is 10.9 m per second with frequent prolonged periods of strong south-easterly katabatic winds from the ice cap at mean speeds over 25 m per second and gusts often exceeding 50 m per second. Mean wind speed decreases seaward with distance from the icecap, but is unlikely to be much lower at the Rookery Islands which lie quite close to the coast. Other general characteristics of the coastal Antarctic climate to which these islands are likely to be subjected are high cloudiness throughout the year, very low absolute humidity, low precipitation and frequent periods of intensified winds, drifting snow and low visibility associated with the passage of major low pressure systems.

Vegetation

No mosses or lichens have been located on any of the Rookery Islands. There are some terrestrial algae but no taxonomic identifications made. Most of the smaller islands and rocks are covered with sea spray in winter and are sometimes scoured by

rafted sea ice in winter and spring. It is considered unlikely that species of moss or lichen could become established.

Inland waters

There are no freshwater bodies on the Rookery Islands.

Birds

Six species of birds breed on the Rookery Islands: Adelie penguin (*Pygoscelis adeliae*), Cape petrel *(Dation capensis*), snow petrel (*Pagodroma nivea*), southern giant petrel (*Macronectes giganteus*), Wilson's storm petrel (*Oceanites oceanicus*) and the south polar skua (*Catharacta maccormicki*).

The giant petrels nest on Giganteus Island (Map C) but the colony is marginal and in danger of extinction. A total of 16 incubating birds were recorded in 1958 and 13 in 1967. However, only two nests were present in 1972, 4 in 1973, 2 in 1977, 1 in 1981, and 2 in 1982. There were 3 pairs in 2001. The nests of shallow mounds of stones are built on broad gravel patches on the raised beaches. The area has many old nests and several appear to be rebuilt each year but there is no evidence that they contained eggs.

Cape petrels bred on Rookery Island, a small island known as Pintado Island and located 300 m north-west of Giganteus Island, and on another small island just to the south of Pintado Island. The number of breeding pairs on each island is very small with 7 nests on Rookery Island, 12 nests on Pintado Island in 1958. No counts of nests with eggs have been made since 1958, although the numbers of adults present recorded subsequently are 69 in 1977, 48 in 1981, and 28 in 1982.

Snow petrels nest on Giganteus Island and are believed to breed on Rookery Island. The Wilson's storm petrel is frequently seen flying around the islands and is thought to breed on a number of the larger islands in the group, although no nests have been recorded.

Adelie penguins breed on 13 of the islands. The largest populations occur on Giganteus Island, where 4850 pairs were counted in December 1971, and on Rookery Island. A total of 33,000 adults were present on 10 of the islands on 17 December 1972. The number of nests was not determined.

The Cape petrel is also a rare breeding species in these islands although it is not rare in the region. Larger breeding colonies occur along the rock outcrops near Forbes Glacier 8 km to the west, and on Scullen and Murray Monoliths 100 km to the east.

6(ii) *Restricted Zones within the Area*

Giganteus Island is a restricted zone to afford high level of protection to southern giant petrels. Entry is restricted and may only be permitted under conditions contained elsewhere in this management plan.

6(iii) *Location of Structures within the Area*

There are no structures within or adjacent to the Area and none are to be erected.

6(iv) *Location of other Protected Areas in close proximity*

Antarctic Specially Protected Area No. 101 Taylor Rookery, Mac. Robertson Land, East Antarctica, (67°26'S; 60°50'E) is located approximately 80 kilometres to the west.

7. Permit conditions

Entry into the Area is prohibited except in accordance with a Permit issued by an appropriate national authority. Entry to Giganteus Island in not permitted at any time unless in accordance with conditions outlined below. National Antarctic Programs operating in the region shall consult with each other to ensure that the frequency of visits does not exceed that permitted in the Management Plan. Conditions for issuing a Permit to enter the Area are that:

- it is issued only for compelling scientific reasons that cannot be served elsewhere, in particular for scientific study of the avifauna and ecosystem of the Area, or for essential management purposes consistent with plan objectives such as inspection, maintenance or review;
- the actions permitted will not jeopardise the values of the Area;
- any management activities are in support of the objectives of the management plan;
- the actions permitted are in accordance with the management plan;
- the Permit, or an authorised copy, shall be carried within the Area;
- a visit report shall be supplied to the authority named in the Permit;
- permits shall be issued for a stated period;
- the appropriate authority should be notified of any activities/measures undertaken that were not included in the authorised Permit.

Additional conditions in relation to Giganteus Island Restricted Zone:

- permits to enter may be issued for the non-breeding period for southern giant petrels, specifically from 1 May to 30 September.
- during any 5 year period, only one Permit may be issued for the southern giant petrel breeding period (1 October to 30 April), for the purpose of conducting a southern giant petrel census. The Permit issuing authority is to refer to the provision under the fifth dot point of section 3 of this management plan when issuing a Permit.
- censuses are to be conducted from outside the southern giant petrel colony wherever practicable. In most cases there are vantage points from where the nesting birds may be counted.
- the maximum time to be spent on Giganteus Island is 6 hours in total; however this may comprise several visits to the islands.
- only the two persons named in the Permit may be ashore within the Area at any time. The vehicle operator and others should remain at the shoreline.

7(i) ***Access to, and movement within or over the Area***

Within the Area travel may be by oversnow vehicles (depending on sea ice conditions). Visitors must ensure that vehicles are taken no closer than 250 metres from concentrations of birds. Vehicles are prohibited on the islands, and must always left at the shoreline. Movement on the islands is by foot only.

Access to Giganteus Island is prohibited except for the purpose of monitoring the southern giant petrels or for activities which may be conducted without threat to their population status. As the breeding colony is close to the point of local extinction and the birds are easily disturbed, the number of persons granted entry for this purpose must be strictly limited and include an experienced ornithologist.

Persons shall not approach closer than is necessary to obtain census data or biological data from any nesting southern giant petrels, and in no case closer than 20m.

As aircraft may provide the only viable access to the islands, and as the islands are small in size, aircraft may land within 500 metres of breeding colonies except those of southern giant petrels on Giganteus Island, where landing during the southern giant petrel season is prohibited. Overflight of the islands is prohibited except where essential for scientific purposes. Such overflight is to be at an altitude of no less than 610 metres. Permission to land an aircraft may be granted for essential scientific purposes only if it can be demonstrated that disturbance will be minimal.

Aircraft may be used subject to the following conditions which apply to Giganteus Island:

- aircraft operations within 2500ft (750m) horizontally and vertically of the islands for single engine aircraft and 5000ft (1500m) horizontally and vertically for double-engine aircraft, are prohibited during the breeding season for Southern Giant Petrels (1 October to 30 April).

- aircraft (including helicopter) overflights for aerial photography within the distances specified above are allowed at intervals of 5 years, consistent with guidelines to reduce disturbance.

No refuelling is permitted within the Area.

7(ii) ***Activities which are, or may be conducted within the Area, including restrictions on time and place***

The following activities may be conducted within the Area as authorised in a Permit;

- scientific research consistent with the Management Plan for the Area that will not jeopardise the values for which the Area has been designated or the ecosystems of the Area;

- compelling management activities, including monitoring; and

- sampling, which should be the minimum required for approved research programs.

7(iii) ***Installation, modification, or removal of structures***

Structures shall not be erected within the Area except as specified in a Permit and permanent structures or installations are prohibited. Small temporary refuges, hides, blinds or screens may be constructed for the purpose of scientific study of the avifauna. Installation (including site selection), removal, modification or maintenance of structures shall be undertaken in a manner that minimises disturbance to breeding birds. All scientific equipment or markers installed within the Area must be clearly identified by country, name of the principal investigator and year of installation. All such items should be made of materials that pose minimal risk of harm to bird populations or of contamination of the Area. Permits will require the removal of specific structures, equipment or markers before the permit expiry date.

7(iv) ***Location of field camps***

Camping is prohibited in the Rookery Islands ASPA except in an emergency.

7(v) ***Restrictions on materials and organisms that may be brought into the Area***

- No poultry products, including dried food containing egg powder, are to be taken into the Area.
- No depots of food or other supplies are to be left within the Area beyond the season for which they are required.
- No living animals, plant material or microorganisms shall be deliberately introduced into the Area and precautions shall be taken against accidental introductions.
- No herbicides or pesticides shall be brought into the Area. Any other chemicals, including radio-nuclides or stable isotopes, which may be introduced for scientific or management purposes specified in a Permit, shall be removed from the Area at or before the conclusion of the activity for which the Permit was granted.
- Fuel is not to be stored in the Area unless required for essential purposes connected with the activity for which the Permit has been granted. Permanent fuel depots are not permitted.
- All material introduced shall be for a stated period only, shall be removed at or before the conclusion of that stated period, and shall be stored and handled so that risk of introduction to the environment is minimized.

7(vi) ***Taking of or harmful interference with native flora and fauna***

- Taking of or harmful interference with native flora and fauna is prohibited, except in accordance with a Permit. Where taking or harmful interference with animals is involved this should, as a minimum standard, be in accordance with the *SCAR Code of Conduct for the Use of Animals for Scientific Purposes in Antarctica.*
- Disturbance of southern giant petrels should be avoided at all times.

7(vii) *Collection or removal of anything not brought into the Area by the Permit holder*

- Material may only be collected or removed from the Area as authorised in a Permit and should be limited to the minimum necessary to meet scientific or management needs.
- Material of human origin likely to compromise the values of the Area, which was not brought into the Area by the Permit holder or otherwise authorised, may be removed unless the impact of the removal is likely to be greater than leaving the material *in situ*. If such material is found the appropriate Authority must be notified.

7(viii) ***Disposal of waste***

No wastes, including human wastes, are to be deposited or left in the Area.

7(ix) ***Measures that may be necessary to ensure that the aims and objectives of the management plan continue to be met***

- Permits may be granted to enter the Area to carry out biological monitoring and Area inspection activities, which may involve the collection of samples for analysis or review; the erection or maintenance of scientific equipment and structures, and signposts; or for other protective measures.
- Any specific sites of long-term monitoring shall be appropriately marked and a GPS position obtained for lodgement with the Antarctic Data Directory System through the appropriate national authority.
- Ornithological research shall be limited to activities that are non-invasive and non-disruptive to the breeding seabirds present within the Area. Surveys, including aerial photographs for the purposes of population census, shall have a high priority.
- To help maintain the ecological and scientific values of the Area, visitors shall take special precautions against introductions of non-indigenous organisms. Of particular concern are pathogenic, microbial or vegetation introductions sourced from soils, flora and fauna at other Antarctic sites, including research stations, or from regions outside Antarctica. To minimise the risk of introductions, before entering the Area visitors shall thoroughly clean footwear and any equipment, particularly sampling equipment and markers to be used in the Area.
- A census of southern giant petrels on Giganteus Island should be conducted in each 5 year period. Censuses of other species may be undertaken during this visit provided no additional disturbance is caused to the southern giant petrels.
- The maximum length of time to be spent at Giganteus Island to conduct a bird census is 6 hours in total.

- Novel GPS data shall be obtained for specific sites of long-term monitoring for lodgement with the Antarctic Data Directory System through the appropriate national authority.
- On Giganteus Island, to reduce disturbance to wildlife, noise levels including verbal communication is to be kept to a minimum. The use of motor-driven tools and any other activity likely to generate noise and thereby cause disturbance to nesting birds is prohibited within the Area during the breeding period for southern giant petrels (1 October to 30 April).

7(x) *Requirement for reports*

Parties should ensure that the principal Permit Holder for each permit issued submits to the appropriate national authority a report on activities undertaken. Such reports should include, as appropriate, the information identified in the Visit Report form suggested by SCAR. Parties should maintain a record of such activities and, in the Annual Exchange of Information, and should provide summary descriptions of activities conducted by persons subject to their jurisdiction, which should be in sufficient detail to allow evaluation of the effectiveness of the ManagementPlan.

Parties should, wherever possible, deposit originals or copies of such original reports in a publicly accessible archive to maintain a record of usage, to be considered in any review of the Management Plan and in organising the use of the Area. A copy of the report should be forwarded to the Party responsible for development of the Management Plan (Australia) to assist in management of the Area, and the monitoring of bird populations. Visit reports should provide detailed information on census data, locations of any new colonies or nests not previously recorded, a brief summary of research findings and copies of photographs taken of the Area

7(xi) *Emergency provision*

Exceptions to restrictions outlined in the management plan are in emergency as specified in Article 11 of Annex V of the Protocol on Environmental Protection to the Antarctic Treaty (the Madrid Protocol).

8. Supporting documentation

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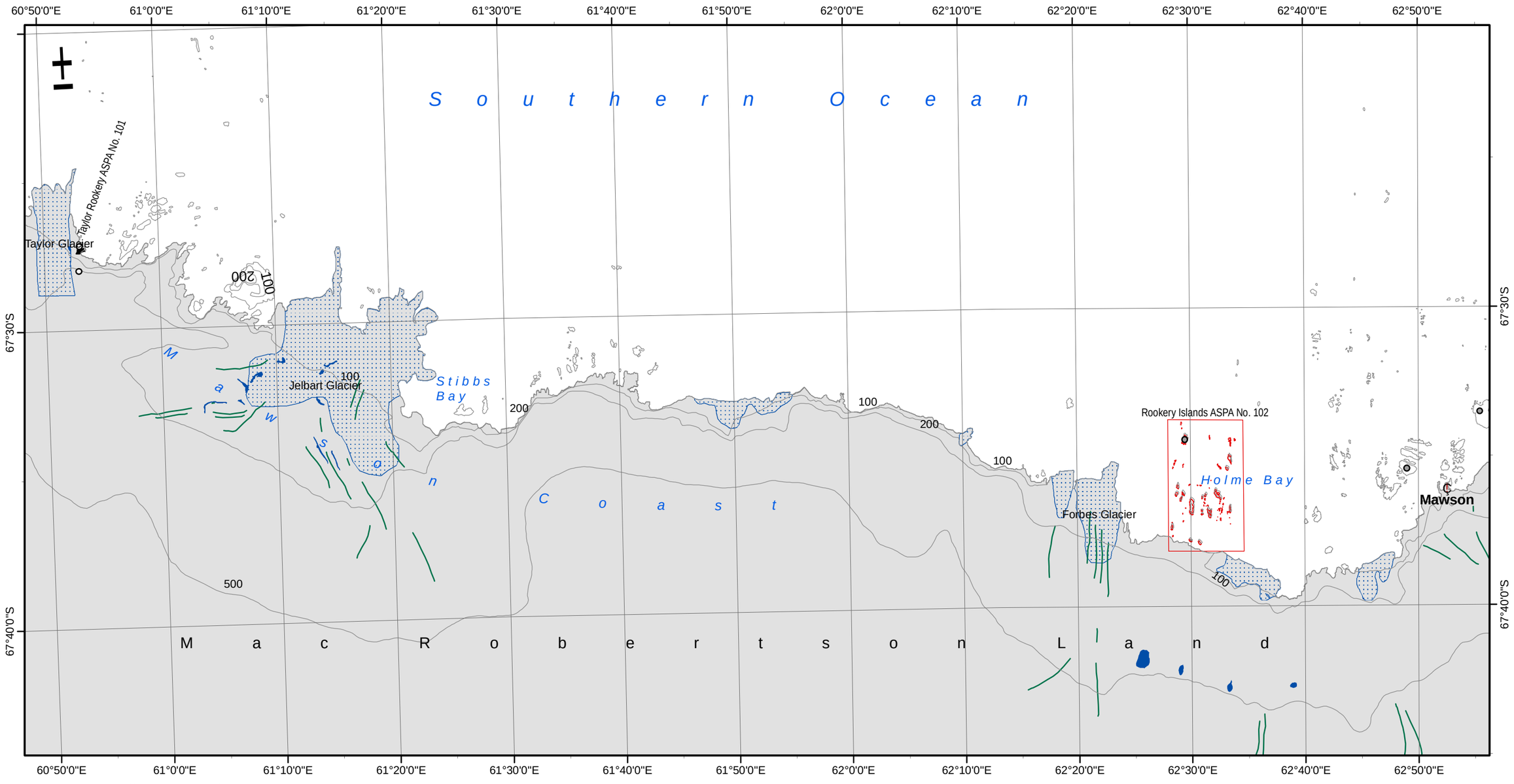
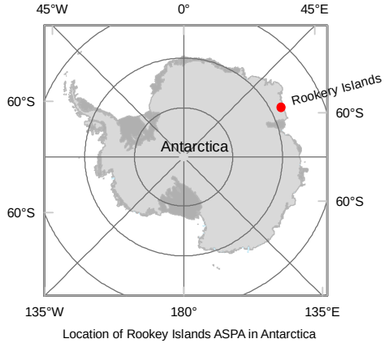
Australian Antarctic Division

Map A: Antarctic Specially Protected Area No 102, Rookery Islands, Holme Bay, Mawson Coast, Mac.Robertson Land, East Antarctica.





Location of Rookey Islands ASPA in Antarctica

Scale 1:250,000

5 0 5 10 15 Kilometres

Horizontal Datum: WGS 84
Projection: UTM Zone 41

Produced by:
Environmental Management and Protection Section, Australian Antarctic Division,
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Legend

Stations
- Mawson station

Protected Areas
- Rookery Islands ASPA No 102
- Taylor Rookery ASPA No 101

Birds
- Adelie penguin
- Emperor penguin
- Southern giant petrel

Features
- Contour line 100 metre interval
- Lakes and Ponds
- Glacier Flow Line
- Glacier
- Continent

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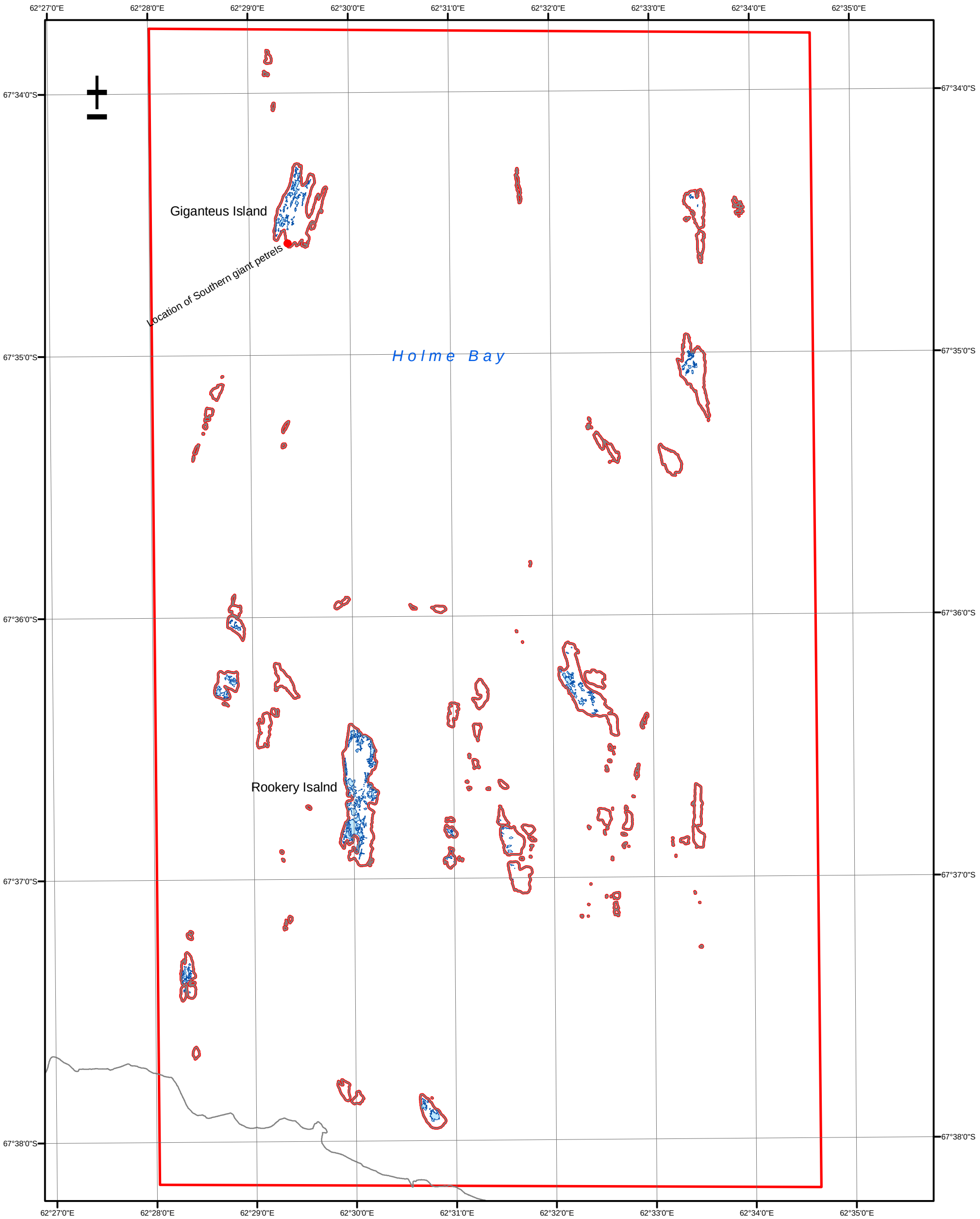
Map B: Antarctic Specially Protected Area: Taylor Rookery, Mawson Coast, Mac.Robertson Land, East Antarctica

Bird Distribution



Horizontal Datum: WGS 84
Projection: UTM Zone 41
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May 2005.

Scal 1:26,000

0 0.2 0.4 0.6 0.8 1

Kilometres

Legend

Protected Areas

Rookery Islands ASPA No 102

Birds

Adelie Penguin

Southern giant petrels

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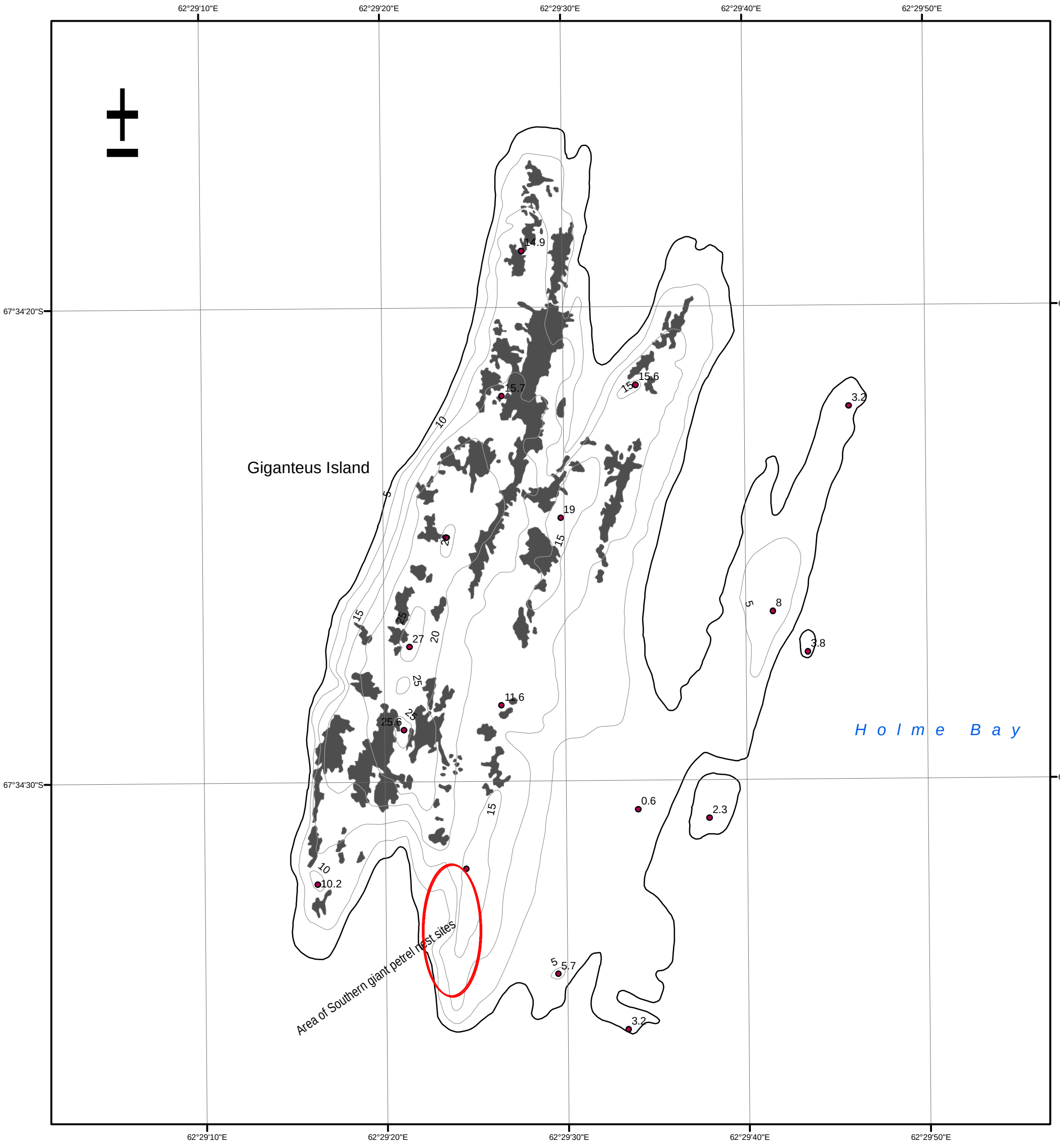
Australian Antarctic Division

Map C: Antarctic Specially Protected Area No. 102: Taylor Rookery, Mawson Coast, Mac.Robertson Land, East Antarctica

Giganteus Island: Topography and Southern Giant Petrel and Penguin Distribution.



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May 2005.

Scale 1:2,500

25 0 25 50 75 100
Metres

Legend

- Giant southern petrels
- Adelie penguin
- 5 metre contours
- Spot Height