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Decisions, Resolutions and Measures

p 1



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No 153, April 2004

Twenty-sixth Antarctic Treaty Consultative Meeting
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Decisions, Resolutions and Measures

MEASURE 2 (2003)
ANTARCTIC PROTECTED AREA SYSTEM:
MANAGEMENT PLANS FOR ANTARCTIC SPECIALLY PROTECTED AREAS

The Representatives

Recalling Resolution 1 (1998) of XXIV ATCM allocating responsibility among Consultative Parties for the revision of Management Plans for protected areas;

Noting that the draft Management Plans annexed to this Measure have been endorsed by the Committee for Environmental Protection and the Scientific Committee on Antarctic Research;

Recognising that these Areas support outstanding natural features and biota of scientific interest;

Recommend that their Governments, in accordance with paragraph 1 of Article 6 of Annex V to the Protocol on Environmental Protection to the Antarctic Treaty, approve the Management Plans, annexed to this Measure, for the following sites:

Antarctic Specially Protected Area No 105, Beaufort Island, Ross Sea;

Antarctic Specially Protected Area No 114, Northern Coronation Island, South Orkney Islands;

Antarctic Specially Protected Area No 118, Cryptogam Ridge, Mt Melbourne, North Victoria Land and summit of Mt Melbourne, North Victoria Land;

Antarctic Specially Protected Area No 135, North-East Bailey Peninsula, Budd Coast, Wilkes Land;

Antarctic Specially Protected Area No 143, Marine Plain, Mule Peninsula, Vestfold Hills, Princess Elizabeth Land; Antarctic Specially Protected Area No 152, Western Bransfield Strait, Antarctic Peninsula;

Antarctic Specially Protected Area No 153, Eastern Dallmann Bay, Antarctic Peninsula;

Antarctic Specially Protected Area No 154, Botany Bay, Cape Geology, Victoria Land;

Antarctic Specially Protected Area No 156, Lewis Bay, Mount Erebus, Ross Island, Ross Sea;

Antarctic Specially Protected Area No 160, Frazier Islands, Wilkes Land;

Antarctic Specially Protected Area No 161, Terra Nova Bay, Ross Sea.

Note: The Management Plans for Antarctic Specially Protected Areas Nos 106, 114, 118, 135, 143 and 152 were reproduced in *SCAR Bulletin* No 151 (October 2003). Summaries of the Management Plans for Antarctic Specially Protected Areas, nos 153, 154, 156, 160 and 161 are reproduced here in abbreviated form due to limitations of space. The full Management Plans may be found on the CEP website at:

<http://www.cep.aq/default.asp?casid=10278>

Management Plan for Antarctic Specially Protected Area No. 153
EASTERN DALLMANN BAY

1. Description of values to be protected

Eastern Dallmann Bay was designated on the grounds that “the shallow shelf west of East Dallmann Bay is one of only two known sites near Palmer Station that are suitable for bottom trawling for fish and other benthic organisms. The Site and, in particular, its benthic fauna, are of exceptional scientific interest and require long-term protection from

harmful interference”.

The boundaries of the Area have been revised, based on new bathymetric data, to focus on the shallow shelf down to 200 m depth to the west and north of Brabant Island, while excluding deeper water off to the west (Map 1).

The Area continues to be important for obtaining scientific samples of fish and other benthic organisms

and is an important habitat for juvenile fish species, including the rockcod *Notothenia coriiceps* and the icefish *Chaenocephalus aceratus*. The Area is within the Palmer Long Term Ecological Research (LTER) Program; fish collected from the Area are used to study biochemical and physiological adaptations to low temperatures.

2. Aims and objectives

- avoid degradation of, or substantial risk to, the values of the Area;
- allow scientific research on the marine environment;
- allow other scientific research;
- allow visits for management purposes.

3. Management activities

- Copies of this Management Plan shall be made available at Palmer Station (USA) and to vessels traveling in the vicinity.
- Buoys or other markers shall be maintained in good condition.
- Visits to ensure management and maintenance measures are adequate.

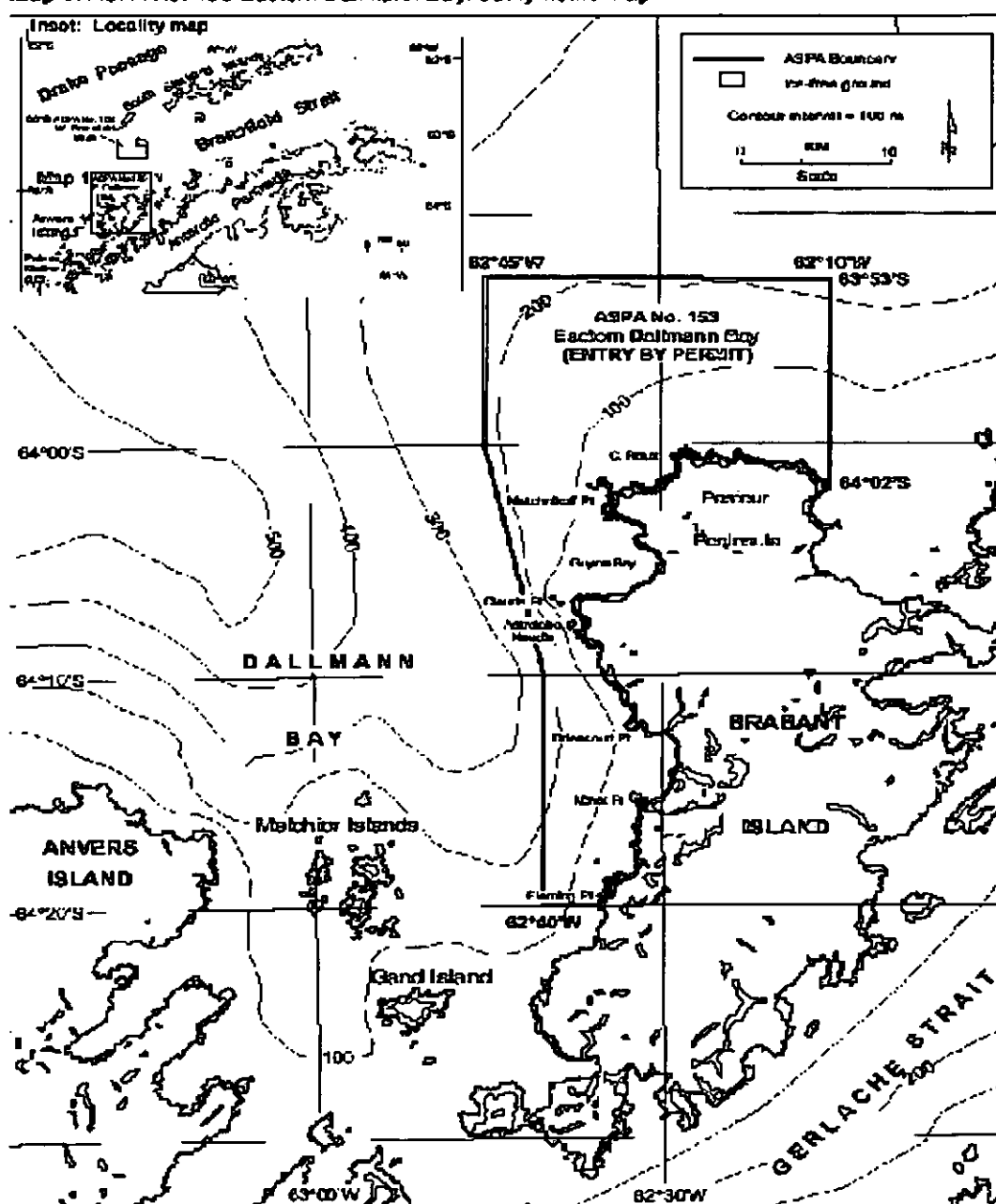
4. Period of designation

Designated for an indefinite period.

5. Maps and photographs

Map 1: ASPA No. 153 Eastern Dallmann Bay

Map 1. ASPA No. 153 Eastern Dallmann Bay: bathymetric map



6. Description of the Area

6(i) Geographical coordinates, boundary markers and natural features

The Area is defined in the south by latitude 64°20'S, extending from Fleming Point westward for 2 km to 62°40'W. From here, the western boundary extends due north on longitude 62°40'W for 18.5 km to 64°10'S, then NNW almost 19 km to 62°45'W, 64°00'S and then approximately 13 km due north on longitude 62°45'W to latitude 63°53'S, the northern boundary of the Area. The northern boundary lies approximately 23.4 km along latitude 63°53'S from 62°45'W to 62°16'W. The eastern boundary extends due south approximately 16 km along 62°16'W to the eastern extremity of Pasteur Peninsula, Brabant Island, at 62°16'W, 64°02'S. From there, the eastern boundary is defined as the mean high water mark of the northern and western coastline of Brabant Island. The total area is approximately 580 km².

Fish commonly collected include *Notothenia gibberifrons*, *Chaenocephalus aceratus*, *Champsocephalus gunnari*, *Pseudochaenichthys georgianus* and *Chionodraco rastrispinosus*. Specimens of *Trematomus newnesi* and *Notothenia coriiceps* have only rarely been collected. Larval species include *Artedidraco skottsbergi*, *Notothenia gibberifrons*, *N. nudifrons* and *Pleuragramma antarcticum*. Invertebrates collected have included varieties of sponge, anemone, annelid, mollusc, crustacean, asteroid, ophiuroid, echinoid, holothurioid and tunicate.

Aggregations of Antarctic krill (*Euphausia superba*) have been recorded in the upper 120 m of the water column.

Two colonies of chinstrap penguins (*Pygoscelis antarctica*) have been recorded on the northwestern coast of Brabant Island immediately adjacent to the Area. Other birds observed breeding on the western coast of Brabant Island and frequenting the Area are: Antarctic fulmars (*Fulmaris glacialisoides*), Antarctic terns (*Sterna vittata*), black-bellied storm petrels (*Fregetta tropica*), blue-eyed cormorants (*Phalacrocorax atriceps*), brown skuas (*Catharacta loennbergi*), cape pigeons (*Daption capense*), greater sheathbills (*Chionis alba*), kelp gulls (*Larus dominicanus*), snow petrels (*Pagodroma nivea*), south polar skuas (*Catharacta maccormicki*) and Wilson's storm petrels (*Oceanites oceanicus*). Antarctic petrel (*Thalassoica antarctica*), black-browed albatross (*Diomedea melanophrys*), southern giant petrel (*Macronectes giganteus*) commonly forage in the Area.

Marine mammals observed in Dallmann Bay have included humpback whales (*Megaptera novaeangliae*), killer whales (*Orcinus orca*), crabeater seals (*Lobodon carcinophagus*), southern elephant seals (*Mirounga leonina*), numerous Antarctic fur seals (*Arctocephalus gazella*), leopard seals (*Hydrurga leptonyx*) and Weddell seals (*Leptonychotes weddelli*).

6(ii) Restricted and managed zones within the Area

None.

6(iii) Structures within and near the Area

There are no structures known to be within the Area. Structures and other material from the UK Joint Services Expedition to Brabant Island (January 1984 to March 1985) may remain on the western shores of Brabant Island, particularly at Metchnikoff Point. The nearest stations are President González Videla (Chile), Paradise Harbour; Port Lockroy (UK), Goudier Island, Yelcho (Chile), approximately 80 km south-west on Doumar Island; and Palmer (USA), approximately 90 km WSW on Anvers Island.

6(iv) Location of other protected areas within close proximity of the Area

The nearest protected areas to Eastern Dallmann Bay are Western Bransfield Strait (ASPANo. 152), which lies about 55 km to the NNW, and Biscoe Point (ASPANo. 139) and Litchfield Island (ASPANo. 113), both of which lie approximately 80 km to the south-west on the southern coast of Anvers Island (Map 1).

7. Permit conditions

Entry into the Area is prohibited except in accordance with a Permit issued by an appropriate national authority.

7(i) Access to and movement within the Area

Access into the Area shall be by sea, over sea ice or by air. Anchoring should be avoided within the Area.

7(ii) Activities that are or may be conducted in the Area, including restrictions on time or place

- Scientific research;
- Essential operational activities of vessels, such as transit through, or stationing within, the Area in order to facilitate science or other activities or for access to sites outside of the Area;
- Essential management activities.

7(iii) Installation, modification or removal of structures

Structures or scientific equipment shall not be installed within the Area except as specified in a Permit. All markers, structures or scientific equipment installed in the Area shall be clearly identified by country, name of the principal investigator and year of installation.

7(iv) Location of field camps

None.

7(v) Restrictions on materials and organisms which can be brought into the Area

No living animals, plant material, pathogens or microorganisms shall be deliberately introduced into the Area. No herbicides or pesticides shall be introduced into

the Area. Any other chemicals, including radio-nuclides or stable isotopes, which may be introduced for scientific or management purposes specified in the Permit, shall be used in the minimum quantities necessary to achieve the purpose of the activity for which the Permit was granted.

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

Taking or harmful interference with native flora or fauna is prohibited, except by Permit.

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

Collection or removal of anything shall only be in accordance with a Permit. Permits shall not be granted if there is a reasonable concern that the sampling proposed would take, remove or damage such quantities of substrate, native flora or fauna that their distribution or abundance

within the Area would be significantly affected.

7(viii) Disposal of waste

All wastes shall be removed from the Area.

7(ix) Measures that are necessary to ensure that the aims and objectives of the Management Plan can continue to be met

1. Permits may be granted to enter the Area to carry out biological monitoring and site inspection activities.
2. Any specific sites of long-term monitoring should be appropriately marked on site and on maps of the Area.

7(x) Requirements for reports

Parties should ensure that the principal holder for each Permit issued submits to the appropriate authority a report describing the activities undertaken.

**Management Plan for Antarctic Specially Protected Area No. 154
BOTANY BAY, CAPE GEOLOGY, VICTORIA LAND**

1. Description of values to be protected

The Area at Botany Bay and Cape Geology (Granite Harbour, Victoria Land) has been proposed by New Zealand on the grounds that it is an extremely rich botanical refuge for such a high latitude location (162° 34' 00"E, 77° 00' 30"S), with a lichen and moss species diversity and abundance that is unique for southern Victoria Land. In addition to a high diversity and abundance of lichens and mosses there are abundant growths of algae, large populations of invertebrates (collembola, mites, nematodes, rotifers) and a colony (in excess of 40 pairs) of South polar skua (*Catharacta maccormicki*). The area is the type locality for the collembolan *Gomphiocephalus hodgsoni* Carpenter.

In addition the Area contains the remains of a rock shelter and associated artifacts known as 'Granite House', designated as Historic Site No. 67. Constructed by members of the 1910–13 British Antarctic Expedition, the shelter and associated artifacts are vulnerable to disturbance and form a Managed Zone.

2. Aims and objectives

- avoid degradation of, or substantial risk to, the values of the Area;
- allow scientific research on the ecosystem;
- allow other scientific research;
- minimise the introduction of alien plants, animals and microbes;
- allow visits to 'Granite House' under strict control;
- allow visits for management purposes.

3. Management activities

- Copies of this Management Plan shall be kept in all

of the research hut facilities located within 25 km of the Area and also at Scott Base (NZ).

- Signs shall be placed at the boundaries of the Area and Zones to help avoid inadvertent entry.
- Markers, signs or structures erected shall be maintained in good condition.
- Visits to ensure management and maintenance measures are adequate.
- National Antarctic Programmes operating in the region shall consult to ensure these steps are done.

4. Period of designation

Designated for an indefinite period.

5. Maps and photographs

Map A: Botany Bay and Cape Geology topographic map.

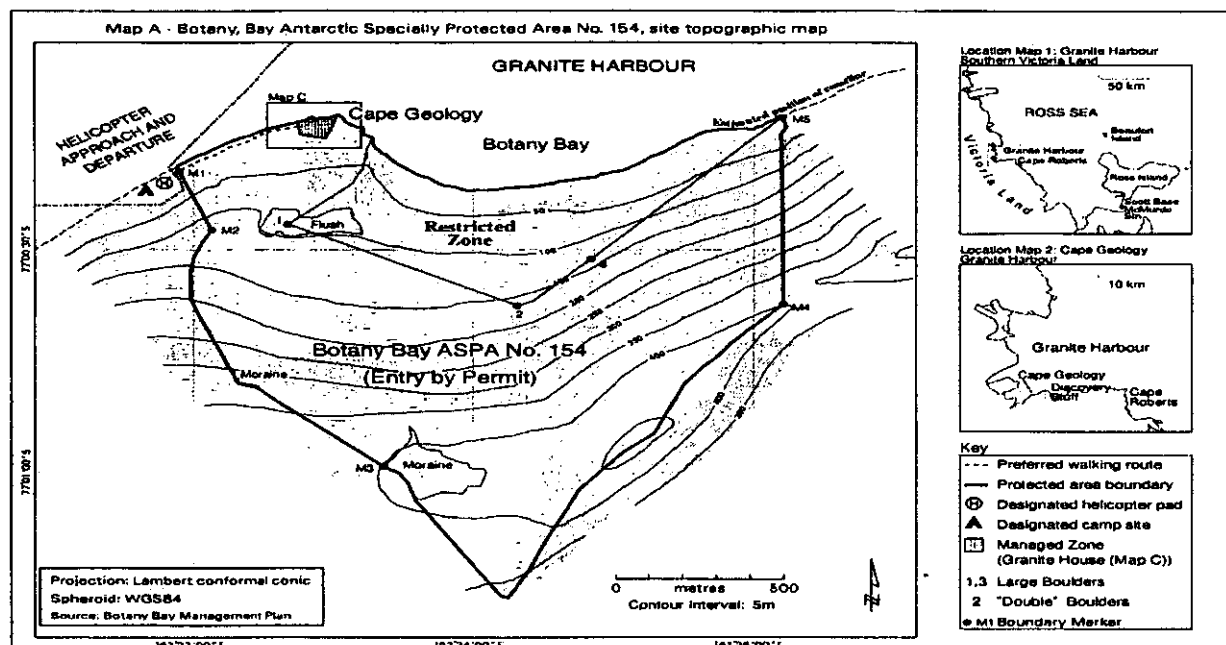
Map B: Botany Bay and Cape Geology, orthophotograph.

Map C: Managed Zone with 'Granite House' site orthophotograph.

6. Description of the Area

6(i) Geographical coordinates, boundary markers and natural features

Cape Geology is situated in the south-western corner of Granite Harbour, southern Victoria Land, at 162°32'52"E, 77°00'14"S, approximately 100 km north-west of Ross Island (Map A, Insets). The Area encompasses much of the catchment above Botany Bay and consists of raised boulder beach terraces, weathered rocky steppes and irregular rock platforms around Cape Geology, extending south to include a well-defined elevated cirque containing



a small ice field. The bedrock geology at Cape Geology has been described as a porphyritic grey biotite-granite, with phenocrysts of reddish orthoclase.

The northwest corner of the Area is marked by a brass plaque in a boulder (M1, 2 m; Maps A and B) 400 m SW of Cape Geology. The west boundary is defined by a line extending first 260 m SSE from M1 to a large boulder (marked by a cairn) with terrier bolt (M2) at an elevation of 118 m on the ridge above the campsite; thence the boundary extends 250 m up this ridge to a point at 162 m elevation marked by an iron tube with bamboo pole. The west boundary extends a further 300 m up this ridge to a large pointed rock at 255 m elevation near the edge of the permanent ice field. The boundary then extends 150 m south across the ice field to the west edge of a prominent line of exposed rock and moraine in the SW corner of the Area at 325 m elevation. The south boundary follows this line of rock east until the exposure is buried by the ice-field, thence SE across the ice field for 500 m to the edge of a second and more prominent exposure at an elevation of just over 400 m (M3). The boundary follows the upper edge of this exposure and then crosses the ice field SE to an elevation of approximately 325 m where the ice-free eastern boundary ridge and the ice field converge. The east boundary follows the ridge crest for 1550 m in a NE direction to a large pointed rock on the ridge (M4, 392 m) where the east boundary turns to descend due north to the coast at the eastern extremity of the boulder beach of Botany Bay (M5, 5 m). The mean high water mark of the coastline of Botany Bay and Cape Geology forms the northern boundary of the Area.

The Area is extremely rich botanically for such a high-latitude location. There is a high diversity and abundance of lichens (more than 30 species) and mosses (eight

species), and the structure and development of these communities are similar to those found 10° of latitude further north. Some lichen thalli (e.g. *Umbilicaria aprina*) measure up to 15 cm diameter. The boulder beach has rich populations of both epilithic and endolithic lichens. The Area contains the most southerly record of an hepatic (*Cephaloziella exiliflora*) and the mosses *Bryoerythrophyllum recurvirostre* and possibly *Ceratodon purpureus*. There are abundant growths of algae (at least 85 taxa).

There are large populations of invertebrates (collembola, mites, nematodes, rotifers) and the area is the type locality for the collembolan *Gomphiocephalus hodgsoni* Carpenter. There is a colony of between 40 – 50 breeding pairs (and numerous non-breeders) of the south polar skua (*Catharacta maccormicki*).

6(ii) Restricted and managed zones within the Area

Restricted Zone

An area directly above Botany Bay is designated a Restricted Zone in order to preserve part of the Area as a reference site for future comparative studies. The west boundary of the Restricted Zone is defined by a line from a marker (iron tube in rock, 20 metres from mean high water mark, elevation 8 m) at the west side of Botany Bay (Map A), extending SW for 170 m up to a second iron tube marker on the crest of the adjacent ridge (87 m). This boundary extends 100 m to a third iron tube and a cairn (98 m), thence 50 m to a large flat rock in the centre of the main flush (marked '1' on Maps A and B). The south boundary of the Restricted Zone extends from the flat rock in a straight line 820 m to the first of two prominent boulders near the middle of the ice-free slopes above Botany Bay. The east boundary extends 300 m from there to a large rock at 135 m

elevation, thence NE downslope to the NE boundary point (M5, 5 m). The north boundary of the Restricted Zone is the mean high water mark of Botany Bay.

Access to the Restricted Zone is allowed only for compelling scientific or management which cannot be served elsewhere.

Managed Zone

The Managed Zone is to protect historic artifacts and plant communities, and to allow access to the rock shelter known as 'Granite House'. The Managed Zone is an enclave of approximately 100 m by 80 m that surrounds a rock ridge leading from the coast at Cape Geology to the old shelter. Access to the Managed Zone may be allowed by Permit.

6(iii) Structures within and near the Area

The only structures known to exist in the Area are 'Granite House', the boundary survey markers and signposts in appropriate locations.

6(iv) Location of other protected areas within close proximity of the Area

The nearest protected area to Cape Geology is ASPA 123 at Barwick Valley, 50 km distant in a SW direction in the Victoria Land Dry Valleys.

7. Permit conditions

Entry into the Area is prohibited except in accordance with a Permit issued by appropriate national authorities.

7(i) Access to and movement within the Area

Vehicles are prohibited within the Area and access should be by foot. Helicopters are normally prohibited from landing within the Area: there is a designated site 60 m outside of the Area.

Access should preferably be from the recommended camping area along a preferred walking route 10–20 m from the coast. Visitors should avoid walking on visible vegetation, and disturbing bird populations.

Access to the Managed Zone should be from the coast, following the ridge leading up to 'Granite House'.

7(ii) Activities that are or may be conducted in the Area, including restrictions on time or place

- scientific research;
- essential management activities;
- limited visits to the Managed Zone for reasons other than science or management;
- activities to preserve or protect the historic resources.

7(iii) Installation, modification or removal of structures

No structures are to be erected within the Area except as specified in a Permit. All scientific equipment installed

in the Area must be authorised by Permit and clearly identified by country, name of the principal investigator and year of installation.

7(iv) Location of field camps

Camping within the Area is prohibited and should be at a site outside of the Area, 100 m from the NW corner (Map A), adjacent to the designated helicopter landing site.

7(v) Restrictions on materials and organisms which can be brought into the Area

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 the 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.

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

This is prohibited, except in accordance with a Permit.

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

Material may be collected or removed from the Area only in accordance with a Permit and should be limited to the minimum necessary to meet scientific or management needs.

Visitors are prohibited from interfering with 'Granite House' in any way, or from handling any artifacts found within the Managed Zone.

7(viii) Disposal of waste

All wastes shall be removed from the Area.

7(ix) Measures that are necessary to ensure that the aims and objectives of the Management Plan can continue to be met

1. Permits may be granted to carry out biological monitoring and site inspection activities or for management activities associated with the Historic Site.
2. Any specific sites of long-term monitoring shall be appropriately marked.
3. To help maintain the ecological and scientific values of the isolation and relatively low level of human impact at the Area visitors shall take special precautions against introductions.

7(x) Requirements for reports

Parties should ensure that the principal holder for each permit issued submit to the appropriate authority a report describing the activities undertaken.

Management Plan for Antarctic Specially Protected Area No. 156 LEWIS BAY, MOUNT EREBUS, ROSS ISLAND

1. Description of values to be protected

An area on the lower slopes of Mount Erebus, above Lewis Bay on the north side of Ross Island, was originally declared a tomb after notification by New Zealand that 257 people of several nationalities lost their lives when the DC-10 aircraft in which they were travelling crashed at this site on 28 November 1979. In spite of the determined and courageous actions of the New Zealand and United States Antarctic expeditions the bodies of some of those who died could not be recovered. Expressing deep sympathy with the relatives of those who died and with the Government and people of New Zealand, the tomb was declared to ensure that the area be left in peace and kept inviolate.

A six-foot oregon timber cross erected as a memorial to those who lost their lives was replaced on 30 January 1987 with a cross of stainless steel, located on a rocky promontory overlooking and approximately 3 km from the site. This site is not part of the protected area, but is proposed as an Historic Monument in recognition of the commemorative and symbolic values of the cross.

2. Aims and objectives

- avoid degradation of, or substantial risk to, the values of the Area;
- ensure the crash site is kept inviolate;
- allow visits to the site of the memorial cross;
- allow visits for support of the management plan.

3. Management activities

- All pilots operating in the region shall be informed of the location, boundaries and restrictions applying to entry and over-flight in the Area;
- Visits shall be made for inspection and to assess whether the Area continues to serve the purposes for which it was designated;
- National Antarctic Programmes operating in the region shall consult to ensure these steps are done.

4. Period of designation

Designated for an indefinite period.

5. Maps and photographs

Map A: Lewis Bay protected area topographic map.

Figure 1: Photograph of the Lewis Bay area and crash site from the memorial cross.

6. Description of the Area

6(i) Geographical coordinates, boundary markers and natural features

The designated Area on Ross Island (Map A) encompasses the crash zone (centered on 167° 28' 30"E, 77° 25' 29"S, elevation 520 m (1720 feet)) and the surrounding glacial

ice 2 km above and to either side of this position, extends as a 4 km wide 'rectangle' down to the sea, and includes the airspace above this region to an altitude of 1000 m (3280 feet) with the exception of a 200 m wide air access 'corridor' along the coastline. The west boundary of the Area is the 167° 23' 33"E meridian; the east boundary is the 167° 33' 27"E meridian. The south boundary is the 77° 26' 33"S parallel, while the north boundary is defined by the coastline. The aircraft's primary impact occurred at an elevation of 446.7 m: debris was spread up-slope 570 m from that point over an area 120 m wide to an elevation of 580 m (1900 feet). Much of the aircraft wreckage is now buried in ice and is slowly moving down-slope with the glacier to the sea (Figure 1). The bodies of some of those who died could not be recovered and remain in the Area.

6(ii) Restricted zones within the Area

None.

6(iii) Structures within and near the Area

The stainless steel memorial cross (proposed as a Historic Monument) is located on a rock outcrop (167° 33' 43"E, 77° 26' 38"S; elevation 810 m (2660 feet)) approximately 3 km SE of the crash site, and is a symbol of the special significance of the Area. No other structures exist within or near the Area. Debris from the aircraft remains *in situ*.

6(iv) Location of other protected areas within close proximity of the Area

The nearest protected area to Lewis Bay is ASPA 130 at Tramway Ridge. New College Valley ASPA 116 (at Cape Bird) and Cape Royds ASPA 121 are to the west and Cape Crozier ASPA 125 is to the east on Ross Island.

7. Permit conditions

Entry into the Area is prohibited except in accordance with a Permit issued by appropriate national authorities.

7(i) Access to and movement within the Area

Land vehicles are prohibited within the Area and access shall be by foot or by helicopter. Overflight of the Area is prohibited below 1000 m (3280 feet) above sea level. An exception to the overflight restriction is provided by a 200 m wide access 'corridor' through the area immediately adjacent to the coastline when visibility or conditions make avoidance of the Area otherwise impractical. Use of helicopter smoke grenades within the Area is prohibited.

7(ii) Activities that are or may be conducted in the Area, including restrictions on time or place

All visits to the Area for any purpose shall be made recognising the principal values to be protected in the Area, and as far as possible the Area should be left in peace.

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

No structures are to be erected within the Area except as specified in a Permit.

7(iv) *Location of field camps*

Camping is prohibited within the Area.

7(v) *Restrictions on materials which can be brought into the Area*

It is prohibited to introduce any materials into the Area.

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

Taking or harmful interference with native flora or fauna is prohibited.

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

Collection or removal of anything not brought into the Area by the Permit holder is prohibited.

7(viii) *Disposal of waste*

It is prohibited to dispose of any waste within the Area.

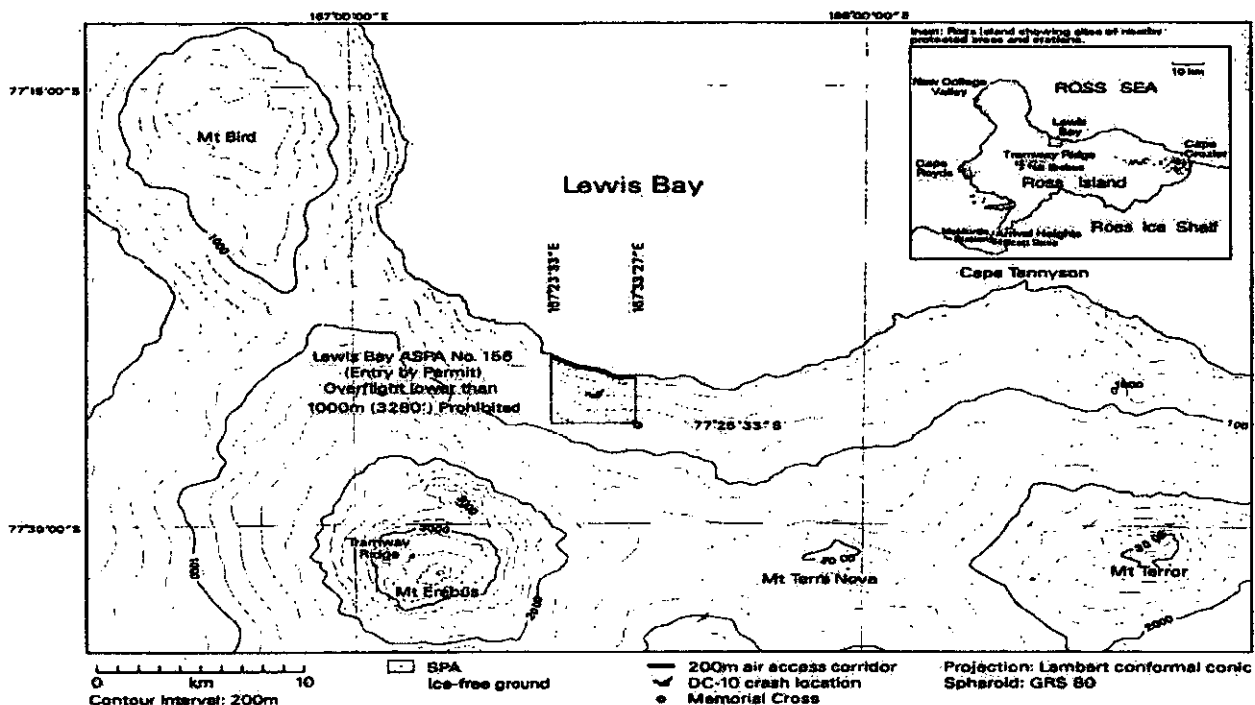
7(ix) *Measures that are necessary to ensure that the aims and objectives of the Management Plan can continue to be met*

None specified.

7(x) *Requirements for reports*

Parties should ensure that the principal holder for each permit issued submit to the appropriate authority a report describing the activities undertaken.

Map A - Lewis Bay Antarctic Specially Protected Area No. 156



Management Plan for Antarctic Specially Protected Area No. 160
FRAZIER ISLANDS, WINDMILL ISLANDS, WILKES LAND, EAST ANTARCTICA

1. Description of Values to be Protected

The Frazier Islands, a group of three islands located approximately 16 km offshore from the Australian Casey Station in East Antarctica (Map A) at 66°13'S 110°11'E, is a breeding locality for Southern Giant Petrels *Macronectes giganteus*.

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. The population of Southern Giant Petrels at the Frazier Islands is the largest known in the continental Antarctic. The most

recent estimate of the population was 248 breeding pairs in 2001–02. Breeding colonies of Southern Giant Petrels are found on all three of the Frazier Islands (Nelly, Dewart and Charlton islands).

The Frazier Islands are one of only four known breeding localities of Southern Giant Petrels around the coastline of continental Antarctica and are the only site in nearly 3000 km of coastline between Davis station and Dumont d'Urville. Chicks from the Frazier Islands disperse throughout the Southern Hemisphere, with banded chicks recovered in New Zealand, South America, Easter Island, and South Africa within nine months of departure.

2. Aims and Objectives

- minimise human disturbance to the breeding colonies of Southern Giant Petrels to assist stabilisation and recovery of the population in the wild;
- conserve the Frazier Islands as a reference area for future comparative studies;
- minimise the possibility of the introduction of alien plants, animals and microbes; and
- preserve the Frazier Islands by limiting visits during the Southern Giant Petrel breeding season.

3. Management Activities

- one research visit should be conducted to census the seabird populations in each 5 year period and monitor the breeding populations;
- information on the Frazier Islands ASPA shall be prominently displayed at Casey Station and copies of this Management Plan shall be available at the station and shall be provided to ships;
- clothing and equipment shall be cleaned before entering the Area; and
- the Management Plan shall be reviewed at least every five years and updated/modified as required.

4. Period of Designation

Designation is for an indefinite period.

5. Maps

Map A: Windmill Islands, showing location of Frazier Islands and protected areas in the region

Map B: Frazier Islands, Antarctic Specially Protected Area showing distribution of nesting sites.

6. Description of the Area

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

The Frazier Islands are located at latitude 66°14'S, longitude 110°10'E (Map A). The three islands (Nelly, Dewart and Charlton Island) lie in the eastern part of Vincennes Bay approximately 16 km to the west north west of Casey Station. Nelly Island is the largest of the three islands (approximately 0.35 km² in area). The ASPA comprises the entire terrestrial area of the three islands, with the seaward boundary at the low water mark (Map B). The total area of the Frazier Islands ASPA is approximately 0.6 km². There are no boundary markers.

Nelly Island supports the largest and most varied avian community of the three islands, with records indicating that Snow Petrels (*Pagodroma nivea*), Cape Petrels (*Daption capense*), Antarctic Petrels (*Thalassoica antarctica*), Wilson's Storm-Petrels (*Oceanites oceanicus*), Southern Fulmars (*Fulmarus glacialisoides*), and South Polar Skuas (*Catharacta maccormicki*) all nest on Nelly Island. South Polar Skua nests have also been found on Dewart Island (Table 3, Map B).

In 1961/62, 100 Adélie Penguin (*Pygoscelis adeliae*) nests were reported in one colony on Nelly Island. During the 1989/90 season, three colonies were recorded on the northwest ridge of Nelly Island with a total of 554 nests.

Recorded sightings of marine mammals at the Frazier Islands are scarce but have included Weddell Seals (*Leptonychotes weddellii*), an Orca (*Orcinus orca*), and Leopard Seals (*Hydrurga leptonyx*).

Vegetation recorded at Nelly Island comprises at least 11 species, including lichens *Buellia frigida*, *Usnea antarctica*, *Rhizoplaca melanophthalma*, *Candelariella flava* (a terrestrial alga *Prasiola crispa*, an indeterminate green crust which is thought to be 'a mixture of fungal hyphae and green alga *Desmococcus olivaceus*', and several species of snow algae including *Chlorococcum* sp., *Chloromonas polyptera*, *Chlorosarcina antarctica*, *Prasiococcus calcarius*. There are no published records of terrestrial invertebrates on the Frazier Islands.

The topography is characterised by steep cliffs rising from the sea. The highest peak on Nelly Island is approximately 65 metres. There are broad 'U' shaped ice-filled valleys on both Nelly and Dewart Islands.

The geology is characterised by layered schists and finely crenulated gneisses of the Windmill metamorphics developed as a result of two phases of metamorphism at 1400–1310 Ma and about 1200 Ma of pre-existing volcanics, greywacke and shale. On Nelly Island there are steep cliffs of biotite-gneiss. A red sandstone erratic is located in the 'U' shaped valley on Nelly Island below the 30 m contour. Highly polished glacial striae in the gneisses provide evidence of recent glaciation and indicate the former direction of ice flow of 265° and 280° T. Surface sediments consist of fine gravelly sand located in bedrock depressions.

6(ii) Special Zones within the Area

There are no special zones within the Area.

6(iii) Location of Structures within the Area

There are no structures within or adjacent to the Area.

6(iv) Location of other Protected Areas within close proximity

The following Protected Areas are located on the Budd Coast near the Frazier Islands:

- North-east Bailey Peninsula, Antarctic Specially Protected Area No. 135 (66°17'S, 110°32'E);
- Clark Peninsula, Antarctic Specially Protected Area No. 136 (66°15'S, 110°36'E); and,
- Ardery Island and Odbert Island, Antarctic Specially Protected Area No. 103, (66°22'S, 110°30'E).

7. Permit conditions

Visits to the Frazier Islands ASPA are prohibited except in accordance with a Permit issued by an appropriate National

Authority. 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. Permits to enter the Area may be issued during the non-breeding period for Southern Giant Petrels, specifically from 1 May to 30 September, for compelling scientific research that cannot be undertaken elsewhere, or for essential management purposes consistent with the objectives and provisions of the Management Plan. Permits are only to be issued for research that will not jeopardise the ecological or scientific values of the Area, or interfere with existing scientific studies.

Only one Permit is to be issued for the purpose of conducting a seabird census in each 5 year period. Censuses are to be conducted from outside the Giant Petrel colonies, wherever practicable. The maximum time to be spent on the Frazier Islands is 12 hours in total. Only the two persons named in the Permit may be ashore within the Area at any time.

The Permit or a copy shall be carried at all times.

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

Vehicles are prohibited within the Area:

- access to the Frazier Islands is by watercraft only. Landings must be made at the designated sites. Boats must be left at the shoreline. Only personnel who are required to carry out scientific/management work in the Area should leave the landing site;
- any movement within the Area is to be consistent with the minimum approach distances to nesting birds. 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;
- noise levels including verbal communication are to be kept to a minimum. The use of motor-driven tools and any other activity likely to generate noise is prohibited during the period (1 October to 30 April).
- landing of aircraft in the Area is prohibited.

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 from 1 May to 30 September as authorised in a Permit;

- scientific research that will not jeopardise the values or the ecosystems of the Area;
- management activities, including monitoring; and
- sampling, should be the minimum required.

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

No permanent structures are to be erected in the Area.

7(iv) Location of field camps

Camping is prohibited in the Frazier Islands ASPA.

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

- Fuel is not to be depoted on the islands. Boat refueling is permitted at shoreline landing sites.
- No poultry products are to be taken into the Area.
- No herbicides or pesticides may be taken into the Area.
- Any chemical shall be removed from the Area. Use of radio-nuclides or stable isotopes is prohibited.
- No animals, plant material or microorganisms shall be deliberately introduced into the Area and precautions shall be taken against accidental introductions. All equipment and clothing should be thoroughly cleaned before entering the Area.

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

- Taking of, or harmful interference with, native flora and fauna, is prohibited unless specifically authorised by permit.
- 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.
- Material of human origin may be removed unless the impact of the removal is likely to be greater than leaving the material *in situ*.

7(viii) Disposal of waste

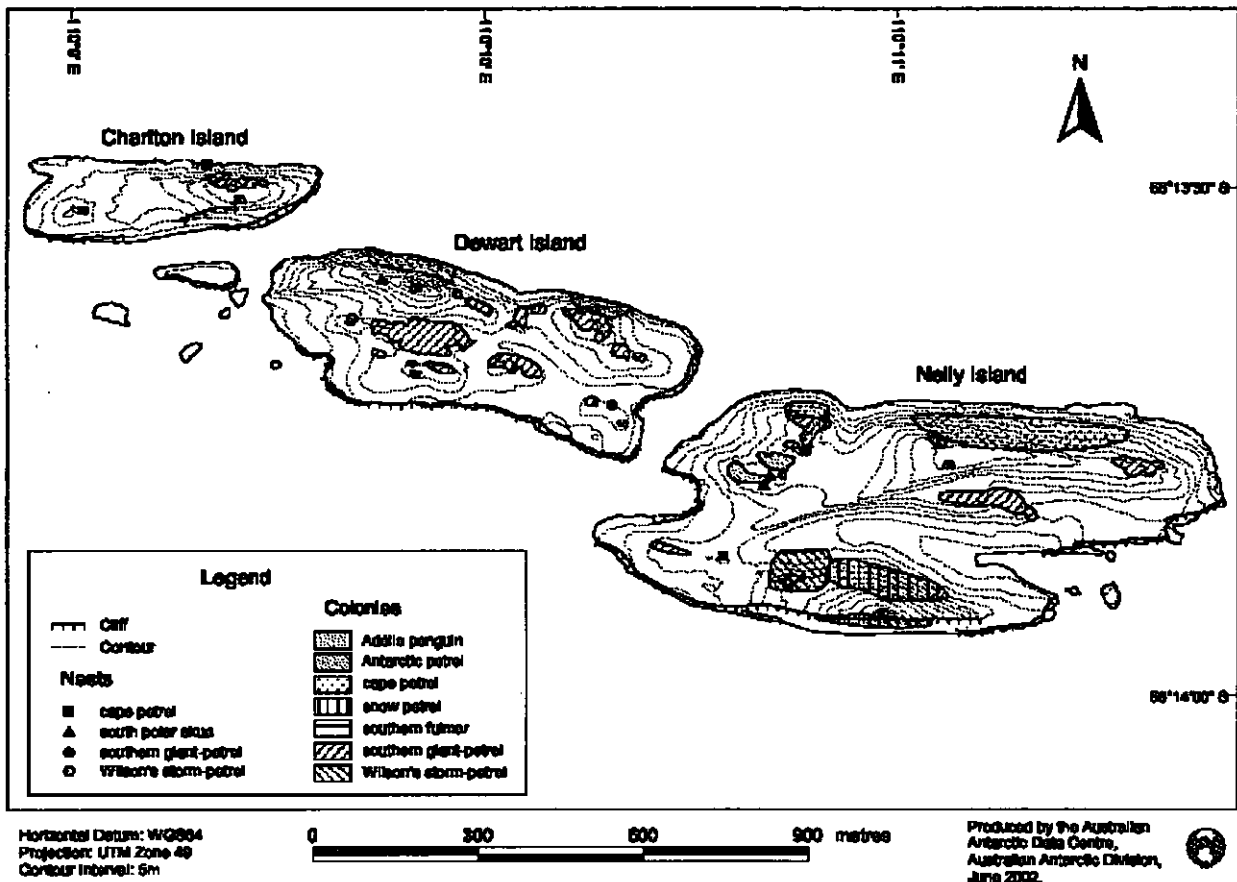
No wastes are to be deposited or left in the Area.

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

- A census of Southern Giant Petrels should be conducted in each 5 year period.
- Time spent at the Frazier Islands to conduct a bird census should be completed in a 12 hour period.
- Novel GPS data shall be obtained for specific sites of long-term monitoring for lodgement with the Antarctic Master Directory through the appropriate National Authority.

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..

Map B Distribution of nesting seabirds on the Frazier Islands

Management Plan for Antarctic Specially Protected Area No. 161 TERRA NOVA BAY, ROSS SEA

1. Description values to be protected

A coastal marine area between Adélie Cove and Tethys Bay, Terra Nova Bay, is designated on the grounds that it is an important littoral area for well-established and long-term scientific investigations. The Area extends approximately 9.4 km southward from Terra Nova Bay Station and up to a maximum of 7 km from the shore. No marine resource harvesting has been, is currently, or is planned to be, conducted within the Area, nor in the immediate vicinity. The site is typically ice-free in summer, rare for coastal areas in the Ross Sea region, making it an ideal and accessible site for research into the near-shore benthic communities in the region. Extensive marine ecological research has been carried out at Terra Nova Bay since 1986–87.

High diversity at both species and community levels make

this Area of high ecological and scientific value. Studies have revealed a complex array of species assemblages, often co-existing in mosaics. There exist assemblages with high species richness and complex functioning, alongside loosely structured, low diversity assemblages. Moreover, the sponge and anthozoan communities at Terra Nova Bay show a unique structure and long-term transects have been established to monitor changes in coastal benthic communities, both natural and human-induced. A population of Adélie penguins (*Pygoscelis adeliae*) at Adélie Cove allows assessment of the effects of this colony on the adjacent marine environment.

It is important to protect the Area as far as possible from direct human impacts in order that it can be used to

monitor potential impacts arising from activities at the scientific station of Terra Nova Bay. The high ecological and scientific values derived from the diverse range of species and assemblages, in particular through the collection of extensive data on these features, together with the vulnerability of the Area to disturbance by pollution, over-sampling and alien introductions, are such that the Area requires long-term special protection.

2. Aims and objectives

- avoid degradation of, or substantial risk to, the values of the Area from human disturbance;
- allow scientific research on the ecosystem while ensuring protection from oversampling or other impacts;
- allow other scientific research;
- maintain long-term monitoring sites;
- monitor the effects of the research station and its associated activities on the marine ecosystem;
- minimise the introduction of alien plants, animals and microbes to the Area;
- allow visits for management purposes.

3. Management activities

- A copy of this Management Plan shall be kept available, at Terra Nova Bay Station;
- A sign illustrating the location and boundaries shall be installed at Terra Nova Bay Station;
- Buoys, or other markers or structures shall be maintained in good condition;
- Visits to assess whether the Area continues to serve the purposes for which it was designated and to assess if management and maintenance measures are adequate.

4. Period of designation

Designated for an indefinite period.

5. Maps and photographs

Map 1: Terra Nova Bay bathymetric map.

6. Description of the Area

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

The designated Area is situated in Terra Nova Bay, between the Campbell Glacier Tongue and Drygalski Ice Tongue, Victoria Land. The Area is confined to a narrow strip of coastal waters to the south of Terra Nova Bay Station (Italy), extending approximately 9.4 km in length and generally within 1.5 – 7 km of the shore, comprising an area of 29.4 km² (Map 1).

The western boundary of the Area is defined as the mean high water mark along the coastline extending between 74°42'57"S in the north (2.3 km south of Terra Nova

Bay Station) and 74°48'00"S in the south (the southern shore of Adélie Cove), and includes the intertidal zone (Map 1). The northern boundary of the Area is defined as the 74°42'57"S line of latitude, extending from the coast 1.55 km eastward to the 164°10'00"E line of longitude. The southern boundary is defined as the 74°48'00"S line of latitude, extending from the coast 3.63 km eastward to the 164°10'00"E line of longitude. The eastern boundary of the Area is defined as the 164°10'00"E line of longitude extending between 74°42'57"S in the north and 74°48'00"S in the south.

The coastline of Terra Nova Bay is characterised predominantly by rocky cliffs, with large boulders forming occasional 'beaches'. In the sheltered areas, the soft bottom begins at a depth of 20–30 m. The tidal range is 1.5–2 m and pack ice of approximately 2–2.5 m thick covers the sea surface for 9–10 months of the year. Along the coastline of the Area there are two main coves; the larger Adélie Cove in the south and a smaller cove around 3 km to its north. The sea floor substrate of the smaller consists of pebbles of various sizes, while Adélie Cove is characterised by fine-grained, muddy sediments. An Adélie penguin (*Pygoscelis adeliae*) colony is situated at Adélie Cove. Outside of the coves, the sea floor characteristics and benthic species assemblages are relatively homogenous along the coastal length of the Area, and are observed to vary more particularly with the vertical gradient.

The seafloor within the Area is primarily granitic rock, with softer substrates composed of coarse sands or gravels. In the supralittoral zone, only cyanobacteria and diatoms colonise the hard substrates, while the intertidal zone (1.5–2.0 m wide) has, in the most sheltered areas, a high coverage of the green alga *Urospora penicilliformis* and *Prasiola crispa*. Below the tidal zone, down to 2–3 m depth, the community is very poor, due to the persistent presence and scouring action of pack ice, and is mainly composed of epilithic diatoms and the crustacean amphipod *Paramoera walkeri*. Immediately deeper, rocks can be fully colonised by the red alga *Iridaea cordata*, frequently found with *Plocamium cartilagineum*, to a depth of 12 m. At this level *Alcyonium antarcticum* and *Urticinopsis antarctica* can be occasionally observed, the asteroid *Odontaster validus* and the echinoid *Sterechinus neumayeri* are common. *Phyllophora antarctica* is another red alga forming expanded mats from 12 to 25 m depth, often fully colonised by sessile organisms, mainly hydroids, serpulids and bryozoans (*Celleporella antarctica* and *Harpezia spinosissima*). Numerous invertebrates, such as the polychaete *Harmothoe brevipalpa*, the mollusc *Laevilittorina antarctica*, the crustacean amphipod *Paramoera walkeri* and the isopod *Nototanais dimorphus* feed on these algal species and can be very abundant. On rocky bottoms in deeper layers, the algal colonisation is replaced by a calcareous crustose coralline alga (*Clathromorphum lemoineanum*).

The soft bottoms from 20–40 m depth are coarse sands and gravels, where the community is characterised by the

mollusc bivalve *Laternula elliptica* and the polychaete *Aglaophamus ornatus* (Nephtidae). The bivalve *Yoldia eightsi* is abundant in fine-sand sediments.

Between 30–70 m, the substrate becomes finer and is completely colonised by the bivalve *Adamussium colbecki*, the shells of which are colonised by a micro-community comprising mainly forams, bryozoans (*Aimulosia antarctica*, *Arachnopusia decipiens*, *Ellisina antarctica*, *Micropora brevissima*) and the spirorbid *Paralaeospira levinseni*. In this region, large predators such as the gastropod *Neobuccinum eatoni* and the nemertean *Parborlasia corrugatus* are frequent. The echinoid *Sterechinus neumayeri* and the starfish *Odontaster validus* are still very frequent at all depths on both hard and mobile substrates (Chiantore *et al.*, 2002; Cerrano *et al.*, 2000b).

Below 70–75 m down to 120–130 m depth, heterogeneous substrates allow hard- and soft-bottom communities to coexist. On the sparse rocky outcrops the encrusting algae disappear and the benthic communities are dominated by the sessile zoobenthos. This diversified filter feeding assemblage is mainly characterised by sponges and anthozoans, while in soft sediments detritus-feeder polychaetes and bivalves dominate. Among sponges, which can reach very high biomass values, *Axociella nidificata*, *Calyx arcuarius*, *Gellius rudis*, *Phorbas glaberrima*, *Tedania charcoti*, are very abundant. Numerous invertebrates constitute an important component of this assemblage which develops down to 120–140 m depth. These include the epibiont polychaete *Barrukia cristata* on Thouarellid gorgonians, crustacean peracarids, pycnogonids, mollusc opisthobranchs (*Austrodoris kerguelensis*, *Tritoniella belli*) and bivalves, ophiuroids and holothuroids, bryozoans, and the endobionts. A peculiar community, dominated by polychaetes and by the bivalve *Limatula hodgsoni*, can be associated with these mats.

Below 130 m the hard substrates become very sparse and are mainly colonised by the polychaete *Serpula narconensis* and several bryozoans (*Arachnopusia decipiens*, *Ellisina antarctica*, *Flustra angusta*, *F. vulgaris* and *Isoschizoporella similis*). The dominant muddy bottoms are instead characterised by tubicolous polychaetes, mainly *Spiophanes*. Much deeper, at about 150–200 m depth, brachiopods and various species of bivalves characterise the environment on small gravels as well as on the soft bottom.

Finally, the faunal assemblage of the Area includes notothenioid fishes, represented especially by species of the *Trematomus* group, including *T. bernacchi*, *T. pennelli*, *T. hansonii* and *T. loennbergii*.

6(ii) Restricted zones within the Area

None.

6(iii) Structures within and near the Area

There are no structures within the Area. The nearest structure

is the atmospheric monitoring facility 650 m north of the northern boundary of the Area, and Terra Nova Bay Station (74°41'42"S, 164°07'23"E) is situated on a peninsula adjacent to Tethys Bay, 1.65 km farther north.

6(iv) Location of other protected areas within close proximity of the Area

ASPA No. 118, summit of Mount Melbourne, 45 km to the NE, is the only other protected area within close proximity.

7. Permit conditions

Entry into the Area is prohibited except in accordance with a Permit issued by an appropriate national authority.

7(i) Access to and movement within the Area

Access into the Area shall be by sea, land, over sea ice or by air. There are no specific restrictions on routes of access to and movement within the Area, although movements should be kept to the minimum necessary. Anchoring is prohibited within the Area. There are no overflight restrictions within the Area and aircraft may land by Permit when sea ice conditions allow. Ship or small boat crew, or other people on small boats or ships, are prohibited from moving beyond the immediate vicinity of their vessel unless specifically authorized by Permit.

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

- Scientific research;
- Essential management activities;
- Activities that involve trawling, dragging, grabbing, dredging, or deployment of nets should be undertaken with great care because of the sensitivity of the rich bottom communities to disturbance;
- The appropriate authority should be notified of any activities/measures undertaken that were not included in the authorized Permit.

7(iii) Installation, modification or removal of structures

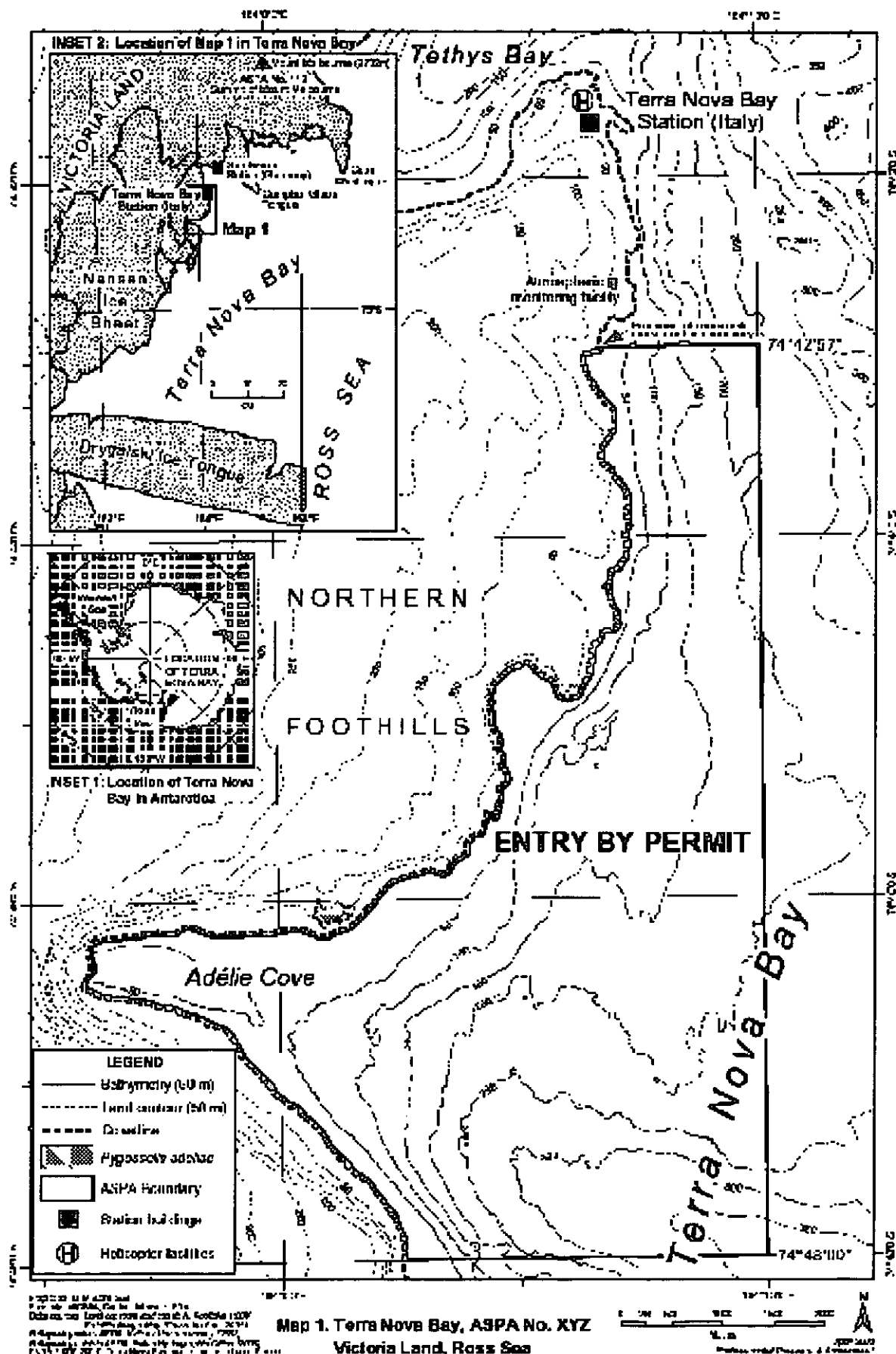
Structures or scientific equipment shall not be installed within the Area except as specified in a Permit.

7(iv) Location of field camps

None within the Area. An occasional field camp has been positioned on the beach at Adélie Cove.

7(v) Restrictions on materials and organisms which can be brought into the Area

No living animals, plant material, pathogens or microorganisms shall be deliberately introduced into the Area. Poultry products shall not be released into the Area. No herbicides or pesticides shall be introduced into the Area. Any other chemicals, including radio-nuclides or stable isotopes, which may be introduced for scientific or management purposes specified in the Permit, shall be used in the minimum quantities necessary.



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

Taking or harmful interference with native flora or fauna is prohibited.

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

Material may be collected or removed only in accordance with a Permit and should be limited to the minimum necessary to meet scientific or management needs.

7(viii) *Disposal of waste*

All wastes shall be removed from the Area.

7(ix) *Measures that are necessary to ensure that the aims and objectives of the Management Plan can continue to be met*

1. Permits may be granted to carry out biological monitoring and site inspection activities.
2. Any specific sites of long-term monitoring should be marked on site and on maps of the Area.

3. To maintain the values of the marine communities, visitors shall take special precautions against marine pollution. Of concern are the release or spillage of hydrocarbons from ships, and biological introductions. To minimize the risk of such pollution, visitors shall ensure that sampling equipment or markers brought into the Area are clean. Vessels that are found to show fuel leakage, or a significant risk of such leakage, are prohibited from entering the Area. If a fuel leak from a vessel is discovered while within the Area, the vessel shall leave the Area unless the leak can be promptly stopped. Handling of fuels and oil within the Area shall be the minimum necessary consistent with meeting the objectives of the permitted activities.

7(x) *Requirements for reports*

Parties should ensure that the principal holder for each Permit issued submits to the appropriate authority a report describing the activities undertaken.

MEASURE 3 (2003)

ANTARCTIC PROTECTED AREAS SYSTEM: REVISED LIST OF HISTORIC SITES AND MONUMENTS

The Representatives,

Recalling Recommendations I-IX, V-4, VI-14, VII-9, XII-7, XIII-16, XIV-8, XV-12, XVI-11, XVII-3 and Measures 4(1995), 2(1996), 4(1997), 2(1998), 1(2001) and 2(2001);

Noting the requirements of Article 8 of Annex V to the Protocol on Environmental Protection to the Antarctic Treaty to maintain a list of current Historic Sites and Monuments and that such sites shall not be damaged, removed or destroyed;

Desiring to update the descriptions of Historic Site and Monument numbers 5, 14, 15, 16, 17, 18, 19, 21, 22, 23, 27, 28, 30, 32, 33, 34, 35, 36, 37, 38, 39, 42, 43, 44, 48, 50, 53, 56, 57, 59, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 74;

Desiring also to remove from the list those Historic Sites and Monuments numbered 25, 31 and 58, which no longer exist;

Recommend that their Governments, in accordance with

paragraph 2 of Article 8 of Annex V to the Protocol on Environmental Protection to the Antarctic Treaty, approve that the "List of Historic Monuments Identified and Described by the Proposing Government or Governments" (annexed to Recommendation VII-9 and modified by the Recommendations and Measures recalled above) be terminated and replaced by the revised and updated "List of Historic Sites and Monuments" annexed to this Measure.

Annex. List of Historic Sites and Monuments approved by the Antarctic Treaty Consultative Meeting

Note: The Antarctic Treaty Consultative Meeting neither approves, nor disapproves of the place names used in the listing below.

Note also: the descriptions given here have been abbreviated for reasons of space. The full list may be found on the CEP website at:

<http://www.cep.aq/default.asp?casid=10278>

No. Brief description and location

1. Flag mast erected in December 1965 at the South Geographical Pole. 90°S
2. Rock cairn and plaques at Syowa Station. 69°00'S, 39°35'E
3. Rock cairn and plaque on Proclamation Island, Enderby Land. 65°51'S, 53°41'E
4. Station building to which a bust of V.I. Lenin is fixed. 83°06'S, 54°58'E
5. Rock cairn and plaque at Cape Bruce, Mac. Robertson Land. 67°25'S, 60°47'E
6. Rock cairn at Walkabout Rocks, Vestfold Hills, Princess Elizabeth Land. 68°22'S, 78°33'E
7. Stone with inscribed plaque, erected at Mirny Observatory, Mabus Point. 66°33'S, 93°01'E
8. Metal monument-sledge at Mirny Observatory, Mabus Point. 66°33'S, 93°01'E
9. Cemetery on Buromskiy Island, near Mirny Observatory. 66°32'S, 93°01'E
10. Building (magnetic observatory) at Dobrowolsky Station, Bunger Hills. 66°16'S, 100°45'E
11. Heavy tractor at Vostok Station. 78°28'S, 106°48'E
12. Cross and plaque at Cape Denison, George V Land. 67°00'S, 142°42'E
13. Hut at Cape Denison, George V Land. 67°00'S, 142°42'E

14. Site of ice cave at Inexpressible Island, Terra Nova Bay. 74°54'S, 163°43'E
15. Hut at Cape Royds, Ross Island. 77°33'S, 166°10'E
16. Hut at Cape Evans, Ross Island. 77°38'S, 166°24'E
17. Cross on Wind Vane Hill, Cape Evans, Ross Island. 77°38'S, 166°24'E
18. Hut at Hut Point, Ross Island. 77°50'S, 166°37'E
19. Cross at Hut Point, Ross Island. 77°50'S, 166°37'E
20. Cross on Observation Hill, Ross Island. 77°51'S, 166°41'E
21. Remains of stone hut at Cape Crozier, Ross Island. 77°31'S, 169°22'E
22. Three huts and associated historic relics at Cape Adare. 71°18'S, 170°12'E
23. Grave at Cape Adare. 71°17'S, 170°13'E
24. Rock cairn, known as 'Amundsen's cairn', on Mount Betty, Queen Maud Range. 85°11'S, 163°45'W
25. De-listed
26. Abandoned installations of Argentine Station 'General San Martin' on Barry Island, Debenham Islands, Marguerite Bay. 68°08'S, 67°08'W
27. Cairn with a replica of a lead plaque, Megalestris Hill, Petermann Island. 65°10'S, 64°09'W
28. Rock cairn at Port Charcot, Booth Island. 65°03'S, 64°01'W
29. Lighthouse named 'Primero de Mayo' erected on Lambda Island, Melchior Islands. 64°18'S, 62°59'W
30. Shelter at Paradise Harbour. 64°49'S, 62°51'W
31. De-listed.
32. Concrete monolith erected in 1947, near Capitán Arturo Prat Base on Greenwich Island, South Shetland Islands. 62°28'S, 59°40'W
33. Shelter and cross with plaque near Capitán Arturo Prat Base (Chile), Greenwich Island, South Shetland Islands. 62°29'S, 59°40'W
34. Bust at Capitán Arturo Prat Base (Chile), Greenwich Island, South Shetland Islands. 62°50'S, 59°41'W
35. Wooden cross and statue of the Virgin of Carmen near Capitán Arturo Prat Base (Chile), Greenwich Island, South Shetland Islands. 62°29'S, 59°40'W
36. Replica of a metal plaque erected by Eduard Dallmann at Potter Cove, King George Island. 62°14'S, 58°39'W
37. Statue erected in 1948 at General Bernardo O'Higgins Base (Chile), Trinity Peninsula. 63°19'S, 57°54'W
38. Wooden hut on Snow Hill Island. 64°22'S, 56°59'W
39. Stone hut at Hope Bay, Trinity Peninsula. 63°24'S, 56°59'W
40. Bust of General San Martin, grotto with a statue of the Virgin of Lujan, and a flag mast at Base 'Esperanza', Hope Bay. 63°24'S, 56°59'W
41. Stone hut on Paulet Island. 63°34'S, 55°45'W
42. Area of Scotia Bay, Laurie Island, South Orkney Island. 60°46'S, 44°40'W
43. Cross 1,300 metres north-east of the Argentine General Belgrano I Station (Argentina) and subsequently moved to Belgrano II Station (Argentina), Nunatak Bertrab, Confin Coast, Coats Land. 77°52'S, 34°37'W
44. Plaque erected at the temporary Indian station 'Dakshin Gangotri', Princess Astrid Kyst, Dronning Maud Land. 70°45'S, 11°38'E
45. Plaque on Brabant Island, on Metchnikoff Point. 64°02'S, 62°34'W
46. All the buildings and installations of Port-Martin base, Terre Adélie. 66°49'S, 141°24'E
47. Wooden building called 'Base Marret' on the Ile des Pétrels, Terre Adélie. 66°40'S, 140°01'E
48. Iron cross on the North-East headland of the Ile des Pétrels, Terre Adélie. 66°40'S, 140°01'E
49. The concrete pillar erected by the First Polish Antarctic Expedition at Dobrolowski Station on the Bunger Hill. 66°16'S, 100°45'E
50. A brass plaque bearing the Polish Eagle, Maxwell Bay, Fildes Peninsula, King George Island. 62°12'S, 59°01'W
51. The grave of Włodzimierz Puchalski. 62°13'S, 58°28'W
52. Monolith on Fildes Peninsula, King George Island, in the South Shetland Islands. 62°13'S, 58°58'W
53. Bust of Captain Luis Alberto Pardo, monolith and plaques on Point Wild, Elephant Island, south Shetland Islands. 61°03'S, 54°50'W
54. Richard E. Byrd Historic Monument, McMurdo Station, Antarctica. 77°51'S, 166°40'E
55. East Base, Antarctica, Stonington Island. 68°11'S, 67°00'W
56. Waterboat Point, Danco Coast, Antarctic Peninsula. 64°49'S, 62°51'W
57. Commemorative plaque at 'Yankee Bay' (Yankee Harbour), MacFarlane Strait, Greenwich Island, South Shetland Islands. 62°32'S, 59°45'W
58. De-listed.
59. A cairn on Half Moon Beach, Cape Shirreff, Livingston Island, South Shetland Islands and a plaque on 'Cerro Gaviota' opposite San Telmo Islets. 62°28'S, 60°46'W
60. Wooden plaque and cairn located at Penguins Bay, southern coast of Seymour Island (Marambio), James Ross Archipelago. 64°16'S, 56°39'W
61. 'Base A' at Port Lockroy, Goudier Island, off Wiencke Island, Antarctic Peninsula. 64°49'S, 63°29'W
62. 'Base F (Wordie House)' on Winter Island, Argentine Islands. 65°15'S, 64°16'W
63. 'Base Y' on Horseshoe Island, Marguerite Bay, western Graham Land. 67°48'S, 67°18'W
64. 'Base E' on Stonington Island, Marguerite Bay, western Graham Land. 68°11'S, 67°00'W
65. Message post, Svend Foyn Island, Possession Islands. 71°56'S, 171°05'W
66. Prestrud's Cairn, Scott Nunataks, Alexandra Mountains, Edward VII Peninsula. 77°11'S, 154°32'W
67. Rock shelter, 'Granite House', Cape Geology, Granite Harbour. 77°00'S, 162°32'E
68. Site of depot at Hells Gate Moraine, Inexpressible Island, Terra Nova Bay. 74°52'S, 163°50'E
69. Message post at Cape Crozier, Ross Island. 77°27'S, 169°16'E
70. Message post at Cape Wadworth, Coulman Island. 73°19'S, 169°47'E
71. Whalers Bay, Deception Island, South Shetland Islands. 62°59'S, 60°34'W
72. Mikkelsen Cairn, Tryne Islands, Vestfold Hills. 68°22'S, 78°24'E
73. Memorial Cross for the 1979 Mount Erebus crash victims, Lewis Bay, Ross Island. 77°25'S, 167°27'E
74. The un-named cove on the south-west coast of Elephant Island in which the wreckage of a large wooden sailing vessel is located. 61°14'S, 55°22'W
75. The A Hut of Scott Base, Pram Point, Ross Island, Ross Sea Region, Antarctica. 77°51'S, 166°46'E
76. The ruins of the Base Pedro Aguirre Cerda Station, Pendulum Cove, Deception Island. 62°59'S, 60°40'W

SCAR Bulletin

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