Antarctic Specially Protected Area No. 111 (Specially Protected Area No. 15) Southern Powell Island and adjacent islands, South Orkney Islands; Lat 60°45'S, Long 45°02'W

1. Description of Values to be Protected

The Area was originally designated in Recommendation IV-15 (1966, SPA No. 15) after a proposal by the United Kingdom on the grounds that Southern Powell Island and the adjacent islands support substantial vegetation and a considerable bird and mammal fauna. The Area was representative of the natural ecology of the South Orkney Islands, and was rendered more important by the nucleus of an expanding colony of Antarctic fur seals (*Arctocephalus gazelle*).

These grounds are still relevant, though the expansion of the fur seal colony is progressing only slowly.

The values to be protected are primarily those associated with the large concentrations of breeding birds and seals, and to a lesser extent, the terrestrial vegetation.

2. Aims and Objectives

Management of southern Powell Island and adjacent islands aims to:

- avoid major changes in the structure and composition of the terrestrial vegetation;
- prevent unnecessary human disturbance to the Area;
- permit research of a compelling scientific nature which cannot be served elsewhere.

3. Management Activities

Because of its use as an anchorage in the past, it is important that the signs, which identify the Area as a Specially Protected Area and point out that landing without a Permit is forbidden, are maintained.

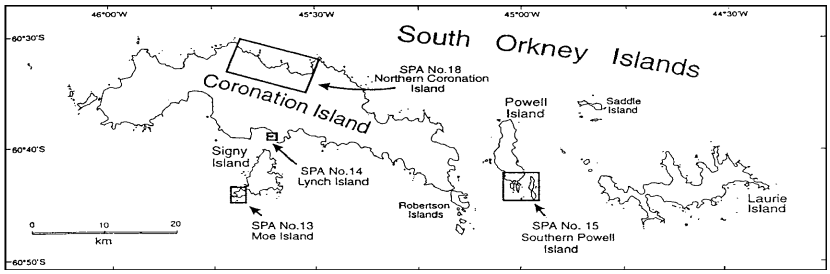
Visits should be made as necessary to assess the biological composition of the Area, in particular the state of the fur seal colony, and to maintain sign boards.

4. Period of Designation

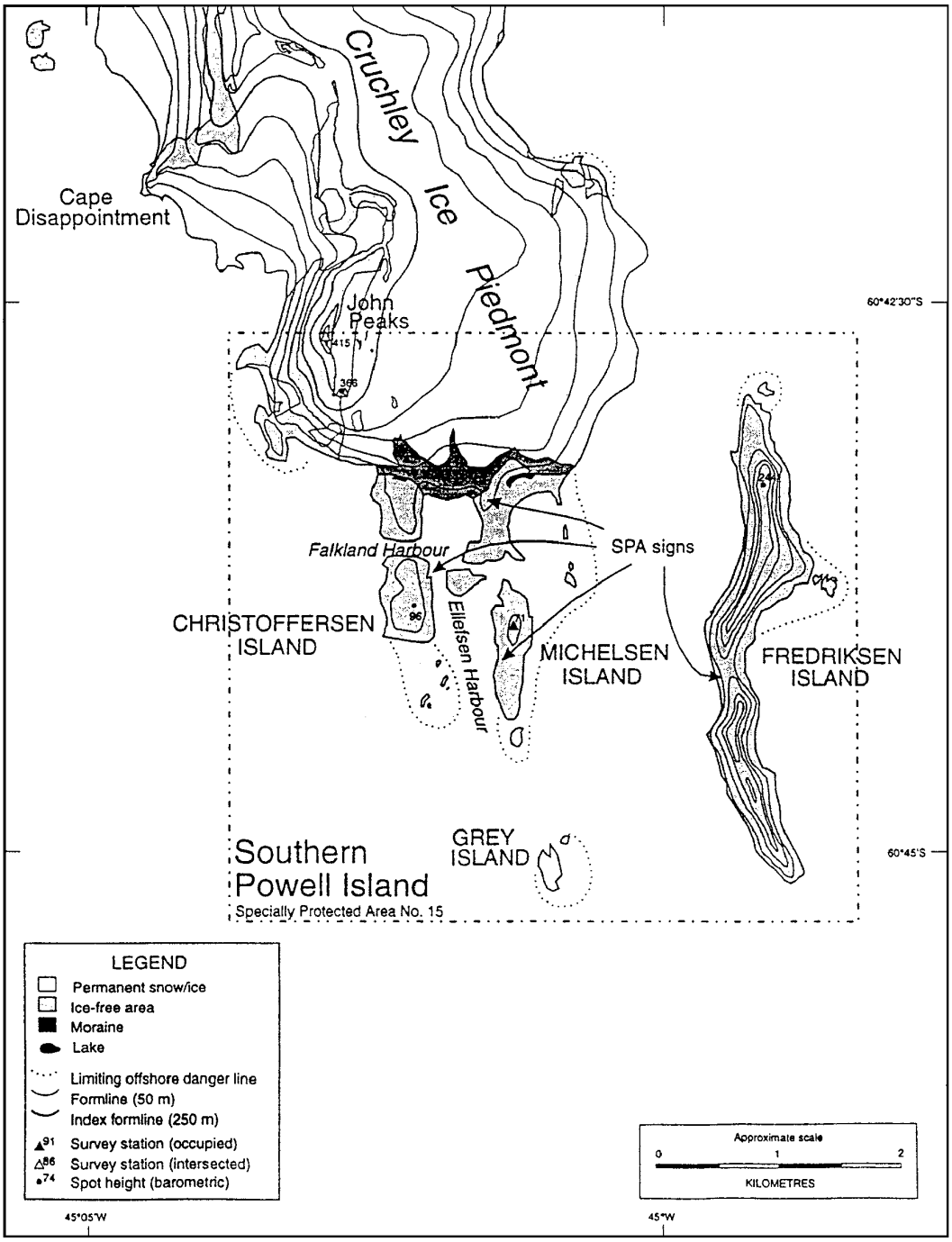
Designated under ATCM Recommendation IV-15 for an indefinite period.

5. Maps

Map A shows the location of southern Powell Island in relation to the South Orkney Islands. Map B shows the Area in greater detail.



ASPA 111
Map A*



ASPA 111
Map B*

6. Description of the Area

6(i) Geographical coordinates and natural features

The Area, which is centered on latitude 60°42'S and longitude 45°01'W includes all of Powell Island, South Orkney Islands, south of the latitude of the southern summit of John Peaks (375 m altitude), together with the whole of Fredriksen Island, Michelsen

Island (a tidal peninsula at the southern tip of Powell Island), Christoffersen Island, Grey Island and unnamed adjacent islands. All but the Crutchley Ice Piedmont of southern Powell Island are ice-free in summer, though there are patches of semi-permanent or late-lying snow in places.

The rocks of southern Powell Island, Michelsen Island and Christoffersen stand are conglomerates of Cretaceous-Jurassic age. The two promontories to the west of John Peaks are Carboniferous greywacke-shales. There are boulders containing plant fossils in the glacial deposits around Falkland Harbour. Much of central and southern Fredriksen Island is composed of sandstone and dark phyllitic shales. The north-east, and probably most of the north, of this island is highly sheared conglomerate with laminated mudstone. The Area has a thick mantle of glacial till, strongly influenced by seabird guano.

Michelsen Island is almost devoid of land vegetation, although on the rocks here are extensive communities of lichens dominated by nitrophilous crustose species. These are also widespread on Fredriksen Island and elsewhere on bird-influenced cliffs and rocks near the shore. The most diverse vegetation on Powell Island occurs on the two promontories and associated scree west of Falkland Harbour. Here, and on Christoffersen Island and the northern part of Fredriksen Island, moss banks with underlying peat occur. Wet areas support stands of moss carpet. There are extensive areas of the nitrophilous macroalga *Prasiola crispa* associated with the penguin colonies in the area. Snow alga are prominent on the ice piedmont and snow patches in late summer.

No information is available on the arthropod fauna, but this is probably very similar to that at Signy Island. The springtails *Cryptopygus antarcticus* and *Parisotoma octoculata* and the mites *Alaskozetes antarcticus*, *Stereotydeus villosus* and *Gamasellus racovitzai* occur in great numbers beneath stones.

There are few observations on marine biota in the Area, but this is likely to be very similar to the well-researched Signy Island area. The relatively enclosed Falkland-Ellefsen Harbour area and the bay on the east side of the peninsula are highly influenced by glacial run-off from the ice Piedmont.

Large numbers of penguins and petrels breed throughout the Area. There are many thousand pairs of chinstrap penguins (*Pygoscelis Antarctica*), mostly on Fredriksen Island. Similarly large numbers of Adelie penguins (*P. adeliae*) occur principally on the southern Powell-Michelsen Island area. Here there are also several thousand pairs of gentoo penguins (*P. Papua*) and a very few scattered pairs of macaroni penguins (*Eudyptes chrysolophus*) breeding among the gentoos.

Other breeding birds include southern giant petrels (*Macronectes giganteus*), cape petrels (*Daption capensis*), snow petrels (*Pagodroma nivea*), Wilson's storm petrels (*Oceanites oceanicus*), blue-eyed shags (*Phalacrocorax Triceps*) Dominican gulls (*Laws dominicanus*), brown skuas (*Catharacta lonnbergi*), sheathbills (*Chionis alba*),

and possibly Antarctic prions (*Pachyptila desolata*) and black-bellied storm petrels (*Fregatta tropica*).

Michelsen Island is the longest known breeding site in the Antarctic of fur seals since their near extermination in the nineteenth century. The number of pups born annually has increased slowly but fairly steadily from 11 in 1956 to about 60 in 1989. Thirty-four live pups were recorded in January 1994. Many non-breeding males visit the Area during the summer. Other seals are frequent on the beaches, mainly elephant seals (*Mirounga leonina*) and Weddell seals (*Leptonychotes weddelli*.). Leopard seals (*Hydmrga leptonyx*) and crabeater seals (*Lobodon carcinophagus*) are occasionally seen on ice floes.

6(ii) Restricted zones within the Area

None

6(iii) Location of structures within the Area

A marker board (erected January 1994) is positioned on southern Powell Island on top of a small rock outcrop at the back of the shingle beach on the east side of the southern promontory of the island.

On Michelsen Island the marker board (erected January 1994) is situated on a 1ow-lying rock about 50 m from the shoreline at the back of a high shingle beach at the southern tip of the island.

On Christoffersen Island the marker board (erected January 1994) is located on a small promontory on the northeastern shore of the island at the entrance to Falkland Harbour. The board is located at the back of the beach just below a small Adelie penguin rookery.

On Fredriksen Island a marker board (erected January 1994) is located at the northern end of the pebble boulder beach on the western side of the island, below a small chinstrap penguin rookery. The board is at the back of the beach on top of a small rock outcrop.

There are no other structures within the Area, but various mooring chains and rings associated with the use of Ellefsen and Falkland Harbours by floating whale factories in the 1920's are to be found on the shore.

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

SPA No 13 Moe Island, and SPA No. 14, Lynch Island, are about 35 km west by south and about 35 km west of the Area respectively SPA No. 18, North Coronation Island is about the same distance away on the northern side of Coronation Island

7. Permit Conditions

Entry into the Area is prohibited except in accordance with a Permit issued by an appropriate national authority as designated under Article 7 of Annex V of the Protocol on Environmenta1 Protection to the Antarctic Treaty.

Conditions for issuing a Permit to enter the Area are that:

- it is bowed only for a compelling scientific purpose which cannot be served elsewhere;
- the actions permitted will not jeopardise the natural ecological system in the Area;
- any management activities are in support of the objectives of this Management Plan;
- the actions permitted are in accordance with this Management Plan;
- the Permit must be carried within the Specially Protected Area;
- a report or reports are supplied to the authority or authorities named in the Permit.

7(i) Access to and movement within the Area

Anchoring within Falkland Harbour and Ellefsen Harbour is prohibited except in emergency.

No pedestrian routes are designated within the Area, but persons on foot should avoid walking on vegetated areas or disturbing wildlife wherever possible. Vehicles are not allowed in the Area.

It is forbidden to overfly the Area below 250m altitude above the highest point except for purposes of landing (when essential) on the beach on the east side of the southern most tip of Powell Island.

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

Compelling scientific research which cannot be undertaken elsewhere essential management activities, including monitoring.

7(iii) Installation, modification or removal of structures

No structures are to be erected in the Area, or scientific equipment installed, except for essential scientific or management activities, as specified in the Permit.

7(iv) Location of field camps

Parties shall not camp in the Area, except in an emergency for reasons of safety. In this case, tents should be erected having regard to causing the least damage to the vegetation or disturbance to fauna.

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

No living animals or plant material shall be deliberately introduced into the Area.

No poultry products, including food products containing uncooked dried eggs, shall be taken into the Area.

No herbicides or pesticides shall be brought into the Area. Any other chemicals, which may be introduced for a compelling scientific purpose 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, food or other materials are not to be deposited in the Area, unless required for essential purposes connected with the activity for which the Permit has been granted. All such materials are to be removed when no longer required.

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

This is prohibited except in accordance with a Permit. Where animal taking or harmful interference is involved this should be in accordance with the SCAR Code of Conduct for Use of Animals for Scientific Purposes in Antarctica, as a minimum standard.

7(vii) Collection and 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, except that debris of man-made origin may be removed from the beaches of the Area and dead or pathological specimens of fauna or flora may be removed for laboratory examinations.

7(viii) Disposal of waste

All non-human wastes shall be removed from the Area. Human waste may be deposited in the sea.

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 site inspection activities which may involve the collection of small amounts of plant material or small numbers of animals for analysis or audit, or to erect or maintain notice boards, or to carry out protective measures.

7(x) Requirements for reports

The principal Permit holder for each issued Permit shall submit a report of activities conducted in the Area using the accepted Visit Report form. This report all be submitted to the appropriate authority or authorities named in the Permit as on as practicable, but not later than six months after the visit has taken place.

Such reports should be stored indefinitely by the appropriate authority and made accessible to interested Parties, SCAR, CCAMLR and COMNAP if requested, to provide the documentation of human activities within the Area necessary for good management.