Management Plan for

Antarctic Specially Protected Area (ASPA) No. 129

ROTHERA POINT, ADELAIDE ISLAND

1. Description of values to be protected

Rothera Point was originally designated in Recommendation XIII-8 (1985, SSSI No. 9) after a proposal by the United Kingdom that the Area would serve as a biological research site and control area, against which the effects of human impact associated with the adjacent Rothera Research Station (UK) could be monitored in an Antarctic fellfield ecosystem. The Area itself has little intrinsic nature conservation value.

2. Aims and objectives

2 (i) Aims

Management of Rothera Point aims to:

- avoid major changes to the structure and composition of the terrestrial ecosystems, in particular to the fellfield ecosystem and breeding birds, by:
    - preventing physical development within the Area, and;
    - limiting human access to the Area to maintain its value as a control area for environmental monitoring studies;
- allow scientific research and monitoring studies of breeding birds, terrestrial and freshwater biota, and soils, while ensuring as far as possible that the Area is protected from over-sampling; and
- allow regular visits for management purposes in support of the objectives of the management plan.

2 (ii) Objectives

The Area is unique in Antarctica as it is the only protected area currently designated solely for its value in the monitoring of human impact. The objective is to use the Area as an unaffected control area in assessing the impact of activities undertaken at Rothera Research Station on the Antarctic environment.

The hypothesis being tested is that the activities undertaken at Rothera Research Station have not caused environmental impact within the Area.

Monitoring studies undertaken by the UK (through the British Antarctic Survey) began at Rothera Point in 1976, before the establishment of the station later that year, and have expanded considerably since 1989. Further long-term development of the station commenced in 2005. The UK plans to continue monitoring studies in the future.

The purposes of the monitoring programme are to:

- survey the distribution of terrestrial flora and invertebrates every decade;
- assess heavy metal concentrations in lichens every five years;
- assess petroleum hydrocarbon and heavy metal concentrations in gravel and soil every 5 years;
- survey the breeding bird population annually.

3. Management activities

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

- signboards illustrating the location and boundary of the Area and stating entry restrictions shall be erected at the major access points and serviced on a regular basis;
- a map showing the location and boundaries of the Area and stating entry requirements shall be displayed in a prominent position at Rothera Research Station;
- visits shall be made as necessary (no less than once every two years) to assess whether the Area continues to serve the purposes for which is was designated and to ensure management activities are adequate.

4. Period of designation

Designated for an indefinite period.

5. Maps

Map 1. ASPA No. 129 Rothera Point, location map.

Map specifications: Projection: WGS84 Antarctic Polar Stereographic. Standard parallel: 71°S. Central meridian 67°45'W.

Map 2. ASPA No. 129 Rothera Point, topographic map.

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6. Description of the Area

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

Rothera Point (67° 34'S, 68° 08'W) is situated in Ryder Bay, at the south-east corner of Wright Peninsula on the east side of Adelaide Island, south-west Antarctic Peninsula (Map 1).

The Area is the north-eastern one-third of Rothera Point (Map 2), and is representative of the area as a whole. It is about 280 m from west to east and 230 m from north to south, and rises to a maximum height of 36 m. At the coast, the Area boundary is the 5 m contour. No upper shore, littoral or sublittoral areas of Rothera Point are therefore included within the ASPA. The southern boundary of the Area, running across Rothera Point, is partially marked by rock filled gabions, in which are placed ASPA boundary signs. The remaining boundary is unmarked. There are two signboards just outside the perimeter of the Area located at the starting points of the pedestrian access route around Rothera Point (see Map 2).

The Area boundary extends to the 5 m contour at the coast. There is unrestricted pedestrian access below this contour height around Rothera Point. The recommended pedestrians access route follows the Mean High Water Mark (MHWM) and is shown on Map 2. During periods when the ground is snow-covered and sea ice has formed, pedestrians should ensure that they are at a safe distance from the shoreline and are not in danger of straying onto unreliable sea ice or into tide cracks.

Small areas of permanent ice occur to the north and south of the summit of the ASPA. There are no permanent streams or pools.

The rocks are predominantly heterogeneous intrusions of diorite, granodiorite and adamellite of the mid-Cretaceous-Lower Tertiary Andean Intrusive Suite. Veins of copper ore are prominent bright green stains on the rock. Soil is restricted to small pockets of glacial till and sand on the rock bluffs. Local deeper deposits produce scattered small circles and polygons of frost sorted material. There are no extensive areas of patterned ground. Around prominent rock outcrops used as bird perches by Dominican gulls (*Larus dominicanus*) there are accumulations of recent and decaying limpet (*Nacella concinna*) shells forming patches of calcareous soil. There are no accumulations of organic matter.

There are no special or rare geological or geomorphological features in the Area.

The limited terrestrial biological interest within the Area is confined to the rock bluffs where there is locally abundant plant growth dominated by lichens. The vegetation is representative of the southern "maritime"

Antarctic fellfield ecosystem and is dominated by the fruticose lichen *Usnea antarctica*, *Usnea sphacelala*, and *Pseudephebe minuscula*, and the foliose lichen *Umbilicaria decussata*. Numerous crustose lichens are associated, but bryophytes (mainly *Andreaea* spp.) are sparse.

A single very small population of Antarctic pearlwort (*Colobanthus quitensis*) occurs below the northern cliff of the Area, whilst a few plants of Antarctic hair grass (*Deschampsia antarctica*) have become established at two locations since 1989.

The invertebrate fauna is impoverished and consists only of a few species of mites and spring tails, of which *Halozetes belgicae* and *Cryptopygus antarcticus* are the most common.

There are no special or rare terrestrial flora and fauna in the Area.

Brown and south polar skuas (*Catharacta lonnbergii* and *C. maccormicki*) are the most abundant breeding birds found in the Area, with five pairs of skuas recorded nesting in the 2006/7 season. A pair of Dominican gulls (*Larus dominicanus*) nest in the Area. Wilson's storm petrels (*Oceanites oceanicus*) also breed, but only one nest has been found.

Rothera Research Station (UK) lies about 250 m west of the western boundary of the Area (see inset on Map 2).

6 (ii) Restricted zones within the Area

None.

6 (iii) Location of structures within the Area

A rock cairn marks the summit of the Area (36 m) and 35 m to the east south east of it there is another cairn (35.4) marking a survey station.

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

ASPA No. 107, Dion Islands, Marguerite Bay, lies about 15 km south of Adelaide Island. ASPA No. 115, Lagotellerie Island, Marguerite Bay, lies about 11 km south of Pourquoi Pas Island. ASPA No. 117, Avian Island, Marguerite Bay, lies about 0.25 km south of the south-west tip of Adelaide Island. The locations of these ASPAs are shown on Map 1.

7. Permit conditions

Entry to the Area is prohibited without a Permit. Permits shall be issued only by appropriate national authorities, and may contain both general and specific conditions.

General conditions for issuing a Permit to enter the Area may include:

- activities limited to scientific research or monitoring purposes;
- the actions permitted will not jeopardize the ecosystem or scientific or monitoring values of the Area;
- any management activities are in support of the objectives of the Management Plan;
- the actions permitted are carried out in accordance with this Management Plan;
- the permit holder must carry the permit, or an authorized copy, within the Area.

National authorities may attach further general and specific conditions to a permit.

7 (i) Access to and movement within the Area

Access to the Area shall be on foot.

Landing of helicopters within the Area is prohibited. As far as practicable, helicopter overflight of the Area shall be avoided.

Vehicles are prohibited in the Area.

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

II. Measures

Activities which are or may be conducted within the Area are:

- scientific research or monitoring which will not jeopardise the ecosystems of the Area;
- essential management activities.

7 (iii) Installation, modification or removal of structures

No structures are to be erected in the Area, or equipment installed, except for essential scientific or management activities (e.g. signboards, monitoring equipment) as specified in the permit.

All scientific and monitoring equipment, including marker stakes, installed in the Area must be approved by Permit and clearly identified to show principal investigator, project and year installation. The Permit holder must remove any scientific or monitoring equipment installed as soon as it is no longer required, or on the expiry of the permit, which ever is the sooner.

7 (iv) Location of field camps

Camping in the Area is prohibited. Accommodation may be available at Rothera Research Station.

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

No non-indigenous living animals, plant material, microorganisms or soil shall be deliberately introduced into the Area. All sampling equipment brought into the Area shall have been thoroughly cleaned. To the maximum extent possible, footwear, outer clothing, backpacks and other equipment used or brought into the Area shall be thoroughly cleaned before entering the Area.

Any hazardous substances or chemicals, including radioisotopes, which may be introduced for scientific, monitoring 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, food and other materials must not be stored in the Area, unless required for essential purposes connected with the activity for which the Permit has been granted. All such materials introduced shall be removed from the Area at or before the conclusion of the activity for which the Permit was granted. Permanent depots are not permitted.

No poultry products, including food products containing uncooked dried eggs, shall be taken into 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, except in accordance with a Permit. Where taking of or harmful interference with animals is involved this should in accordance with the SCAR Code of Conduct for the use of Animals for Scientific Purposes in Antarctica, as a minimum standard.

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

Material may be collected and/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. Material of human origin not brought into the Area by the Permit holder, or otherwise authorised, which is likely to compromise the values of the Area shall be removed unless the impact of removal is likely to be greater than leaving the material *in situ*. In the latter case the appropriate authority shall be notified.

7 (viii) Disposal of wastes

All wastes, including all human wastes, must 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

Permits may be granted to enter the Area to carry out scientific research, monitoring and Area inspection activities, which may involve the collection of a small number of samples for analysis, to erect or maintain signboards, or to carry out protective measures.

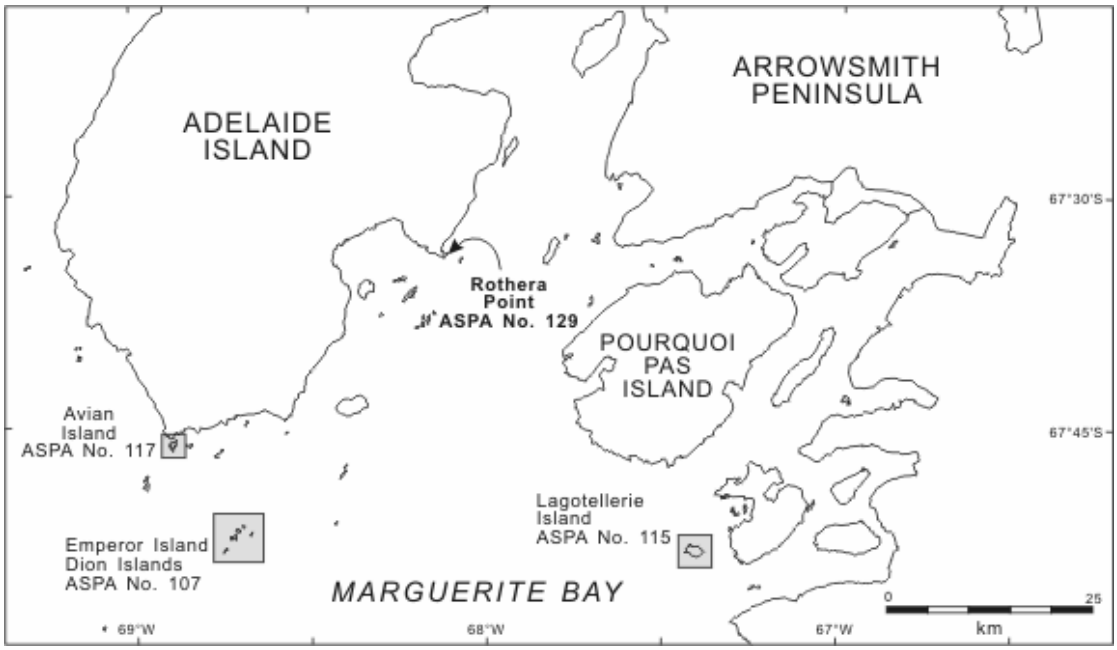
7 (x) Requirements for reports

Parties should ensure that the principal holder of each Permit issued submits to the appropriate authority a report describing the 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, should provide summary description of activities conducted by persons subject to their jurisdiction, in sufficient detail to allow evaluation of the effectiveness of the Management Plan. 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 used both in any review of the Management Plan and in organising the scientific use of the Area.

II. Measures

Map 1. ASPA No. 129 Rothera Point, location map.

Map specifications: Projection: WGS84 Antarctic Polar Stereographic. Standard parallel: 71°S. Central meridian 67°45'W.



Map 2. ASPA No. 129 Rothera Point, topographic map.

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