

Antarctic Specially Protected Area No. 140 (Site of Special Scientific Interest No. 21)

Shores of Deception Island, South Shetland Islands

i. *Description of Site.* The Site includes 5 areas on the coast of Port Foster, Deception Island (lat 62°55'S, long 60°37'W):

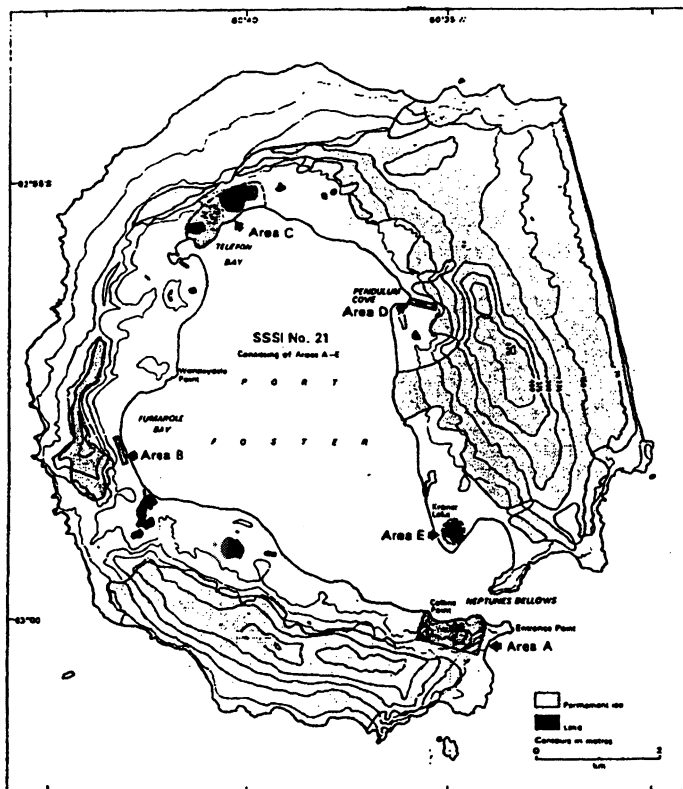
Area A. From the west side of Entrance Point to the west side of Collins Point on the south side of Neptune's Bellows, and extending 500 m inland from the shore.

Area B. Mid Fumarole Bay, south-west of Wensleydale Point extending for 500 m along the shore, to the line precipitous lava cliffs about 100 m inland.

Area C. The 'island' created during the 1967 eruption in Telefon Bay, and including the low land, containing a lake, which presently joins the new 'island' to the main island.

Area D. A strip 100 m wide extending from the high-water mark of the heated shoreline of Pendulum Cove inland to a series of gullies about 750 m inland. The area lies about 300 m south of the former Chilean station Pedro Aguirre Cerda.

Area E. Kroner Lake including the land within 50 m of its shore. The boundaries of these areas of the Site are shown on the attached map.



ASP A 140
Map A*

ii. *Reason for designation.* Deception Island is exceptional because of its volcanic activity, having had major eruption 1967, 1969 and 1970. Parts of the island were completely destroyed, new areas were created, others covered by varying depths of ash. Few areas of the interior were unaffected. The island offers unique

opportunities to study colonization processes in an Antarctic environment (the South Sandwich Islands and Bouvetøya are at a more advanced stage of colonization while Mt. Erebus and Mt. Melbourne are at considerable altitude and the biota are restricted to micro-organisms. Each of the area has been selected for different reasons:

Area A contains stands of closed vegetation buried by shallow ash but which have regenerated as isolated colonies. The beach area was occupied in summer 1981 by about 200 fur seals.

Area B was unaffected by the three eruptions and contains the most diverse flora on the island, including a few endemic and rare mosses and lichen.

Area C provides an entirely new substrate of known age, the colonization of which has been studied since its creation.

Area D includes two areas of heated ground-on the beach close to the shore and inland in a gully - where unique bryophyte communities have developed containing several species not known elsewhere in the Antarctic.

Area E is a small shallow crater lake with geothermal activity, the water and shore being warm to hot and the benthos colonized by various thermophilic algae.

iii. *Outline of research.* Several studies of the terrestrial and freshwater biota have been carried out before and after the eruptions, and changes in the biota and recolonization of new surfaces are being studied. Theses will continue but will also be extended to other areas of the island, while the succession of organism associated with heated ground and the biota of the various types of lakes will be investigated in greater detail.

iv. *Date of expiry of designation.* 31 December 1995.

v. *Access points.* No access points are stated.

vi. *Pedestrian and vehicular routes.* Entry to the Areas should be limited to research scientists. Tourists should be excluded. No vehicles, including helicopters, should be used within any Area of the Site. Pedestrians should exercise great care when walking over the terrain which is loose and soft, where the substrate and vegetation are extremely vulnerable to damage by trampling.

vii. *Other kinds of scientific investigations which would not cause harmful interference.* Other research which would not interfere with that outlined above may be carried out.

viii. *Scientific sampling.* The collection of specimens should be the minimum required for the research being undertaken.

ix. *Other restraints.* In order to minimize microbial and cryptogamic contamination of substrate, the soles of footwear should be cleaned and disinfected (for example, by rinsing with alcohol) before entering the Areas.