



Management Plan

for Antarctic Specially Protected Area No. 167 HAWKER ISLAND, PRINCESS ELIZABETH LAND

Introduction

Hawker Island (68°38'S, 77°51'E, Map A) is located 7 km south-west from Davis station off the Vestfold Hills on the Ingrid Christensen Coast, Princess Elizabeth Land, East Antarctica. The island was designated as Antarctic Specially Protected Area (ASP) No. 167 under Measure 1 (2006), following a proposal by Australia, primarily to protect the southernmost breeding colony of southern giant petrels (*Macronectes giganteus*) (Map B). The Area is one of only four known breeding locations for southern giant petrels in East Antarctica, all of which are ASPs: ASPA 102, Rookery Islands, Holme Bay, Mac.Robertson Land (67°36'S, 62°53'E) – near Mawson Station; ASPA 160, Frazier Islands, Wilkes Land (66°13'S, 110°11'E) – near Casey station; and ASPA 120, Pointe Géologie, Terre Adélie (66°40'S, 140°01'E) – near Dumont d'Urville. Hawker Island also supports breeding colonies of Adélie penguins (*Pygoscelis adeliae*), south polar skuas (*Catharacta maccormicki*), and Cape petrels (*Daption capense*). Occasionally Southern elephant seal (*Nirounga leonine*) haul out on the southern beaches and Weddell seals (*Leptonychotes weddellii*) pup on the sea ice nearby.

1. Description of values to be protected

The total population of southern giant petrels in East Antarctica is currently unknown but is likely to represent less than 1% of the global breeding population. There are four known colonies in East Antarctica. At Hawker Island, there were 31 adults, 27 chicks and 3 yearlings (non-breeders, age 1 year) in January 2020. No more than 4 nests (one with a chick) were occupied at Giganteus Island (Rookery Islands ASPA 102) in January 2010. The last estimate of approximately 250 pairs at the Frazier Islands (ASP 160) dates back to 2001 and comprised numbers only at one of the three islands. At Pointe Géologie (ASP 120), 19 breeding pairs were recorded in 2016. Southern giant petrels also breed on other islands in the southern Indian and Atlantic oceans, and at the Antarctic Peninsula.

The southern giant petrel colony at Hawker Island was discovered in December 1963; 40–50 nests were estimated some with eggs, but it is unclear whether all the nests were occupied. From 1963 to 2007, adults, eggs or chicks were counted intermittently at various stages of the breeding cycle. Because of the variability in the timing of counts and the inconsistency of count units, it is not possible to establish a long-term trend for this population. Low numbers were previously reported for this colony, because counts included only the numbers of chicks banded in a given year, rather than total chick numbers.

Breeding southern giant petrels are sensitive to disturbance at the nest. Restrictions on activities permitted at breeding sites near Australian stations were introduced in the mid-1980s including a prohibition of banding.

Hawker Island also supports breeding colonies of Adélie penguins (*Pygoscelis adeliae*), south polar skuas (*Catharacta maccormicki*), Cape petrels (*Daption capense*) and occasionally Weddell seals (*Leptonychotes weddellii*).



2. Aims and objectives

Management of the Hawker Island ASPA aims to:

- Protect the breeding colony of southern giant petrels and other wildlife.
- Avoid human disturbance or other adverse impacts on the values of the Area, while still allowing research or other activities consistent with this Plan.
- Protect the values of Hawker Island as a reference area for future comparative studies with other breeding populations of southern giant petrels.
- Minimise the possibility of the introduction of alien plants, animals and microbes to Hawker Island.
- Allow visits for management purposes in support of the aims of the management plan.

3. Management activities

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

- Research visits to assess population levels and trends of the southern giant petrel colony and/or other wildlife shall be permitted. Wherever feasible, preference shall be given to activities and methodologies which minimise disturbance to the breeding colony (for example, use of automated cameras).
- Where practicable, the Area shall be visited outside the breeding season of southern giant petrels (i.e. during the period mid-April to mid-September), as necessary, to assess whether it continues to serve the purposes for which it was designated and to ensure that management activities are adequate.
- Information on the location of Area (stating the restrictions that apply) shall be produced, and copies of this management plan shall be available at nearby stations. Informative material and the management plan should be provided to everyone visiting the vicinity.
- 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: Hawker Island Antarctic Specially Protected Area, Vestfold Hills, Ingrid Christensen Coast, Princess Elizabeth Land, East Antarctica.

Map B: Hawker Island, Antarctic Specially Protected Area, Vestfold Hills, Ingrid Christensen Coast, Princess Elizabeth Land, East Antarctica, Biota, Topography and Physical Features.

Specifications for maps:

Projection: UTM Zone 49

Horizontal Datum: WGS84

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

Hawker Island is located at 68°38'S, 77°51'E, approximately 300 m offshore from the Vestfold Hills. The Vestfold Hills are roughly triangular ice-free area of approximately 512 km² of bedrock, glacial debris, lakes and ponds. The Vestfold Hills are bound by the ice plateau to the east, the Sørsdal Glacier to the south and Prydz Bay to the west, and contain low hills (maximum height 158 m at Boulder Hill) and valleys, and are penetrated deeply by fjords and lakes. Numerous islands fringe the coast of the Vestfold Hills, and Hawker Island lies in the south-west, between Mule Island and Mule Peninsula.

Hawker Island is an irregularly shaped island of low elevation (maximum elevation of nearly 40 m), with two parallel ranges of hills running in a north-south direction terminating in two small southern peninsulas. A third peninsula lies directly west and terminates with a 40 m hill with steep cliffs to the sea on the western and southerly aspects. A number of small freshwater lakes lie between the ranges of hills on the northern part of the island, with a number of small lakes lying on the flatter terrain on the eastern sector of the island. At its maximum extent the island is 2 km north to south and 1.7 km east to west.

The Area comprises the entire terrestrial area of Hawker Island, with the seaward boundary at the low water mark (Map B). Hawker Island is approximately 1.9 km². There are no boundary markers.

Environmental Domains, Antarctic Conservation Biogeographic Regions and Important Bird Areas

Based on the Environmental Domains Analysis for Antarctica (Resolution 3 (2008)) Hawker Island is located within Environment D East Antarctica coastal geologic. Based on the Antarctic Conservation Biogeographic Regions (Resolution 3 (2017)) Hawker Island is located in Biogeographic Region 7 East Antarctica. Hawker Island is not identified as an Antarctic Important Bird Area under Resolution 5 (2015).

Human history

On 9 February 1931, Douglas Mawson on the BANZARE voyage of the Discovery made the first recorded sighting of the Vestfold Hills. Four years later, on 20 February 1935, Captain Klarius Mikkelsen of the tanker Thorshavn (Lars Christensen Company), sighted and landed in the area. He named many features in the area and in the Vestfold Hills after his home province in Norway. The Vestfold Hills were again visited by Mikkelsen in early 1937, while undertaking an aerial survey of the coast.

In January 1939, the American explorer, Lincoln Ellsworth, and his Australian adviser, Sir Hubert Wilkins, were the next recorded visitors to the area in the motor ship Wyatt Earp. Ellsworth flew some 400 km inland. In early 1947, the USS Currituck visited the Ingrid Christensen Coast as part of Operation Highjump. Photographic flights were conducted to survey the coastline.



The first Australian National Antarctic Research Expeditions (ANARE) visit to the area was led by Dr Phillip Law on Kista Dan and reached the Vestfold Hills on 1 March 1954. In January 1956, members of the First Soviet Antarctic Expedition landed on the Ingrid Christensen Coast in preparation for the International Geophysical Year and established Mirny station 595 km to the east. Australia established Davis station in the Vestfold Hills in 1957. Hawker Island was named for A.C. Hawker, radio supervisor at Davis station in 1957.

Climate

Meteorological data for the Area are confined almost entirely to observations at Davis station, 7 km northwest of Hawker Island. The Vestfold Hills area has a polar maritime climate that is cold, dry and windy. Summer days are typically sunny, with midday temperatures from -1°C to $+2.9^{\circ}\text{C}$ and a summer maximum of $+5^{\circ}\text{C}$, but temperatures are below 0°C for most of the year falling to as low as -40.7°C in winter. The maximum temperature recorded at Davis station from 1957 to 2001 was $+13^{\circ}\text{C}$. Long periods of relatively calm, fine conditions occur throughout the year. Winds are generally light; the yearly average is around 20 km/h. Violent winds and blizzards can commence with little warning, and gusts of over 200 km/h have been recorded. Snowfall averages 78 mm/y, with the greater proportion of annual accumulation resulting from windblown drift. Apart from several permanent ice banks, the Vestfold Hills are virtually snow free in summer and lightly covered in winter. The weather record illustrates the seasonal climate expected for high latitudes, but on average, Davis station is warmer than other Antarctic stations at similar latitudes. This has been attributed to the “rocky oasis”, which results from the lower albedo of rock surfaces compared to ice, hence, more solar energy is absorbed and re-radiated.

Geology

The Vestfold Hills consist of Archaean gneiss, upon which thin and often fossiliferous Pliocene and Quaternary sediments occupy depressions. The oldest known Cenozoic strata in the Vestfold Hills are the mid-Pliocene Sørsdal Formation, which contains a diverse marine fossil flora and fauna. Other younger Cenozoic strata attest to repeated glaciation, and several marine transgressions and regressions. The three major lithologies forming the Vestfold Hills are (in order of age) Chelnock Paragneiss, Mossel Gneiss and Crooked Lake Gneiss. This is repeated in units from east-north-east to west-south-west. Intruded into these, are groups of mafic dykes in a rough north-south orientation. The dykes are a major feature of the Vestfold Hills. Hawker Island comprises an extension of the Crooked Lake Gneiss of the northern portion of Mule Peninsula above Laternula Inlet. In common with the Archaean gneisses in the Vestfold Hills, the Hawker Island Crooked Lake Gneiss is cut by very distinctive, early to middle Proterozoic dolerite dykes.

Southern Giant Petrels

At Hawker Island, the southern giant petrel colony is situated at the northern end of the island on slightly sloping and uneven ground. The eastern side of the breeding area forms a small ridge about 20 m above sea level (Map B). The petrels have used the same area as a breeding site since it was first sighted in 1963–64. The small ridge provides a good area for take-off into the prevailing north-easterly winds.

The breeding season for southern giant petrels on Hawker Island commences from late September to early October, and eggs are laid during the second half of October. Following an incubation period of about 60 days, chicks hatch in the second half of December. Hatching continues over a period of three to four weeks until mid-January. About 14 to 16 weeks after hatching, the fledglings leave the colony from late March to early May. From the analysis of year round automated cameras and visits during recent winters, it is known that a small number of birds are present outside the breeding season; hence, the requirement to conduct visits to the Area in a manner that ensures minimal disturbance at any time of the year.

In the mid-1980s, a management strategy was implemented for all three southern giant petrels breeding localities near the Australian stations in East Antarctica, to minimise human disturbance. Previously, the Australian Antarctic Program restricted census visits to one in every three to five year period and implemented tight administrative controls over all other visits. At the time, this level of visitation was considered an appropriate balance between the risk of disturbing the birds and the need to obtain meaningful population data. With the development of new technologies (for example, automated cameras), detailed information can now be obtained with little or no human presence throughout the year.

In March 2011, 23 chicks and 64 adults were observed in the Area. Of the adult birds observed, four were banded birds, two of which were banded in the Casey region (dated 1985) and two were banded at Hawker Island (dated 1986). The two birds banded in the Casey region were not attending chicks but their presence within the colony suggests that immigration may occur from a hatchling colony. In January 2020, 31 adults, 3 yearlings (non-breeders, age 1 year) and 27 chicks were present.

Other birds

Adélie penguins breed along the Vestfold Hills coastline and on at least 25 offshore islands including Hawker Island. The total number of Adélie penguins in the Vestfold Hills was approximately 324,000 pairs in 2009/10. The Hawker Island colony is located in the vicinity of a small hill, midway on the western side of the island, and has been estimated at around 5000 pairs in 2009/10. The first Adélie penguins usually appear in the area in mid-October and eggs are laid about four weeks later. The interval between laying of the first and second egg is 2 to 4 days, and the incubation period lasts 32 to 35 days. The last moulted adults depart Hawker Island by the end of March.

A small colony of Cape petrels (12 pairs in 2017/18) exists on the southern tip of the south western peninsula. Cape petrels are absent from the Area in winter; they return to their nesting sites during October, lay eggs from late November to early December and chicks fledge from late February and early March.

South polar skuas are often seen near the Adélie penguin colony and may breed nearby.



Seals

Weddell seals are seen year-round in small numbers throughout the Vestfold Hills. They breed mainly in Long Fjord, Tryne Fjord and the Wyatt Earp Islands area, and occasionally on the south-east part of Hawker Island. Weddell seal numbers start to increase in late September and early October, and pupping occurs from mid-October to late November. Throughout summer, moulting Weddell seals continue to frequent the remnant fast ice and very occasionally haul out onto land. The numbers of seals seen in the Vestfold Hills fluctuates between winter and summer.

Non-breeding groups of southern elephant seals (*Mirounga leonina*) haul out during the summer months (December–April) near the south-western peninsula of Hawker Island and at several other sites along the southern coast of the Vestfold Hills (eg. at the station, Old Wallow). Like Old Wallow, the Hawker Island moulting areas contain layered deposits of hair and excrement that have accumulated over several thousand years and these areas could be considered as unique and sensitive locations.

Vegetation

The flora of the Vestfold Hills comprises at least 82 species of terrestrial algae, six moss species and at least 23 lichen species. With modern genetic analysis it is anticipated higher diversity would be found in sublithic communities.

The lichens and mosses are distributed chiefly in the eastern or inland sector and their distribution patterns reflect the availability of drift snow, time since exposure of the substrate from the ice plateau, time since the last glaciation, elevation and proximity to saline waters. Very few lichens or mosses occur along the salt-affected coastal margin including Hawker Island where the low terrain is densely covered with extensive sand and moraine deposits.

Terrestrial algae are widespread and are major primary producers in the Vestfold Hills. Sublithic (or hypolithic) algae have been reported from Hawker Island, developing on the undersurfaces of translucent quartz stones that are partially buried in soil. The dominant algae, Cyanobacteria, particularly *oscillatoriacean* species, *Chroococidiopsis* sp., and *Aphanothece* sp. occur with the greatest frequency together with the *Chlorophyta* species, cf. *Desmococcus* sp. A and *Prasiococcus calcarius*. The endaphic alga *Prasiola crispa* occurs as green crumpled sheet-like strands at melt flushes, usually associated with the diatom *Navicula muticopsis* and *oscillatoriacean* algae. The ornithophilous lichen *Candelariella flava* grows at Hawker Island, and is associated with seabird nesting sites.

Invertebrates

An extensive survey of terrestrial tardigrades undertaken in the Vestfold Hills in 1981 found four genera and four species of tardigrade. Although no tardigrades were recovered from the Hawker Island sample site, it is possible that they may be found in other coastal areas of similar ecology, associated with *Prasiola crispa* as two species of tardigrade, *Hypsibius allisonii* and *Macrobiotus fuciger* were recovered from Walkabout Rocks. The mite *Tydeus erebus* is associated with the breeding colony of Adélie penguins on the island.

6(ii) Access to the Area

Depending on sea ice conditions, vehicles, small boats or aircraft can approach the Area but all must remain outside the Area. Vehicles and aircraft approaching the Area via the sea ice must adhere to minimum separation distances from all wildlife.

6(iii) Location of structures within and adjacent to the Area

There are no permanent structures within or adjacent to the Area. At the time of writing, three automatic cameras are temporarily located near the southern giant petrel colony, for the purposes of ongoing population monitoring.

6(iv) Location of other protected areas in the vicinity

The following Protected Area is located near Hawker Island: Marine Plain, Antarctic Specially Protected Area No. 143 (68°36'S, 78°07'E).

6(v) Special zones within the Area

There are no special zones within the Area.

7. Terms and conditions for entry permits

7(i) General conditions

Visits to the Area are prohibited, except in accordance with a permit issued by an appropriate national authority. Permits to enter the Area may only be issued for compelling scientific research that cannot be undertaken elsewhere, or for the purpose of essential management of the Area consistent with the objectives and provisions of this 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.

Permits shall include a condition that the permit or a copy shall be carried at all times when within the Area. Additional conditions, consistent with the objectives and provisions of the management plan, may be included by the issuing authority. The principal permit holder for each permit issued is required to submit to the permit issuing authority a visit report detailing all activities undertaken within the Area and all census data obtained during the visit.

Collaboration with other national programs is encouraged to reduce duplication of research and minimise disturbance of the southern giant petrels. National Antarctic programs planning research in this Area are encouraged to contact the Australian Antarctic Division, which maintains a regular population monitoring program on the island, to ascertain other projects that may be undertaken that season.



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

- Vehicles are prohibited within the Area.
- Depending on sea ice conditions, vehicles (including quad-bikes), small boats or aircraft can approach the Area but all must remain outside the Area. Vehicles and aircraft approaching the Area via the sea ice must adhere to minimum separation distances from all wildlife. Boats used to visit the island must be left at the shoreline.
 - Vehicles shall remain on the sea ice at least 150 m (quad-bike) or 250 m (other wheeled vehicles) from the edge of the southern giant petrel colony (see Table 1).
- Movement within the Area is to be by foot only. Only personnel required to carry out scientific/management work in the Area may leave the landing/parking site.
- The minimum (closest) approach distances to wildlife are set out in Table 1. If disturbance of wildlife is observed, separation distance should be increased or the activity modified until there is no visible disturbance, unless a closer approach distance is authorised in a permit.
- Persons authorised by permit to approach southern giant petrels to obtain census data or biological data should maintain the greatest practical separation distance.
- To reduce disturbance to wildlife, 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 significant noise (thereby causing disturbance to nesting southern giant petrels and other nesting birds) is prohibited within the Area during the breeding period for southern giant petrels (from mid-September to mid-April).
- During the southern giant petrel breeding season, overflights of the island are prohibited, except where essential for scientific or management purposes of the Area and authorised in a permit. Such overflights are to be at an altitude of no less than:
 - 930 m (3,050 ft) for single-engine helicopters.
 - 930 m (3,050 ft) for twin-engine fixed-wing aircraft.
 - 1,500 m (5,000 ft) for twin-engine helicopters.
- Overflights of bird colonies in the Area by remotely piloted aircraft systems (RPAS) are prohibited, except where essential for compelling scientific or management purposes. Such overflights shall be undertaken in accordance with the *Environmental guidelines for operation of Remotely Piloted Aircraft Systems (RPAS) in Antarctica*.
- If required for an emergency, vehicles or aircraft may enter the Area.

Table 1: Minimum distances to maintain when approaching wildlife at Hawker Island

Distances (m)				
Species	People on foot / ski (unless a closer approach distance is authorised in a permit)	Quad/Skidoo	Hagglunds (and similar vehicles)	Small watercraft
Southern giant petrels	100 m	Not permitted inside the Area. Parking shall be on the sea ice and no closer than 150 m from wildlife colonies.	Not permitted inside the Area. Parking shall be on the sea ice and no closer than 250 m from wildlife colonies.	Watercraft should not be landed within 50 m of wildlife; in particular, the Adélie penguin colony on the eastern shore. Care shall be taken when in close proximity to the island.
Adélie penguins in colonies	30 m			
Moulting penguins				
Seals with pups				
Seal pups on their own				
South polar skuas on nests				
Penguins on sea ice	5 m			
Non breeding adult seals				

7(iii) 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 15 April to 15 September (southern giant petrel non-breeding period) as authorised in a permit:

- scientific research consistent with the provisions of this management plan which cannot be undertaken elsewhere or in the Area outside that period, and which will not jeopardise the values for which the Area has been designated or the ecosystems of the Area
- essential management activities including monitoring
- sampling, which should be the minimum required for approved research programs.

Activities undertaken within the breeding period of the southern giant petrel shall only be permitted if the activity is non-invasive and cannot reasonably be undertaken during the non-breeding period.

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

- Permanent structures or installations are prohibited.
- Temporary structures or equipment, including cameras, shall only be erected within the Area in accordance with a permit.
- Small temporary refuges, hides, blinds or screens may be constructed for the purpose of facilitating scientific study.
- Installation (including site selection), removal, modification or maintenance of structures or equipment shall be undertaken in a manner that minimises disturbance to breeding birds and the environment. If possible, these activities should be carried out from 15 April to 15 September (non-breeding period of southern giant petrels).



- All scientific equipment or markers installed within the Area must be clearly identified by country, name of the principal investigator and year of installation.
- Markers, signs or other structures erected within the Area for scientific or management purposes shall be secured and maintained in good condition and removed under permit when no longer required. All such items should be made of materials that pose minimal risk of harm to wildlife or of contamination of the Area.

7(v) Location of field camps

- Camping is prohibited within the Area except in an emergency. Any emergency camp should avoid areas of wildlife concentrations, if feasible.

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

- Fuel is not to be stored in the Area. Boat refuelling is permitted at landing sites. A small amount of fuel may be taken into the Area for an emergency stove.
- No poultry products, including dried food containing egg powder, are to be taken into the Area.
- No herbicides or pesticides are to be brought into the Area.
- Any chemical, which may be introduced for compelling scientific purposes, as authorised in a permit, shall be removed from the Area, at or before the conclusion of the activity for which the permit was granted. The 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 (particularly footwear) should be thoroughly cleaned before entering the Area.
- All material introduced into the Area shall be for a stated period only, shall be removed at or before the conclusion of that stated period, and shall be stored and handled so as to minimise the risk of environmental impact.

7(vii) 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 a permit issued in accordance with Article 3 of Annex II to the Protocol on Environmental Protection to the Antarctic Treaty. The permit shall clearly state the limits and conditions for such activities which, except in an emergency, shall only occur following approval by an appropriate animal ethics committee.
- Research visits to assess population levels and trends of the southern giant petrel colony and/or other wildlife may be permitted. Wherever feasible, preference shall be given to activities and methodologies that minimise disturbance to the breeding colony (e.g. use of automated cameras).
- Research should be limited to activities that are non-invasive and non-disruptive to breeding southern giant petrel within the Area.
- Disturbance of southern giant petrels or other wildlife should be avoided or minimised.

7(viii) Collection or removal of anything not brought into the Area by the permit holder

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

7(ix) Disposal of Waste

- All wastes including human wastes shall be removed from the Area.

7(x) Measures that may be necessary to continue to meet the aims of the management plan

- GPS data shall be obtained for specific sites of long term monitoring for lodgement with the Antarctic Master Directory through the appropriate national authority.
- Permits may be granted to enter the Area to carry out biological monitoring and management activities, which may include collecting rubbish or samples for analysis or review; the erection or maintenance of temporary scientific equipment and structures, and signposts; or for other protective measures.
- To help maintain the ecological and scientific values of the Area, visitors shall take special precautions against introductions of non-indigenous organisms. Of particular concern are pathogenic, microbial or vegetation introductions sourced from soils, flora and fauna at other Antarctic sites, including research stations, or from regions outside Antarctica. To minimise the risk of introductions, before entering the Area visitors shall thoroughly clean footwear and any equipment, particularly sampling equipment and markers to be used in the Area.

7(xi) Requirement for reports

Parties shall ensure that the principal permit holder for each permit submits a report on activities undertaken to the appropriate National Authority. Such reports should include, as appropriate, the information identified in the visit report form contained in the *Guide to the Preparation of Management Plans for Antarctic Specially Protected Areas*.

Parties shall maintain a record of such activities and in the annual exchange of information shall provide summary descriptions of activities conducted by persons subject to their jurisdiction, which shall be in sufficient detail to allow evaluation of the effectiveness of this management plan.

Parties shall, wherever possible, deposit originals or copies of such original reports in a publicly accessible archive to maintain a record of use, to be used both in any review of the management plan and in organising the scientific use of the Area.



A copy of the report shall be forwarded to the National Authority responsible for development of the management plan to assist in management of the Area, and monitoring of bird and other wildlife populations. Additionally, visit reports shall provide detailed information such as census data, locations of any new colonies or nests not previously recorded, a brief summary of research findings and copies of photographs taken of the Area.

8. Supporting documentation

Some or all of the data used in this Management Plan were obtained from the Australian Antarctic Data Centre (IDN Node AMD/AU), a part of the Australian Antarctic Division (Commonwealth of Australia).

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7(xii) Emergency provisions

Exceptions to restrictions outlined in the management plan are in emergency as specified in Article 11 of Annex V to the Protocol on Environmental Protection to the Antarctic Treaty. A report of any such actions shall be provided to the relevant National Authority.

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Map A: Antarctic Specially Protected Area No 167, Hawker Island
Vestfold Hills, Ingrid Christensen Coast, East Antarctica





Map B: Antarctic Specially Protected Area No 167, Hawker Island Vestfold Hills, Ingrid Christensen Coast, East Antarctica Topography and Fauna Distribution



- Contour (5 metre interval)
 - Ice-free area
 - Lake
 - Antarctic Specially Protected Area
 - Adélie penguin colony
 - ✈ Southern giant petrel colony
 - ✈ Cape petrel colony
 - Southern elephant seal haulout area (Jan-May)
- 0 100 200 300 400 Metres
- Horizontal Datum: WGS84
Projection: UTM Zone 44

Map Available at: <http://data.aad.gov.au/aadc/mapcat/>
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