Revised Management Plan for Antarctic Specially Protected Area No. 122. Arrival Heights, Hut Point Peninsula, Ross Island

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| **ASPA No.122 Arrival Heights, Hut Point Peninsula, Ross Island** | |
| **1. Is a new ASPA proposed?** | No |
| **2. Is a new ASMA proposed?** | No |
| **3. Does the proposal relate to an existing ASPA or ASMA?** | Yes |
| *First designation:* | Recommendation VIII-4 (1975) SSSI No. 2 |
| *First adoption of management plan:* | Recommendation VIII-4 (1975) SSSI No. 2 |
| *Any revisions to management plan:* | Measure 2 (2004), Measure 3 (2011), Measure 3 (2016) |
| *Current management plan:* | ASPA No. 122, Arrival Heights, Hut Point Peninsula, Ross Island |
| *Any extensions of expiry dates of management plan:* | Recommendation X-6 (1979), Recommendation XII-5 (1983), Recommendation XIII-7 (1985), Recommendation XIV-4 (1987), Resolution 3 (1996), Measure 2 (2000) |
| *Renamed and renumbered by Decision 1 (2002) as:* | ASPA No. 122, Arrival Heights, Hut Point Peninsula, Ross Island |
| *Other relevant measures:* | SCAR Recommendation XXIII-6 (1994), Resolution 1 (1998) |
| **4. If the proposal contains a revision of an existing management plan, please indicate the types of amendment:** | |
| *(i) major or minor?* | Minor. |
| *(ii) any changes to the boundaries or co-ordinates?* | No |
| *(iii) any changes to the maps? If yes, are the changes in the captions only or also in the graphics?* | Yes. Changes to captions and graphics. New facilities and Restricted Zone added. |
| *(iv) any change to the description of the area that is relevant to identifying its location or its boundaries?* | No |
| *(v) any changes that affect any other ASPA, ASMA or HSM within this area or adjacent to it? In particular, please explain any merger with, incorporation of or abolition of any existing area or site.* | No |
| *(vi) Other - brief summary of other types of changes, indicating the paragraphs of the management plan in which these are located.* | The scientific description of the Area has been updated to reflect recent information and results. Details are provided below. |
| **5. If a new ASPA or ASMA is proposed, does it contain any marine area?** | N/A |
| **6. If yes, does the proposal require the prior approval of CCAMLR in accordance with Decision 9 (2005)?** | N/A |
| **7. If yes, has the prior approval of CCAMLR been obtained?** | N/A |
| *If yes, please list the CCAMLR Final Report and Paragraph No.* | N/A |
| **8. If the proposal relates to an ASPA, what is the primary reason for designation (*i.e.*, which part under Article 3.2 of Annex V)?** | The primary reason for designation is the scientific value of the Area as an electromagnetically ‘quiet’ site for the study of the upper atmosphere. Under Article 3.2 of Annex V the main reason for special protection is:  (e) areas of particular interest to on-going or planned scientific research.  While the Area is not intended to be kept inviolate, compared to the surrounding area it has remained relatively undisturbed and thus has value for ecological comparisons. |
| **9. Have you identified the main Environmental Domain represented by the ASPA/ASMA (Resolution 3 (2008))?** | Yes. Environment S – McMurdo – South Victoria Land Geologic. |
| **10. Have you identified the main Antarctic Conservation Biogeographic Region represented by the ASPA/ASMA (Resolution 3 (2017))?** | Yes. ACBR9 – South Victoria Land. |
| **11. Have you identified any Antarctic Important Bird Areas represented by the ASPA/ASMA (Resolution 5 (2015))?** | N/A. |

ASPA No. 122 Arrival Heights, Hut Point Peninsula, Ross Island

1. The Management Plan for ASPA No. 122 Arrival Heights, Hut Point Peninsula, Ross Island was last reviewed in 2016, and review therefore fell due in 2021. Accordingly, the United States has verified with scientists working in the Area that the values under special protection are still valid and that measures for protection of those values are generally sufficient, although there remain concerns about electromagnetic interference and the need for improvements.
2. Arrival Heights was originally designated as Site of Special Scientific Interest (SSSI) No. 2 through Recommendation VIII-4 (1975) due to its value as an electromagnetically quiet site for the study of the upper atmosphere. The current Management Plan reaffirms the high scientific value of the Area for study of the upper atmosphere and for other scientific programs. Despite some increases in electromagnetic interference (EMI) from activities in the vicinity, research within the Area appears to operate within acceptably low levels of EMI and the aims and objectives set out in the management plan for Arrival Heights therefore remain relevant.
3. Detailed input and comment from the scientific community working at Arrival Heights was requested and received, and information on facilities and management procedures were reviewed and brought up to date. The review concluded that the values of the Area remain valid and no changes have been made to the boundaries of the Area. Therefore the revisions have been classified as ‘minor’ in nature and in effect.
4. As was the case at the previous review, some concerns were raised about some activities occurring outside of the ASPA that appear to be affecting scientific research conducted within the ASPA, in particular electromagnetic emissions in the low frequency range emitted from the nearby wind turbines. The review noted that New Zealand plans to replace the existing wind turbines, and that the replacements have potential to affect science at Arrival Heights and this has been highlighted for attention in the Environmental Impact Assessment. This matter cannot be addressed through the ASPA management plan because the potential source of the interference lies outside of the boundary of the Area, and this has been noted for consideration by operators in the region.
5. In view of incidences of electromagnetic interference, New Zealand and the United States continue to consult together with a view to identifying the sources and exploring additional ways in which these can be minimized. In this respect it was considered desirable to initiate further scientific dialogue on interference issues, to carry out appropriate investigations, and take steps to eliminate or mitigate interference – originating both within and outside of the Area – to the extent practicable.
6. New Zealand installed a new Geomagnetic Observatory at Arrival Heights in 2021/22, which is located ~200 m NE of the main United States laboratory (Map 2). The objective of the Observatory is to capture data continuously on natural changes in the regional Earth’s magnetic field as part of a global recording network. The Observatory comprises a Variometer hut and an Absolute hut, with power and data service cables extending to the existing New Zealand laboratory. Instruments collecting data at the Observatory are particularly sensitive. After consultation between New Zealand and the United States, the Observatory was intentionally located away from other facilities in order to minimize both the effects of, and on, other activities and experiments.
7. New Zealand proposed designation of a new Restricted Zone around the Observatory to help minimize potential interference and to provide spatially explicit guidance related to activities at and near the Observatory. The Restricted Zone defines specific conditions for access and installations within a radius of 140 m from the two Observatory huts. The Arrival Heights science community were consulted on the proposed Restricted Zone, which involved over 50 scientists, support staff and management personnel, principally from New Zealand and the United States, although also including international collaborators (e.g. Japan, United Kingdom).
8. Comments received in the consultation were supportive and no objections were made. It was considered important that road access to Second Crater be maintained. It was also recommended that application of zoning should be reserved for more substantial and / or long-term facilities with special management requirements, rather than for general application to every experiment or installation, for which provisions elsewhere within the management plan are provided.
9. The Restricted Zone boundary and conditions for access, installations and activities have been defined in the revised management plan taking into account these comments (Map 2).
10. The principal changes to the provisions of the existing Management Plan include:
    1. Revisions throughout the plan to achieve consistency with the Committee for Environmental Protection *Guide to the Preparation of Management Plans for Antarctic Specially Protected Areas* adopted in Resolution 2 (2011), and with new agreements and guidance reached by the ATCM since the previous Management Plan was adopted, and with other management plans recently adopted by the ATCM.
    2. *Section 5 Maps*. Maps have been updated, including use of color to improve clarity;
    3. *Section 6 (i) Geographical coordinates, boundary markers and features*. The description of the Area was updated to reflect recent scientific results;
    4. *Section 6(iii) Location of structures within and adjacent to the Area.* The nature and locations of structures were updated (Map 2).
    5. *Section 6(v) Special zones within the Area*. A new Restricted Zone was added surrounding the Geomagnetic Observatory installed by New Zealand in 2021/22.
    6. *Section 7(ii)* relating to aircraft access and overflight has been updated to note that flight restrictions also apply to Remotely Piloted Aircraft Systems (RPAS), with reference to the Environmental Guidelines for operation of RPAS in Antarctica (Resolution 4 (2018)).
    7. *Section 8 - Supporting documentation*. The reference list has been updated.

Recommendation

The revised Management Plan is attached for consideration by the Committee for Environmental Protection for recommendation for adoption by the Antarctic Treaty Consultative Meeting.