20th Prince Edward Islands Management Committee Meeting

8 November 2005

(2.2) Agreed will be same h'copter support in April 2006

AGENDA
of the
20th PRINCE EDWARD ISLANDS MANAGEMENT COMMITTEE MEETING

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VENUE: *Department of Environmental Affairs & Tourism*
Directorate: Antarctica & Islands Conference Room
Southern Life Building (4th Floor)
44 Hertzog Boulevard
Foreshore
CAPE TOWN

Howard Humphries SANParks

DATE: *Tuesday, 8 November 2005*

TIME: *09:00* 2.8: Biodiversity Survey 2007/08 (by MCM) (IPY)

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1. **WELCOME AND OPENING**

2. **MINUTES OF THE 19th PRINCE EDWARD ISLANDS MANAGEMENT COMMITTEE MEETING (*2 March 2005*)** *Doc 2*

MATTERS ARISING: commissioning – 30.06.2007

2.1 Building of new and decommissioning of old Marion Island base
- Update on progress made *(Mr H Valentine)*
- Testing of portaloos (which chemicals can be used) *(Dr M de Villiers)* *Doc 2.1A*
- Burning of wood / Inspection of construction site *(for info)* *Doc 2.1B*

* 2.2 Removal of rubble and building waste ("Country clean-ups" at Marion) (par. 2.3) *(Mr J Cooper)* – h'copter support.

2.3 Quarantine measures to halt alien invasions of Southern Ocean Islands (par. 2.5) budget from 2007/08 / Apr 2006
- Implementation strategy / Field plan *(Dr M de Villers)* rodent poison bait store in hand
- Electronic fly killers at Paardeneiland and other stores *(Mr H Valentine)* + isopod
- Possibility of appointing of overwintering Aliens Officer *(Mr H Valentine)*

2.4 World Heritage Site (WHS) status for the Prince Edward Islands (par. 2.6) *(Mr H Valentine)* ready by 25/11 → 16/12 PEMC

bait stns in hand received

2.5 Update on progress of Prince Edward Island maps (par. 2.8) (Mr H Valentine)

2.6 Feedback on illegal fishing (par. 2.9) *(Ms T Akkers)* PE keep on agenda

2.7 Update on revision of the Prince Edward Islands Environmental Management Plan (par. 2.10) *(Prof S L Chown)* — 18/11

* 2.8 Extension of Special Nature Reserve status of the PEIs to include territorial waters out to 12 nautical miles (Marine Protected Area) (par 2.12) *(Ms T Akkers)* (? promulgate early 2006?)

JC – WWF-SA funds a warden

Mielc Greenn – Can cover expenses travel/CT accomm!

Search Rescue/Safe Stor

2.6 3 patrols; 2 illegals.

Visiting patrols transit " " – to do

– new hut in construction / place in 2006.

– Review sites in 2006 takeones

– costing lab filling out → NRF/Steering Committee

2.9	RAMSAR Wetland Reserve Status for the Prince Edward Islands (par. 2.13) *(Mr H Valentine)*	***Doc 2.9***	
2.10	Agreement on the Conservation of Albatrosses and Petrels (par. 2.14) *(Mr J Cooper)*	***Doc 2.11***	
2.11	House Mouse update (par 2.15) *(Mr H Valentine / Mr J Cooper)*		– Quoting?
2.12	National Policy on Seals, Seabirds and Shorebirds (par. 2.18) *(Mr J Cooper)*	***Doc 2.12***	Draft Act in the cabinet.
2.13	Application for King Penguins from Marion Island (par. 2.19) *(Mr H Valentine)*	***Doc 2.13***	
2.14	New huts at Marion Island (par 2.20)		
	- EIA for new location of Cape Davis hut *(Mr J Cooper)*		→ who decided needs to be moved?
2.15	Fumigation of Marion Island base (par. 2.23) *(Mr H Valentine)*	***Doc 2.15***	
2.16	CTBTO Station RN62 – Marion Island (par. 5.1) *(Mr H Valentine)*	***Doc 2.16***	
2.17	Pollution at Marion base (biodegradeable products) (par. 5.5) *(Mr J Cooper)*		

all on current platform or rebuilt.

3. REPORTS

3.1	Extract from monthly Seabird Research Report - September 2005 *(Mr J Cooper)*	***Doc 3.1***
3.2	Extract from Takeover Conservation report – April/May 2005 *(Mr J Cooper)*	***Doc 3.2***

4. NEW ITEMS

4.1	Feedback on best practices workshop on Biodiversity Act regulations pertaining to alien/invasive species *(Mr J Cooper)*	M & V attended?
4.2	SANAP Environmental Form (NRF process) *(Dr M de Villiers)*	***Doc 4.2***
4.3		
4.4		
4.5	public comment soon.	16. Requires Govt work

5. DATE OF NEXT MEETING

6. CLOSING

will account when comes out. Would like clear web site.

DEPARTMENT OF ENVIRONMENTAL AFFAIRS AND TOURISM

Ref. No: C10/14/2

Enquiries: N. Ntantiso

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Mr J Cooper
Avian Demography Unit
University of Cape Town
RONDEBOSCH
7701

Dear Mr Cooper

PRINCE EDWARD ISLANDS MANAGEMENT COMMITTEE (PEIMC)
MEETING: 8 November 2005 (09:00)

1. Enclosed for information, please find the documentation (including agenda, time and venue) for the above-mentioned meeting. It would be much appreciated if you could kindly go through these documents in detail prior to the meeting.

2. Should you have any queries, you are welcome to contact me.

3. Looking forward to seeing you on 8 November.

Kind regards

Ntantiso

Ms N Ntantiso
for Director-General
19 October 2005

Doc 2

19th PRINCE EDWARD ISLANDS MANAGEMENT COMMITTEE (PEIMC) MEETING

MINUTES OF THE MEETING HELD ON 2 MARCH 2005 AT THE DEPARTMENT OF ENVIRONMENTAL AFFAIRS AND TOURISM, DIRECTORATE: ANTARCTICA AND ISLANDS, SOUTHERN LIFE BUILDING, 4TH FLOOR, 44 HERTZOG BOULEVARD, CAPE TOWN

PRESENT

Mr H R Valentine *(Chair)*	-	Department of Environmental Affairs and Tourism (DEAT)
Ms A van Wyk	-	S A National Parks
Prof M N Bester	-	University of Pretoria (UP)
Dr M de Villiers	-	University of Cape Town (UCT)
Mr M Majodina	-	S A Weather Service (SAWS)
Ms T Akkers	-	Marine and Coastal Management (MCM)
Mr D Hendrikse	-	National Department of Public Works (NDPW)
Dr T Seekoe	-	Department of Science and Technology (DST)
Ms C Levieux	-	National Research Foundation (NRF)
Mr J Cooper	-	UCT
Mr M Nkomentaba	-	DEAT
Ms K Ngxabani	-	DEAT
Ms N Ntantiso *(Minutes Secretary)*	-	DEAT

APOLOGIES

Mr J A Dreyer	-	DEAT
Ms C A Jacobs	-	DEAT
Prof M A McGeoch	-	University of Stellenbosch (US)
Prof S L Chown	-	US
Mr M Murphy	-	NDPW *(Mr Hendrikse attended on his behalf)*

1. WELCOME AND OPENING

The Chair welcomed all present. He extended a special welcome to new serving members Prof Bester, Ms Akkers and Dr de Villiers. He commended Mr Cooper for his commitment. He also extended a word of welcome to Ms Levieux from NRF and Dr Seekoe from DST who were invited to give a brief outline on the South African National Antarctic Programme (SANAP) research issues and processes.

Adoption of agenda

The agenda was adopted by all.

2. MINUTES OF 18th PEIMC

The minutes were accepted as true reflection of what was discussed in the previous meeting, with the following 3 amendments:

(1) p. 3, item 2.2 – "... *Minister: DEAT announced the intention of declaring* one of the world's largest Marine Protected Areas (MPA) around Prince Edward Islands (PEIs), an increase ..."
(2) spelling mistake on p. 9, item 2.22 '*Kind*' corrected to '*King*' Penguins, and
(3) "The Chair enquired how long it would take to capture the penguins, and Mr Cooper replied that if *the birds were collected from Archway Bay it might take several days to back-pack (one per person) them to the base, but there would then be a need to carry the birds on foot about 500m inland to a holding pen or equivalent, from where they could be flown to the ship. If* they worked from Archway ...')".

MATTERS ARISING:

2.1 Building of new and decommissioning of old Marion Island base

- *Update on progress made*

The Chair reported that the structural reports had been received timeously and would be forwarded to committee members electronically for information.

- *Unauthorised visits to the construction site*

The Chair was concerned about unauthorised visits to the construction site. Mr Hendrikse emphasised the importance of obtaining permission from the Construction Manager for visits as the Compensation for Occupational Injuries and Diseases Act (COIDA) did not cover accidents that could occur. He confirmed that people would be granted permission to view the new building, but only sites that were out of danger. Mr Cooper enquired about people using the Upper Air (Bolug) building and Mr Hendrikse replied that entry would be granted, but that all visits and entry to the new building must be logged.

- *Testing of portaloos (need sunlight to work properly)*

The Chair felt that it would not be a good idea to introduce portaloos on Marion Island because of extremely limited sunlight. He enquired whether the committee could take a decision regarding removal of human waste. Mr Hendrikse mentioned that the problem on Marion Island was the sun, as opposed to SANAE, where everything was frozen. The Chair asked if it was necessary to introduce portaloos in huts. Prof Bester replied that due to frequent visits he foresaw an increase in the volume of waste. The Chair stated that during relief periods there must be a temporary storage facility in place at the huts. He further stated that in principle the human waste had to be removed. He undertook to contact waste companies to find out how the problem could be addressed and promised to report back to the committee. Mr Hendrikse added that chemicals that require water could be used, as there were streams nearby the huts. In conclusion, the Chair emphasised the importance of waste removal from the huts, and requested Dr de Villiers to ascertain which non-hazardous chemicals, that required water, could be used. Mr Hendrikse indicated that containerised storage was available.

2.2 Protected Areas Act and Amendment Bill / Biodiversity Act / NEMA Amendment Act

Mr Cooper reported that Biodiversity Act, allowing the Minister to declare species as threatened and prohibiting killing and/or trapping of animals, had come into force in 2004. He reported that he was involved in the bird group and had recommended the inclusion of threatened seabirds breeding at the Prince Edward Islands in the species listing. He stated that there was uncertainty on the interpretation of the Act, as the birds affected by illegal fishing were left out. The Chair requested input from the committee and asked Mr Cooper to enquire from the listing committee why those birds had been excluded. Mr Cooper undertook to draft a letter to Species Listing Committee for the Chair's signature. The Chair thanked Mr Cooper for this.

2.3 Removal of rubble and building waste (Country clean-ups at Marion)

- *Removal of hydroshack*
- *Fourie Anchor Pole Extractor*

The Chair informed the new members that Mr Cooper had been meticulous in the country clean-ups on Marion Island. In turn, Mr Cooper noted, with thanks, Dr de Villiers' contribution to this process as well. Mr Cooper supported NDPW's concerns on the removal of the hydroshack. He stated that an Environmental Officer (EO) had to accompany the NDPW team during the removal of these structures to assist with the site reclamation. He also enquired as to when the removal would take place. Mr Hendrikse replied that it would form part of the decommissioning of the old Marion base. The Chair was concerned about loose material on the shack. Dr de Villiers confirmed that some cladding had come loose. She requested people to be cautious. Mr Cooper suggested that the Conservation Officer (CO) monitor the building for loose rubble and to place it underneath the building.

Ms van Wyk emphasised that the removal had to be done properly - guidelines and requirements were to be followed in removing the concrete structure. The Chair indicated that there would be Environmental Impact Assessment (EIA), approved by PEIMC, in place. Mr Cooper added that an experienced EO would be required. The Chair stated that the committee would have input in whatever channel was going to be followed for the removal. Mr Cooper suggested that the EO for the forthcoming takeover concentrated on the removal of rubble from the other sites, requesting helicopter support as and when necessary.

Mr Cooper also suggested that the poles next to the huts could be removed during erection of the new huts and/or decommissioning of the old huts. The Chair indicated that NDPW had a method for extracting these poles, and that the Fourie Anchor Pole Extractor would only be reconsidered if this did not work. Mr Hendrikse requested that everything that needed decommissioning must be logged.

2.4 Marion Flora CD

During the tea break, each committee member received a copy of the Marion Flora CD. Dr de Villiers suggested that expedition members and the base were to receive a CD each.

2.5 Quarantine measures to halt alien invasions of Southern Ocean Islands

- *Implementation strategy / Field plan*

Mr Cooper said he was not sure if there was a person going to Marion Island as an Aliens Officer. He enquired if it was possible to appoint an Aliens EO, recommending Dr Niek Gremmen, as he was participating in the 2005 Marion Island relief voyage. The committee endorsed this suggestion and Dr de Villiers undertook to convey to Dr Gremmen that he had been appointed Aliens EO for the 2005 takeover. She added that Dr Gremmen would provide DEAT with information on equipment to be purchased for the eradication of alien plant species. Mr Cooper enquired whether Dr Gremmen's appointment included his airfare from the Netherlands and accommodation in Cape Town. The Chair welcomed the idea but indicated that Government funding would be a problem.

- *Specifications for incinerator at Marion Island*

Mr Cooper enquired whether this would be commissioned when the new base was working. Mr Hendrikse confirmed that it would.

- *Rat guards on SA Agulhas*

The Chair stated that Smit Marine had been extremely cooperative and done everything they could to avoid rodent infestation. He indicated that investigations had shown that Quay 500 was rat free. Dr de Villiers felt that Smit Marine should be commended for their efforts. The Chair undertook to draft a letter of appreciation.

- *Electronic fly killers at Paardeneiland and other stores*

Dr de Villiers reported that fly killers had been installed on the *SA Agulhas* and enquired after developments at Paardeneiland. The Chair replied that Mr Oosthuizen was in contact with pest control companies, and that his report would be distributed electronically to committee members. Dr de Villiers suggested that a pest control company audit the facilities before any moves to new premises.

- *No use of wood and cardboard at the Prince Island Edwards*

The Chair indicated that Departmental Coordinating Officer (DCO) would convey that no wood and cardboard were permitted during the Marion Planning meeting. Mr Hendrikse indicated that Mr Murphy had asked him to convey to the committee that it was impossible to avoid wood packaging of the construction material at this stage, but that the timber would be treated and fumigated, steel trunks were also being used. Mr Cooper pointed out that the phasing out of wood and cardboard mostly referred to personal belongings, as these were not fumigated, recommending tote boxes for use by participants.

- *Possibility of appointing of overwintering Aliens Officer*

The Chair advised the committee that an Aliens EO would be appointed in 2006.

2.6 World Heritage Site (WHS) status for the Prince Edward Islands

The Chair reported that Marion and Prince Edward Islands had been nominated as World Heritage Sites. He added that DEAT was managing this process, as outlined in document 2.6.

2.7 Prevention of the transmission of diseases in the Prince Edward Islands' wildlife

To stand over until the next meeting (Prof McGeoch not available).

2.8 Update on progress of Prince Edward Islands maps

- *Marion*
- *Prince Edward (photography option)*

Prof Bester enquired whether there was a need to change the names of the Prince Edward Islands. The Chair responded that the South African Geographic Names Council (SAGNC) had requested that the names on the Marion map reflect the diverse cultures of South Africa, and that a process had been undertaken accordingly. He added that he was awaiting a response to the Minister's letter to the SAGNC on the changing of the names of the Islands themselves.

- *Continental shelf claim*

The Chair mentioned that the South African Air Force had been contracted to assist in South Africa's claim. Ms Akkers stated that this entailed a lot of work, with the Chair adding that there were requirements such as surveys, hydrographic geological work, information to support the claim. This cumbersome process needed to meet the 2009 deadline. He mentioned that South Africa would not benefit much, as the West Coast was very narrow, but that the Prince Edward Islands could benefit substantially. He felt that perhaps South Africa and Namibia could collaborate in submitting the West Coast claim. There was a national committee driving the claim process.

Mr Cooper enquired whether there was any feasibility for DEAT and a helicopter company to drive the process and Mr Majodina enquired whether other Departments were interested in the shelf claim and who would fund this process. The Chair responded that other Departments were committed to driving the process and that they would have to obtain the necessary funding.

2.9 Feedback on illegal fishing – deep water patrol vessel, *Sarah Baartman*

- *Emergency medical evacuation at Marion Island*

South Princess was fishing illegally

Ms Akkers reported that there had been three sightings reported by the French three weeks ago that the *South Princess* was fishing illegally and had been caught with fishing gear under the water. She mentioned that the *Sarah Baartman* had been officially handed to DEAT on 10 December 2004, and had been to Marion Island for an emergency evacuation. She added that the vessel was currently in for repairs after the voyage, and intended to undertake 2-3 further voyages to the Prince Edward Islands, but that this would not be publicised. She also mentioned that all DEAT patrol vessels were high speed vessels capable of the same distance in half the time of the *SA Agulhas*.

Mr Cooper enquired if the committee would comment on the fresh fruit salad that had been taken ashore. Prof Bester strongly objected to this, stating that the team had acted illegally and they knew it. Mr Cooper agreed with Prof Bester, but indicated that the team had acknowledged that they had made an error. Mr Cooper suggested that future team members and patrol vessels must be made aware of conservation issues.

Ms Levieux queried the diagnosis of Mr Tshitabane's "psychotic disorder" in the CO's report, as he was not medically diagnosed. She also queried whether it was necessary for the details of Mr Tshitabane's condition and reason for evacuation needed to be sent to PEIMC members, as this was an invasion of his privacy and presented ethical problems. The Chair stated that the journalist was not aware that he had overstepped the mark and refused to take the blame saying he had not divulged any secrecy regarding doctor-patient relationship. Ms Levieux said that it was necessary for people internally to know she felt this was an ethical issue. The Chair admitted that DEAT was at fault, and that the evacuation for medical reasons only should have been reported on, not the details divulged. Prof Bester stated that DEAT needed to get to the bottom of the problem at Marion Island. He mentioned that there was unhappiness and frustration amongst team members, and

suggested that the expedition bonuses were withheld until the investigation had been completed. Mr Majodina enquired whether the team underwent any team building exercises beforehand. The Chair stated that such activities formed part of team training prior to each voyage.

2.10 Revision of the Prince Edward Islands Management Plan (PEIMP)

The Chair reported that a person had been appointed for the revision of the PEIMP and that the due date was January 2006. Mr Cooper asked if the committee would receive the draft for comments. The Chair confirmed that the PEIMC and other interested and affected parties would be consulted. Mr Cooper enquired whether the final draft would be gazetted. The Chair confirmed that it would, adding that he had discussed with Mr Geoff Cowan that Protected Areas should be publicised.

2.11 Filming policy for the Prince Edward Islands

Dr de Villiers stated that there should be a clause reflecting that DEAT should receive a copy of what was filmed at the PEIs. Dr Seekoe asked if the document was final, and this was confirmed by the Chair.

2.12 Extension of Special Nature Reserve Status of the PEIs to 12 nautical miles (Marine Protected Area (MPA))

Mr Cooper mentioned that the Minister of DEAT had made a public announcement in the intended extension of the area around the PEIs. He further reported that he had a contract with WWFSA to produce biography and biota for the MPA to be increased to 12 nautical miles. On completion, the report would be circulated to the WWFSA and PEIMC for comments on where the boundaries should be. CCAMLR had been informed accordingly. Mr Cooper stated that there were a number of other issues which needed to be addressed.

Ms Akkers stated that WWFSA and DEAT were engaged in a partnership, and that the WWFSA had contracted some people to do GSIA for producing maps. She said the WHS would include territorial waters and that the revised PEIMP would include activities around work and legal issues, including ships' passage. Ms Akkers further stated that MCM planned to have two Marine Biodiversity Surveys (MBS) leading into the polar year. The Chair requested that Mr Cooper and Ms Akkers update the committee on developments at the next meeting. Ms Akkers stated that the finalised cruise plan, including international collaboration, would be made available to the committee.

2.13 RAMSAR Wetland Reserve Status for the Prince Edward Islands

The Chair reported that Mr Cooper had submitted a draft application to DEAT. Mr Cooper invited comments from the PEIMC so that he could revise the report and submit the final version to DEAT by no later than 31 March 2005. He said there was necessity for literature to accompany the application, i.e. PEIMP, digital A4 size maps showing the zonation of the Islands and the South African Naval (SAN) Chart of the PEIs. The Chair thanked Mr Cooper on behalf of the committee for his dedication.

2.14 Agreement on the Conservation of Albatrosses and Petrels (ACAP)

Mr Cooper stated that the Advisory Committee of ACAP was meeting in Australia in July 2005. Dr Rob Crawford from MCM and himself would represent South Africa at this meeting. He advised that he was in the 2nd working group that looked at population trends of species, and that he would report back on the outcome of the meeting at the next PEIMC meeting. He informed the committee that the next meeting of the parties would take place in the United Kingdom (UK) in 2006. He mentioned that South Africa, as one of the founder members of this Advisory Committee, had made an informal offer to host the 3rd ACAP meeting in 2008.

2.15 House Mouse Update

The Chair outlined that it had been agreed at the Steering Committee meeting between DEAT, NRF and DST that SANAP may need to hire a consultant to investigate the possible eradication of mice on Marion Island. Mr Cooper indicated that Tristan da Cunha had received funding from the UK for such a programme on Gough Island. He suggested investigating the feasibility of the eradication of mice on Marion Island, adding that it could be done but that it would cost millions of rands. The Chair felt that the chances of using the same programme on Marion Island were very slim. Ms Levieux enquired whether funding would be required and if Mr Cooper could draft a brief for the feasibility study. Mr Cooper agreed to do so, stating that it could be done in two stages: a brief of what needs to be done and how (weather data, best time of year, etc.). Dr Seekoe suggested that both stages be done at the same time as the problem was increasing, and that it could then be decided whether it was affordable. Ms Levieux stated that there was no funding available in the current financial year. Mr Cooper enquired when they intended to call for tenders. Ms Levieux suggested July 2005, and that DEAT and NRF should look into this together. The Chair indicated specific funding for this purpose would need to be requested. Ms Levieux felt that we must not only look at consultancy, training would be beneficial as well. Mr Cooper recommended appointment of a South African scientist with experience of mouse research.

2.16 Penguin Flipper Banding Workshop report

The Chair suggested that this item be discussed under item 3.2.

2.17 International Code for Security of Ships and Port Facilities (ISPS)

The code was re-tabled for the new members' information.

2.18 National Policy on Seals, Seabirds and Shorebirds

Mr Cooper reported that a workshop had been held with MCM on the drafting of these policies, that they had been gazetted for public comment, but that there was no feedback as yet. He added that tenders had been sent out, but he was not sure whether they had been awarded. Mr Cooper informed the members that there would be a new Act, including the PEIs, and that MCM would invite the PEIMC's comments. The Chair requested Ms Akkers to keep tabs on the issue.

2.19 Application for King Penguins from Marion Island

The Chair reported that Pretoria Zoo had confirmed that the facility would be completed in December 2005, but that Prof S Jackson would advise on the matter on her return from Canada, as requested by the PEIMC. Prof Bester was concerned about this group's participation in one of the construction voyages. The Chair explained that this matter was not strictly science, and that if the Pretoria Zoo personnel had to participate in one of the relief voyages, this would impact on the number of scientific research personnel that could be accommodated.

2.20 New huts at Marion Island

The Chair indicated that the main structure would be focused on first and that the huts would be looked at afterwards. Mr Hendrikse confirmed that the hut tenders had been prepared and were ready to be sent out. Mr Cooper enquired whether an EIA for the new huts was required in accordance with the PEIMP. Ms van Wyk stated that some form of record would be required. The Chair specifically referred to the hut at Cape Davis, as it needed to be moved slightly. Dr de Villiers suggested that the project leaders be consulted on the placement of the new huts, but Mr Cooper stated that the new huts would be placed on the same spot as the old ones (except for Cape Davis). Prof Bester added that the huts were placed to be helicopter/logistics operations user-friendly. Mr Cooper suggested that during the forthcoming takeover the DCO, CO, Project Leader and Construction Manager check all the huts and see if they needed repairs. why?

2.21 Bridge over Soft Plume River

Dr de Villiers stated that she spoke to field workers who regularly use the route and they indicated that a bridge was not necessary. The Chair suggested that teams must be briefed from a safety point of view. Dr Seekoe enquired if there was any potential danger during heavy rain. The Chair responded that there was not really a need to cross the river when it was raining – field workers who at the island when the river is in flood, should either go back or find a safe crossing place further upstream. The committee agreed that there was no need for the bridge.

2.22 Impact of trampling on the vegetation of Subantarctic Marion Island

- *Closure of main path and use of alternative path to the Fault for 2005*
- *Boardwalks at Marion Island*

Re-tabled for the new committee's information.

2.23 Fumigation of Marion Island base

The Chair reported that Mr Oosthuizen had just returned from SANAE and would be reminded to do a follow up with pest control companies. The PEIMC would be kept apprised of developments.

2.24 Duty Lists

- *Project Environmental Officer (PEO) – revised*
- *Team and Relief Conservation Officers (CO) – current*

Dr de Villiers stated that she would submit her input in writing regarding these lists.

3. SANAP RESEARCH

3.1 DST/NRF and DEAT/PEIMC issues and processes

The Chair reported that in the past the SANAP research component had been administered by DEAT. In 2003, Cabinet had approved the transfer of the science management to DST. Ms Levieux explained that NRF managed the research budget on behalf of DST and that they worked with DEAT regarding the logistics. She stated that DEAT was represented in the Review Panel meetings held annually. Dr Seekoe stated that the Minister of DST had approved the finalised research strategy. DST was on the verge of finding a service provider to produce the document. He further stated that a call for proposals was invited annually wherein researchers were entitled to submit project proposals. The call for 2006/07 would open in a week or two.

In reply to Ms Akkers' question as to what role the PEIMC played in SANAP, Dr Seekoe replied that anything pertaining to environmental issues at the PEIs was this committee's responsibility. Whatever was done must be in compliance with the PEIMP. Prof Bester was concerned on the lack of funding of research projects by DST, stating that he had turned to USAID for funding. Ms Akkers acknowledged Prof Bester's point as worth noting. The Chair asserted that it was not this committee's mandate to address the issue, but agreed that it was a point of concern.

Dr de Villiers enquired if the PEIMC could recommend important projects to DST, e.g. monitoring that affects CCAMLR. The Chair explained that projects were evaluated according to their scientific merit. Ms Levieux stated that any pertinent PEIMC issues could be conveyed to Profs Bester and McGeoch, as they served on the NRF/DST/DEAT Steering Committee. She further stated that a meeting would be held shortly to look at the various roles, e.g. international, etc. to clarify matters.

3.2 Response from MCM regarding outcome of SANAP proposal to monitor seabirds in the Southern Ocean

The Chair stated that it should have been conveyed to Dr Crawford that the PEIMC had specifically referred to flipper banding of penguins. Ms Akkers enquired whether the PEIMC had made any formal recommendations to the NRF. The Chair confirmed that it had, but undertook to advise Dr Crawford from DEAT's side of the committee's recommendations.

Mr Cooper and Dr de Villiers supported Dr Crawford's proposed survey in August 2005, with the Chair adding that such surveys had merit. Prof Bester said that August was the best time to census Gentoo penguins. Mr Cooper suggested that Dr Crawford be asked to do a winter survey to Prince Edward Island this year, and that if he was interested, his application/request (accompanied by a detailed motivation) should be submitted to DEAT for consideration.

4. SACAR 3 VOYAGE PARTICIPATION DETAILS

CONSTRUCTION VOYAGE: 9-23 March 2005

- *Appointment of PEO – Mr A Dreyer*

The Chair clarified that the 1st SACAR 3 (4.1 – 4.4) were for construction.

4.1 Zones 1 and 2
4.2 Zones 1 and 2
4.3 Zones 1 - 4 (zone 4 for emergency only/avoid flying over sensitive areas)
4.4 Zones 1 - 3
4.5 Zones 1 - 3 (under CO's guidance)

RELIEF VOYAGE: 31 March – 6 May 2005

- *Appointment of CO*

Mr Cooper volunteered to act as CO for the 2005 Marion Island relief voyage. This was endorsed by the committee and Mr Cooper was thanked for his willingness to assist. The Chair asked that Mr Cooper liaise with Mr Dreyer regarding environmental issues pertaining to the construction.

- *Appointment of Chief Scientist*

As the appointment of the Chief Scientist lay with DEAT, the decision on this would be taken at the Marion Planning meeting to be held on 11 March 2005.

4.6 Zones 1 – 4 (zone 4 in case of an emergency)
4.7 Zones 1 – 2
4.8 Zones 1 – 3 and collection permit
4.9 Zone 3 and collection permit (to collect in different sites)
4.10 Zones 1 – 3 and collection permit
4.11 Zones 1 – 2 – zone 3 entry to be motivated. The Chair stated that the current GPS could be monitored or adjusted, but the tidal gauge could not to be installed.
4.12 Zones 1 – 3, research and collection permits
4.13 Zones 1 – 2
4.14 Zones 1 – 2
4.15 Zones 1 – 3 and collection permit
4.16 Zones 1 – 3 and research permit
4.17 Zones 1 – 3, research and collection permit
4.18 Zones 1 – 3 and collection permit

4.19 Zones 1 – 3 and collection permit
4.20 Zones 1 – 4 (zone 4 for emergency only/avoid flying over sensitive areas)

Mr Majodina enquired whether DEAT still depended on the Department of Foreign Affairs for communication and the Chair confirmed that this was the case.

5. NEW ITEMS

5.1 CTBTO Station RN62 –Marion Island

The Chair stated that South Africa was a signatory to the CTBTO and that Dr Faanof from NECSA was the contact person. Mr Nkomentaba reported that a quotation had been received from Endecon on how much it would cost to put up a structure and that NDPW had undertaken to erect the structure on receipt of funding. This would only be done after the completion of the new base. DEAT would provide the necessary logistic support. Mr Nkomentaba continued that they would put up a duplicate in Pelindaba just outside Pretoria beforehand. The PEIMC was to check the placement of the chimney of the structure. The Chair requested Mr Nkomentaba to obtain its specifications and design for discussion at the next meeting. Mr Majodina requested that the meteorological observations should not be influenced by the structure. The Chair undertook to ask the SAWS 2005/06 overwintering team member to look into this.

5.2 Policy – Visits to the Prince Edward Islands other than normal relief (scientific) or construction voyages

Mr Cooper emphasised that no fresh produce should be taken onto the Islands.

5.3 Notification for voyage participants regarding gear checks

Dr de Villiers requested the committee's comments on document 5.3. The Chair suggested that the comments should be sent to Dr de Villiers within a day or two so that the DCO could include the document in the takeover manual. The document should also be sent to all participants in the Marion Island relief voyage, and Mr Cooper suggested that some brochures be added to the document.

5.4 Marking of stand of alien vegetation at Gentoo Lake – area to be avoided

Dr de Villiers felt that the current overwintering CO was to advise team members to avoid these areas, and could even use marker poles.

5.5 Pollution at Marion base (biodegradable products)

Mr Cooper suggested a reduction in the amount of cleaning products sent to Marion Island. He undertook to investigate other options when attending the ACAP meeting in Australia. It could be cheaper and may reduce the amount of packaging. The Chair stated that gas was better than petrol from environmental point of view as well.

5.6 Re-zoning of Crozet Shag colonies and Fred's Hill lava tunnels as Zone 4

Dr de Villiers was concerned that Crozet Shag was not doing well on Marion Island. Mr Cooper suggested a memorandum to the DG to declare the area at Duikers Point (where the Crozet Shag are found) a Zone 4 area. Dr de Villiers volunteered to draft the submission for the Chair.

5.7 Construction article (Succeed magazine)

Document 5.7 tabled for information.

5.8 Painting of crosses and monuments on Marion Island

The Chair enquired whether there was any objection in utilising good quality paint (10 year guarantee) to paint the crosses and monuments on Marion, as was done annually in the past. The committee had no objection to this course of action, provided that the letters were painted around, so that the value and meaning were retained.

6. DATE OF NEXT MEETING

The members would be advised of the next date accordingly.

7. CLOSING

The Chair thanked the committee and co-opt members for attending, extending his appreciation for their time, valuable inputs and patience. He also extended a special word of thanks to Dr Seekoe and Ms Levieux for attending, and the feedback received from the both of them.

Henry Valentine
CHAIR: PEIMC

Date:

Doc 2.1A

THE ENVIRO LOO SERVICING REQUIREMENTS AND INSTRUCTIONS

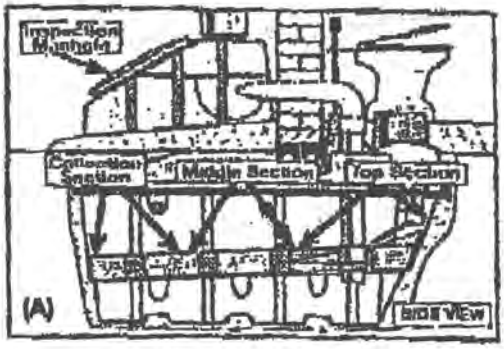
INSPECTION REQUIREMENTS

(A). It is recommended that periodic inspections be conducted on the system to check the quantity and position of the waste relative to the collection section.

The number of users utilizing the system should determine the frequency of these inspections.

The inspections should be carried out every 12 months or on 6 month intervals if it is a high usage application.

These inspections are carried out through the manhole to check the position of the waste as depicted in drawing A.

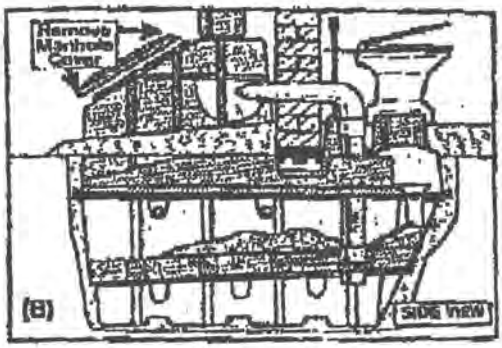


SERVICING INSTRUCTIONS

(B). TO REMOVE DRIED WASTE:

It is recommended that this operation be carried out 12 months after commissioning and every 12 months thereafter. Low usage applications might only require this service every 24 - 36 months.

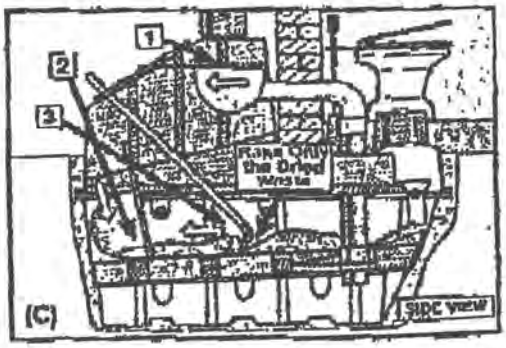
Tools required for removing the waste into the drying bag include a 3/8s spanner, rake and gloves. Using the spanner loosen the screws on each corner of the manhole cover and remove cover.



(C). 1: Remove the drying bag from its support bracket.

2. Position the drying bag in the collection section with the open end facing the waste as depicted.

3: Rake the waste, which is fairly dry, from the middle section of the plate into the bag.

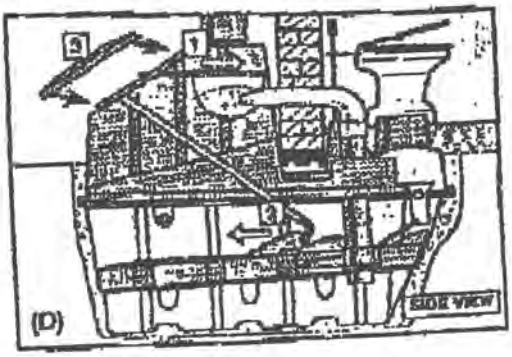


(D). 1: When completed hang the drying bag back onto the support bracket.

2: It is recommended that any other waste located near the top end of the middle section of the plate be raked back towards the collection section for future removal and to promote further dehydration.

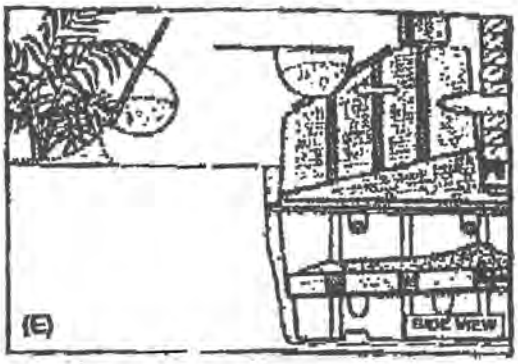
3: Secure the manhole cover when completed.

Ensure that the rake and any other utensils are thoroughly washed and avoid direct contact with any fresh waste.



(E). This process is then repeated every 12 to 24 months. Prior to repeating the servicing operation, remove the drying bag and dispose of the contents.

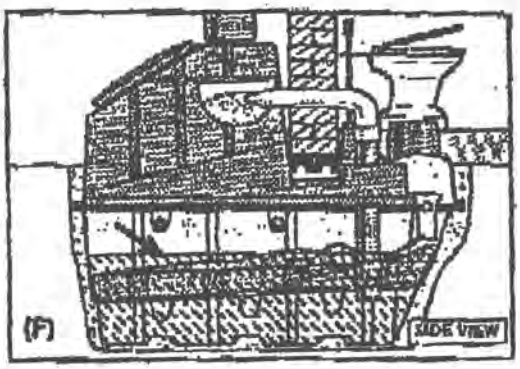
After 6 to 12 months the waste will now be stabilised and harmless. The humus can be disposed of around shrubs and trees.



THE ENVIRO LOO TROUBLESHOOTING

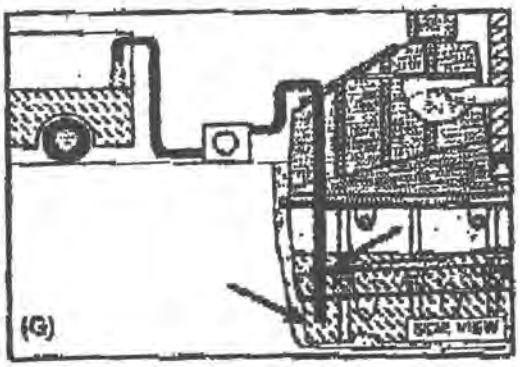
EXPERIENCING ODOURS

(F). CHECK the level of liquid in the container. If liquid should rise above the drying plate the liquid will block the ventilation and the contents will turn anaerobic. The liquid will need to be pumped out.

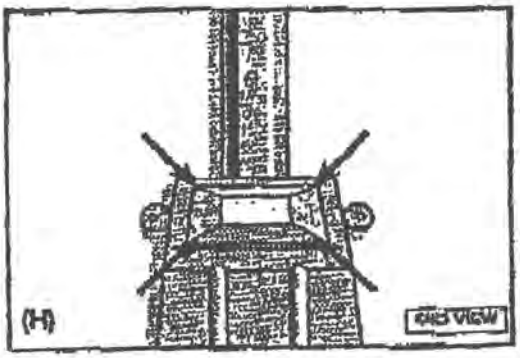


(G). TO PUMP OUT EXCESS LIQUID. Open manhole cover, insert 50mm to 75mm pipe through the hole in the collection section of the plate. Ensure that the hose end is well below the plate as depicted.

Arrange for the liquid to be pumped into a tank and disposed of according to the Local Authority Regulations.

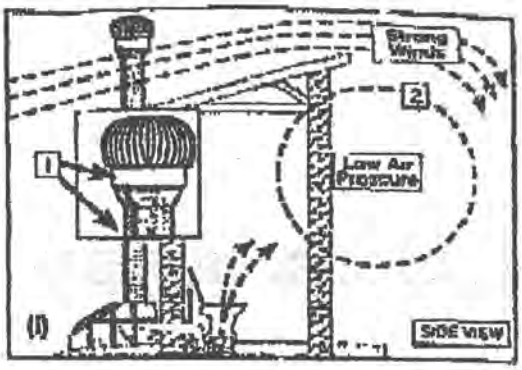


(H). CHECK that the manhole cover is properly sealed, odours could be escaping through gaps.



(I). CHECK 1: That the vent extractor is operating and is properly sealed and that there are no holes in the outlet vent pipe.

CHECK 2: That the prevailing wind is not causing a negative pressure on the leeward side of the structure, which if strong enough, might reverse the airflow through the toilet.

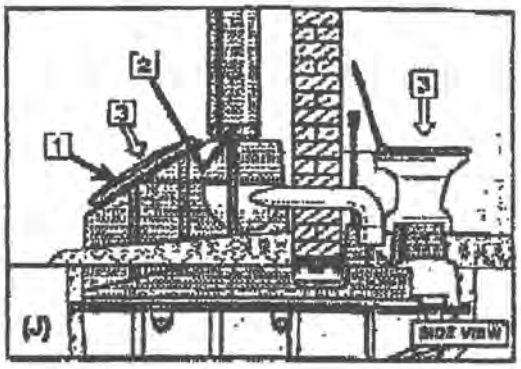


EXPERIENCING FLY PROBLEMS

(J). CHECK 1: That the manhole cover is properly sealed and that there are no gaps between the unit and the cover.

2: Ensure that the fly gauze was installed in the outlet vent pipe.

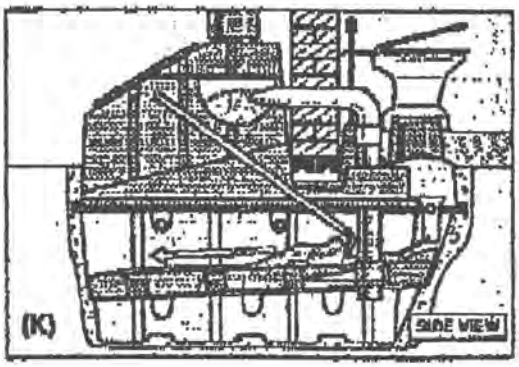
3: If the fly problem persists put some lime into the system via the toilet pan and manhole.



WASTE NOT MOVING DOWN THE PLATE

(K). If you find that the flap is not moving the waste down the plate and that the waste is building up and retarding the working of the flap.

CHECK via the manhole that no foreign matter is blocking the migration of the waste. If so, remove by raking the matter down to the collection area. This should unblock the build-up.



If you experience any problems that cannot be fixed, please contact the local Enviro Loo Representative for assistance.

LOCAL CONTACT DETAILS

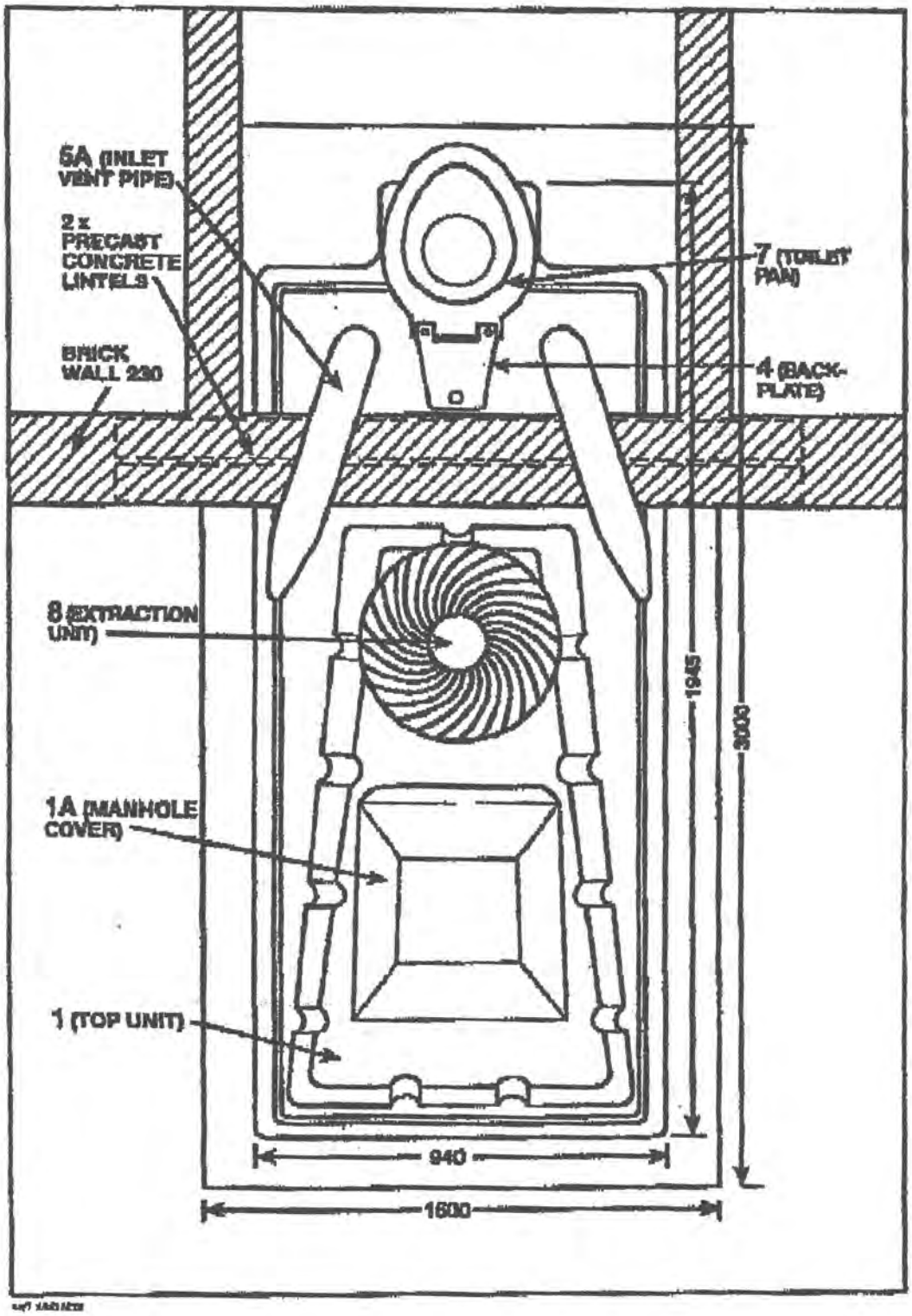
ENVIRO OPTIONS (PTY) LTD
P.O. BOX 13 KYA SANDS
JOHANNESBURG
SOUTH AFRICA
2163
TEL: 27 11 708-2245
FAX: 27 11 708-2180
EMAIL: eloo@mweb.co.za

THE ENVIRO LOO

MODEL: 2010

APPLICATIONS: HOMES, FARMS, GAME FARMS, ETC.

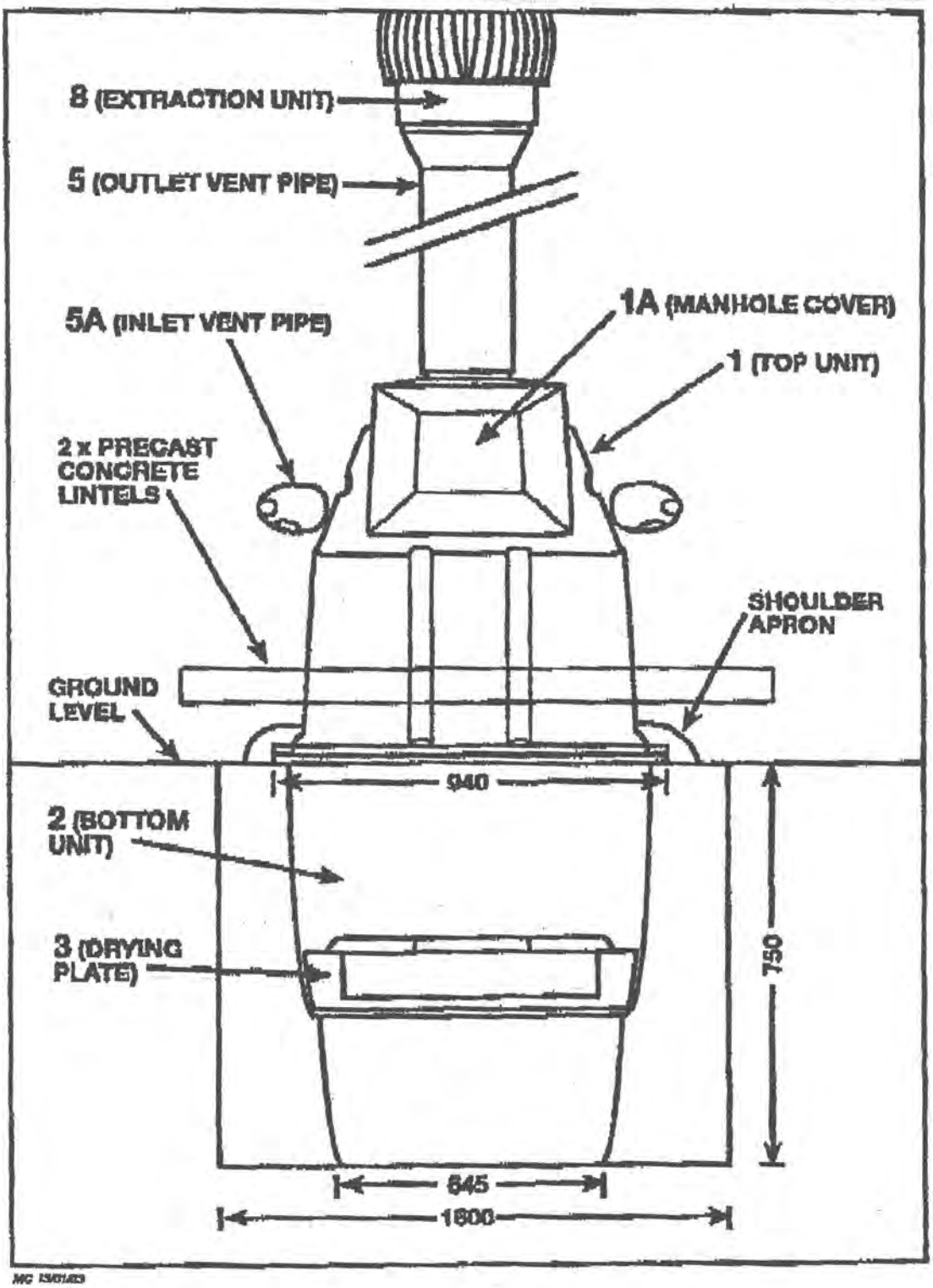
2010 ENGINEERING PLANS: TOP VIEW



THE ENVIRO LOO
MODEL: 2010

APPLICATIONS: HOMES, FARMS, GAME FARMS, ETC.

2010 ENGINEERING PLANS: END VIEW

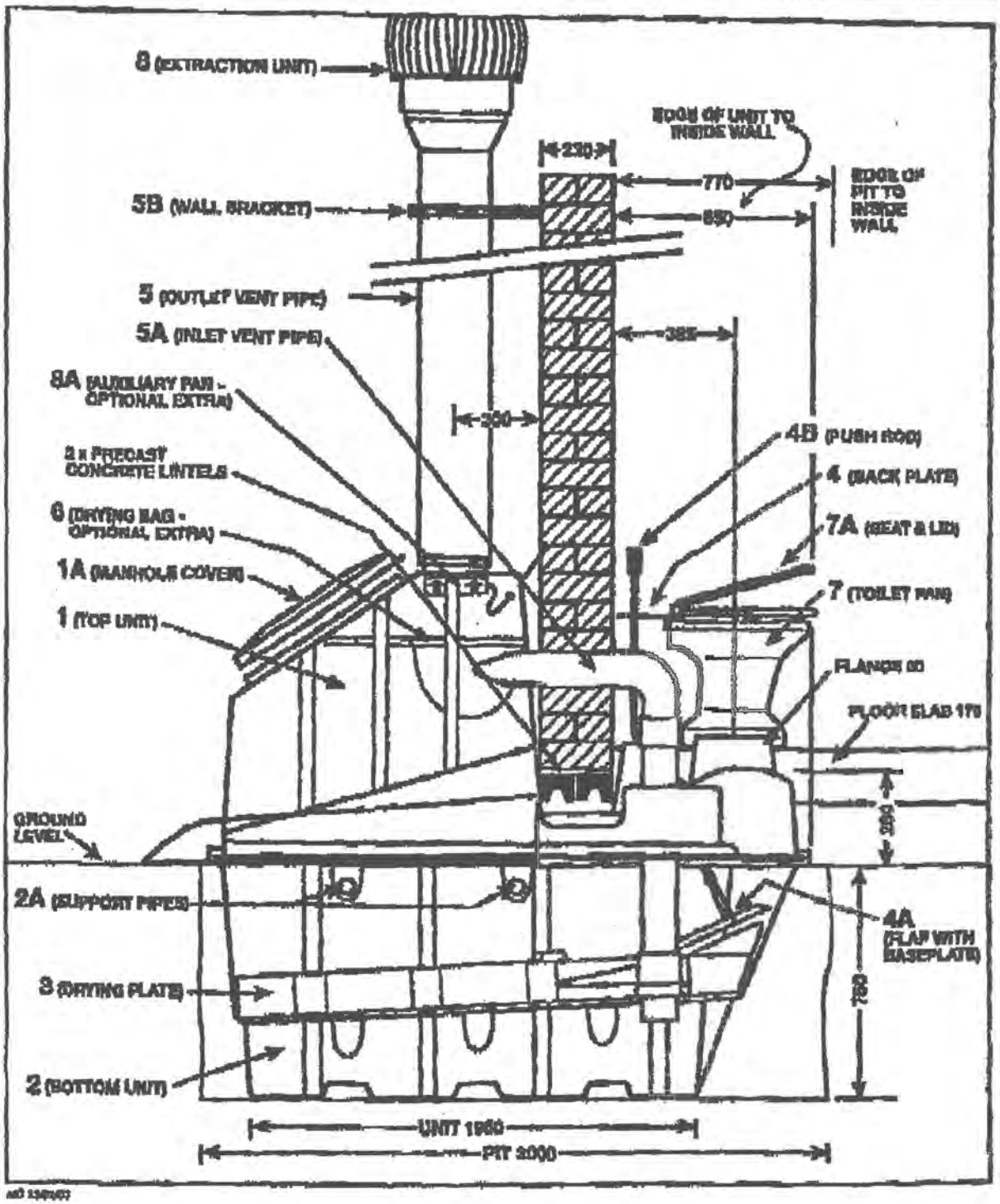


MC 13/01/03

THE ENVIRO LOO
MODEL: 2010

APPLICATIONS: HOMES, FARMS, GAME FARMS, ETC.

2010 ENGINEERING PLANS: SIDE VIEW



FAX

ENVIRO OPTIONS (PTY) LTD
P O BOX 15
AVA BANOS
JOHANNESBURG
2143
TEL (011) 708-3342/3343
FAX (011) 708-2180
e-mail: [illegible]
Web: [illegible]

QUOTATION

5. WARRANTY

The Enviro Loo plastic components namely; the container (the unit), manhole cover, outlet vent pipe are guaranteed for a period of twenty four (24) months from the date of invoice against faulty workmanship and/or materials, which warranty specifically excludes faulty installation, fair, wear and tear and abuse outside the manufacturer's specifications, operation recommendation and or application.

Any working parts namely the Windmaster ventilator extractor unit are warranted for a period of twelve (12) months, against faulty workmanship and/or materials.

This warranty specifically excludes incorrect operation, lack of maintenance, fair wear and tear and/or abuse outside the manufacturer's specifications and operation guidelines, which incorrect use and/or non-usage may cause waste to back-up and/or blockages

6. ASSEMBLY AND INSTALLATION

The Enviro Loo will be delivered in component form; Enviro Options will assemble and provide installation training to the contractor's responsible for the on site work.

***NB.* Enviro Options will not be held responsible if the units are assembled by 3rd parties.**

***NB.* All Enviro Loo units must be anchored to avoid flotation.**

***NB.* Backfilling must consist of a stabilised mixture as specified by the Project Engineer to ensure that the hydraulic pressure and geo technical conditions prevalent on the site would not adversely affect the plastic sub-structure of the system. (Not applicable to the BP1040 Model)**

Refer to assembly and installation instructions

The Consulting Engineer/Developer/Contractor would be responsible for specifying the correct installation specifications to ensure that the geo-technical conditions prevalent on the site would not adversely affect the plastic sub-structure of the system.

7. EXCLUSIONS

Anything not specifically mentioned in this quotation such as off loading, site storage, installation costs and the cost of the toilet superstructure have been excluded.

8. PRICE ESCALATIONS

These prices are based on the current costs of our raw materials and manufacturing prices. Should any increase occur which will affect our selling price, we reserve the right to revise our prices accordingly. Price escalations would depend on the project period and would need to be addressed in the Project contract.

9. DELIVERY PERIOD

Enviro Options will manufacture the units quoted for, on receipt of written order. The units will be manufactured and delivered according to the project works schedule as specified in the project contract.

We trust that this quotation is acceptable, and we look forward to hearing from you. If you have any queries please do not hesitate to contact us and we will assist as far as possible.

Assuring you of our full co-operation.

Len Parsons
ENVIRO OPTIONS (PTY) LTD

FAX

ENVIRO OPTIONS (PTY) LTD
P O BOX 13
KYA SAND
JOHANNESBURG
2163
TEL:(011) 708-2240/2248
FAX:(011) 708-2180
e-mail, [illegible]
Web, [illegible]

QUOTATION

Ref LP050905-01

To: Avian Demography Unit
University Of Cape Town
Attention Marenne de Villiers
Tel/Fax No: 021-852-8396 / 650-2434
Date: 05/09/2005

We thank you for your valued enquiry and have pleasure in submitting our quotation for your due consideration: -

Area
Marion Island

Per complete Enviro Loo unit including, ventilation piping, ventilation extraction unit and ceramic toilet bowl.

All Prices exclude VAT

1	DS2010 (10 users per day)	3780.00	3,780.00
1	Anchor Sets	170.00	170.00
1	Overflow Connector	40.00	40.00
1	Assemble	66.00	66.00
	Delivery Paarden Eiland Using King's Transport		1,180.00
	Sub Total		5,236.00
	Vat @ 14%		733.04
	TOTAL		5,969.04

The above prices excludes installation and preferred top structure

1. **PRICE BASIS**

   The quoted prices are based on the quantities ordered of 1 unit, and should this quantity quoted herein change; we reserve our right to revise our prices.

2. **OPERATION RECOMMENDATION**

   The Enviro Loo utilises ambient heat and natural ventilation for the dehydration and evaporation process. The unit is a sealed system which does limit the number of users per toilet per day, to ensure the efficiency of the drying process. **We recommend that not more than ten (10) users per toilet per day for the DS2010 Model.** For optimum results the toilet should be positioned on the sun facing aspect of the dwelling. Where the Enviro Loo is installed inside a dwelling we recommend that an electrical fan be connected to the mains or a solar panel. These electrical fans are charged at R150.00 excluding VAT (Specifications for fans provided on request)

3. **VALIDITY**

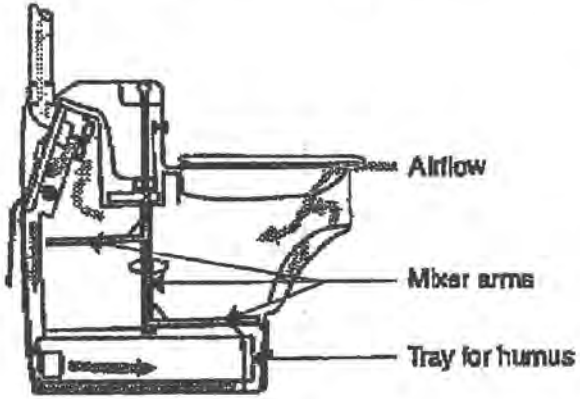
   This quotation is valid for thirty (30) days from the date shown on page one, and is subject to written confirmation thereafter.

4. **TERMS OF PAYMENT**

   Delivery to be confirmed after receipt of an official written order.
   To be paid into Standard Bank Randburg. (Prior to delivery/collection)
   Account no: 021-685-746
   Branch Code: 012-005

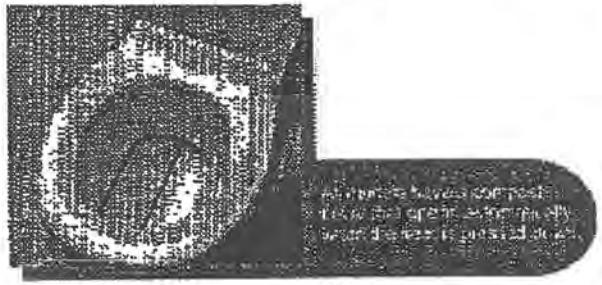
Operating Principle

EcoLet uses modern technology to accelerate and optimise natural biological decomposition, evaporate excess liquid and to exhaust odours and water vapour, all within an attractive home appliance that is easy to use and economical to operate.



The ventilation pipe leads moist air away and ventilates the entire bathroom. Mixing arms help aerate the compost and sift it into the humus tray. The adjustable thermostat combined with recirculation of the heated air results in a very low energy cost. The fan drives warm air through the air channels to remove moisture, to provide the compost with oxygen and to warm it up to optimum temperature. For maximum usage rates the toilet room should be at least 18°C.

The humus collection tray in the bottom of the unit is emptied once every 2-3 months or up to a year, depending on usage. More humus-starter is added as needed to maintain a balanced composting mix.



TECHNICAL SPECIFICATIONS

MEASUREMENTS:

ECOLET XL
H66 W65 D74 -Floorspace required 65x135cm

ECOLET Automatic and Manual
H68 W55 D74 -Floorspace required 55x135cm

ECOLET NE
H67 W64 D88 -Floorspace required 65x135cm

MATERIALS: Outer casing of ABS-Plastic. Mixing arms and other important metal components of Stainless Steel.

ELECTRICAL RATING: 240V

ECOLET Manual: 250W max - Heater 225W and fan motor 25W.

ECOLET Automatic: 320W max - Heater 250W Mixer motor 45W and Fan motor 25W

ECOLET XL: 350W max - Heaters 310W Mixer Motor 45 W and Fan motor 25W

Made in Sweden, EcoLet models are approved for household use by various State Authorities in Australia - refer to distributor for your local details.

WARRANTY: Two years limited warranty.
The right is reserved to alter designs.

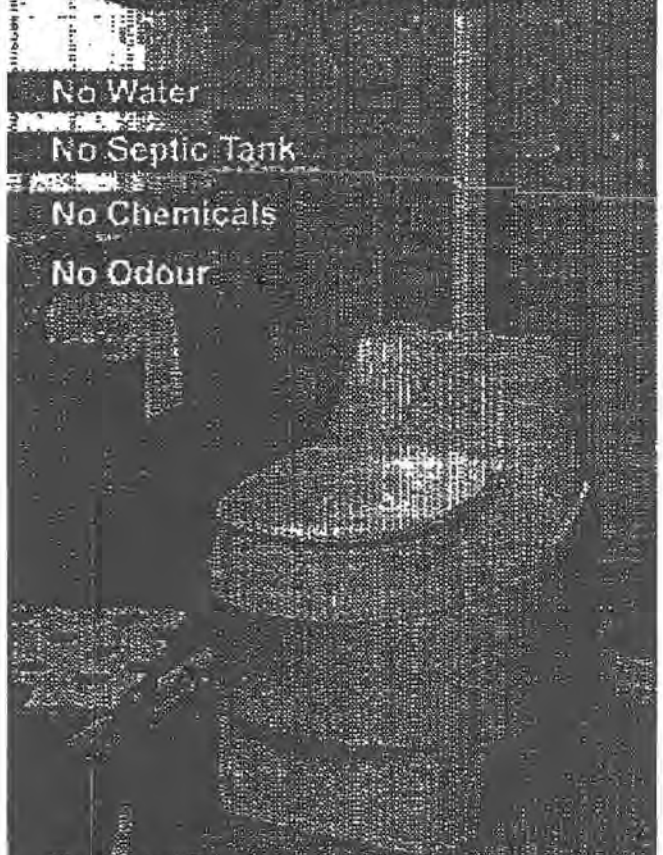
Australian Distributors:

Clivus Multrum Australia
115 Railway Avenue Strathpine Q 4500
Ph: (07) 3889 6144 Fax: (07) 3889 6149
www.clivusmultrum.com.au

Local Distributor

EcoLet®
Waterless Toilets®

No Water
No Septic Tank
No Chemicals
No Odour



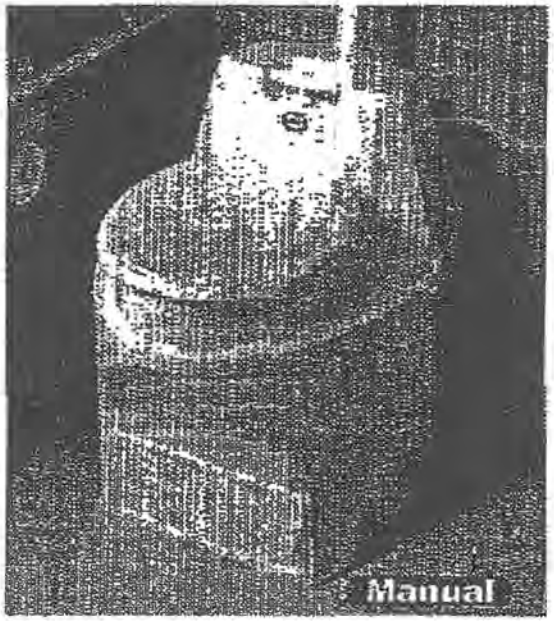
The Natural Solution for:
Country Cottages
Weekender Cabins
Poolside Amenities
Garage or Workshop
Almost ANYWHERE!

The most advanced self-contained composting toilet...

Now over 40 years in Australia!

Solcci.

Four models...



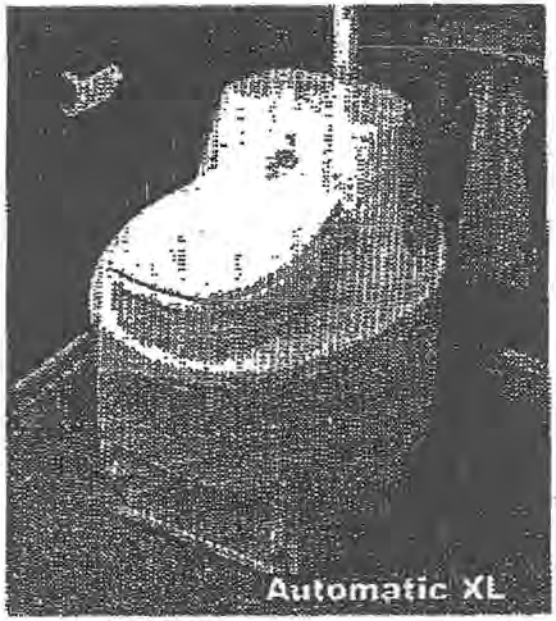
EcoLet Manual

Semi automatic | Electric 240V | 2 people full time | 3 people part time usage

The Manual model contains an electric heater and fan to aid the composting process by evaporating excess liquids, regulating the temperature, and providing additional air flow to the compost mixture. Simply turn the T-handle at top a couple of times after each use and your compost is mixed and aerated by the internal mixing arms.

EcoLet is easy to install.
Connect the ventilation pipe, plug into a standard 240V outlet, add the bag of humus starter mix, and your EcoLet is ready to use.

...simple installation...



EcoLet Automatic

Fully Automatic | Electric 240V | 3 people full time | 4 people part time usage

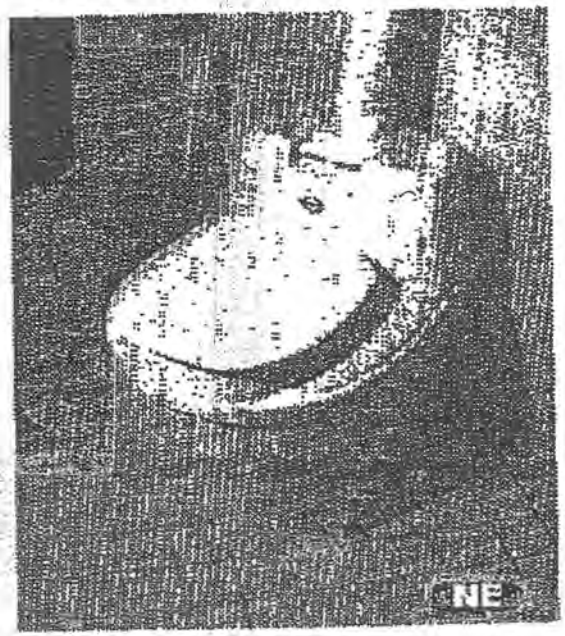
The Automatic model is similar to the Manual but has a fully automatic mixing mechanism. Simply lower the seat after each use and your Automatic does the rest. There is no risk that the mixing is forgotten by children or visiting guests.

EcoLet Automatic XL

Fully Automatic | Electric 240V | 4 people full time | 6 people part time usage

The XL is for those who need extra capacity. This unit is fully automatic, has a 40% larger chamber, two heating elements, ventilation fan, advanced mixing mechanism, and excess liquid sensor making it the most advanced composting toilet on the market!

...environmental solutions...



EcoLet NE

Batch Composter | Non Electric | 2 people full time | 4 people part time usage*

*Higher with extra container/s

The NE is the ideal toilet for remote locations where electricity is not available. The NE has two exchangeable composting bins, one under the seat and one in the rear for maturing the compost further before emptying. The NE is supplied with a larger vent pipe for better natural draft, but has no heater or fan to aid in the evaporation of excess liquid. Therefore, a convenient drain tube is provided to evacuate the liquids to a leaching pit in-ground, grey water system or to an auxiliary storage container. A low wattage fan can be fitted as an option.

EcoLet Toilets are small, attractive appliances, constructed from durable, easy to clean ABS plastic and non corroding metals.

...instead of polluting water ways, the EcoLet transforms waste into rich humus for the garden.

http://www.billingsgazette.com/index.php?id=1&display=rednews/2005/10/03/build/state/60-park-toilet.inc

$1M park toilet won't work right

Associated Press

KALISPELL - A $1 million composting toilet at Sperry Chalet in Glacier National Park will never work as planned, park officials said.

"It has never worked as effectively as it was designed to," said John Kilpatrick, Glacier's facilities chief. "We just weren't reaching the temperatures that would allow us to compost, even in the summer."

The rock-sided, four-hole, solar-powered privy was completed in 1998, as part of a $2.4 million overhaul of the chalet. The chalet was closed in 1992 after Montana water quality officials said the park's practice of emptying septic tanks on the slopes below both Sperry and Granite chalets was no longer acceptable.

After years of filling with little composting, the toilet units at Sperry were removed entirely last summer. They were flown out by helicopter and emptied at the park's sewage treatment plant near Apgar.

In their place, the park installed capped drums that collect waste and can be easily removed once a year.

The price of the Sperry overhaul drew some criticism, but Kilpatrick said most of the cost can be directly attributed to the remote, rugged location of the chalet.

"The real expense in that project was the construction of the restrooms in a historic setting, and it was a tough site to work in. The cost wasn't with these units themselves," he said. "Everything had to be brought in by horse or helicopter."

Granite Park Chalet is an even more difficult problem. It has two toilet units designed to reduce waste through composting, evaporation and drying, but they aren't working properly either.

"The problem is those units are getting so much use that they aren't functioning well," Kilpatrick said. "We still aren't able to keep up with the volume that people use there. We have 300 to 350 uses every day there."

As a result, the park has to fly out Granite Park's waste once a year.

And Kilpatrick does not see any technology or funding on the horizon to change the way waste is managed at the backcountry chalets.

"At all these backcountry sites, we're going to have to fly waste out as far into the future as I can see," he said. "That's not going to change."

[illegible] delivered according to the project works schedule as specified in the project contract.

We trust that this quotation is acceptable, and we look forward to hearing from you. If you have any queries please do not hesitate to contact us and we will assist as far as possible.

Assuring you of our full co-operation.

Len Parsons
ENVIRO OPTIONS (PTY) LTD

5. THE ALTERNATIVES

5.1. Do-nothing option

Degradation of the environment and recreation experiences at several sites in the Main Range (refer section 3) oblige DEC to provide management solutions. The failure to address these issues would result in continuing damage to internationally significant values in the park, continuing visitor and staff health risks, and continuing erosion of recreational experiences. Inaction would also conflict with park legislation, the current and new Draft Plan of Management and the expectations of the wider community.

5.2. Alternative human waste management systems

There are a number of alternative human waste management systems available, and a number of them have been used in national parks and reserves around the world. Table 5.2.1.1 below includes human waste management systems that have been used in sensitive areas including alpine environments.

5.2.1. Alternative toilet systems

Sewered toilets

Typical sewerage system with flush toilets connected to a main Sewerage Treatment Plant (STP).

Composting toilets

Consisting of a chamber(s) where human waste is composted through bacterial and biological action. Fluid is evaporated with solids (and some liquid) stored for removal or allowed to return to the immediate environment. Venting is important to ensure airflow and odour removal. This type also includes dehydrator type toilets where fluid is evaporated and excess fluid stored for removal or filtered and returned to the immediate environment (refer Attachment 5). In all cases composted waste requires removal.

Site limitations such as shallow soils or high water tables, coupled with heavy use, have led to the development of batch-bin composting and moldering privies, as well as more expensive manufactured aerobic composting toilets. In a composting toilet, raw wastes are held apart from the surrounding site until sufficiently decomposed and reduced in volume to be removed from the sensitive area, usually by helicopter or vehicle but in some cases pack animals have also been used. There have been various modifications to composting toilets to cater for the extreme weather conditions of backcountry areas. There have been on-going difficulties in getting composting systems in alpine areas to work effectively with waste still needing to be removed from the site.

Pit toilets (unsealed)

The traditional repository. Because anaerobic waste breakdown in a pit is slow, pathogens may remain viable for years. The waste in poorly placed privies can leach contaminants into the surrounding area years after use has ceased, causing a significant environmental impact. However, pit toilets have worked well when properly sited and not overused. The level of use must match local soil characteristics.

Modified pit toilets (unsealed)

These attempt to avoid anaerobic decomposition in favor of aerobic decomposition. Modifications include regularly digging out pits to prolong their life or tilting to allow aeration and mixing of wastes. Wastes are then shallow-buried or composted.

Table 5.2.1.1 Comparison of alternative human waste management systems

Criteria	Sewerage	Composting (waterless) Toilets	Vault systems	Septic and trenching system	Carry out systems	Minimal Impact Code (waste burial)
Environmental						
Water quality impact	Locally low, off-site low-moderate (tertiary treatment)	Locally low, off-site low-moderate (tertiary treatment of waste)	Locally low, off-site low-moderate (tertiary treatment)	Potentially moderate-high	Low	Potentially high
Soil impact	Locally high, off-site low	Locally high, off-site low	Locally high, off-site low	Locally high, off-site moderate	Low	Locally high
Vegetation impact	Locally high, off-site low	Locally high, off-site low	Locally high, off-site low	Locally high, off-site moderate	Low	Locally high
Cultural heritage impact	Site dependent	Site dependent	Site dependent	Site dependent	Low	Low
Experiential and social						
Visual impact	Moderate	Moderate	Moderate	Moderate (absorption area)	Low	Low (potentially high where burial not possible)
Odour impact	Low	Low-moderate (odour can be mitigated with appropriate venting)	Low-moderate (odour can be mitigated with appropriate venting)	Trench failure can produce odour	Low	Low (potentially high where burial not possible)
Access and equity	Acceptable	Acceptable	Acceptable	Acceptable	May exclude aged or mobility impaired. Backcountry visitors should be physically capable of complying.	May exclude aged or mobility impaired. Backcountry visitors should be physically capable of complying.
Health and safety risk (visitors)	Acceptable	Acceptable	Acceptable	Acceptable	Potential for spills, storage and disposal issues	Moderate–high where water supply contaminated
Method acceptability	Acceptable	Acceptable	Acceptable	Acceptable	Low-moderate (requires education and facilitation)	Moderate-high (difficult to achieve burial in winter/snow environment)
Planning and design						
Functionality	High	Moderate – composting occurs, but limited fluid	High	Moderate – absorption trench prone to failure	Moderate – some technical issues remain	Low-moderate in alpine environment

5.2.2. Systems appropriate to each recreation setting

Peripheral 'gateway' sites and major track heads

At the grandstand sites and major track heads there is generally excellent road access and high visitation levels. The potential alternatives are connection to an established sewerage system or large capacity vault pump-out systems.

Major walking track system

The walking track network can be separated into areas with and without vehicle access. In the Main Range, for sites with vehicle access, the best potential alternative is a vault pump-out system. Without vehicle access the alternatives are; vault with air lift out (an example is shown in Attachment 5), carry out methods or the minimal impact code. The latter two approaches are not likely to be successful on the major walking track system of the Main Range because of visitor numbers and characteristics. Major track routes which are inaccessible to vehicles and distant from toilets should be managed for their natural and remoter values through appropriate carry out and disposal methods.

Huts

Visitation rates to huts in the Main Range vary greatly. Tasmanian research has demonstrated environmental and human health issues associated with huts where toilets are not provided. Where vehicle access is available, pump-out vault toilets are likely to be most appropriate. Where vehicle access is not available (for example, Cootapatamba Hut), the alternatives are helicopter fly-out, servicing using light vehicle (skidoo or ATV), carry-out or minimal impact. Each of these alternatives has drawbacks. Helicopter access impacts on the recreation experience of visitors over a wide area. Light vehicle access suffers from low waste capacity and possibly difficult or unreliable access. Minimal impact has been shown to fail under alpine conditions, particularly in winter (refer section 3). Carry-out may be a partial solution, depending on the attitudes and abilities of the user groups.

Backcountry areas

Human waste in backcountry areas, where toilets are not provided, has traditionally involved waste burial, either on an individual basis (under minimal impact codes) or a group basis (such as trench or pit latrines). The provision of toilets in these areas would be either impractical or inappropriate to the recreation setting.

Tasmanian research, and anecdotal accounts from the Main Range, suggests that minimal impact methods are not complied with in alpine areas. In winter, deep snow cover may make waste burial difficult or impossible, shallow soils, rocks or tree roots may impede waste burial and terrain or vegetation may make the required 100 metres from watercourses unachievable. In alpine and high sub-alpine conditions waste and toilet paper is very slow to break down. Unmanaged or poorly buried waste has been shown to pose significant and persistent health risks to visitors (Bridle *et al.* 2005).

The remaining alternative is the use of carry-out methods. Enforcement and campsite signage is unlikely to be acceptable, and user education and active facilitation is required from management.

5.2.3. The carry out options

Carry out systems are used in remote areas where no toilet facilities exist and the minimal impact code is not practiced or promoted. Individuals collect their own human waste and *carry out* this waste to be disposed of outside the protected area. Disposal may involve sewage treatment works, composting facilities, incineration facilities or a suitable land fill site.

Table 5.2.3.1 Assessment of the principal carry out options

Carry out option	Portable container toilets (eg US Clean Mountain Can)	Hard container systems (eg Poo Tube or NZ Poo Pot)	Bio-Bags	Wag Bags
Mode of operation	Collect faeces, urine (optional) and toilet paper in a sealable leak proof container. In use in Alaska, U.S and Canada in alpine remote back country areas by groups. Dump in sewerage/septic system and clean out. An automatic cleaning system is currently being developed. Not commercially available in Australia at present.	Collect faeces in bag or grease proof paper and store/carry in container. In use on Main Range. (Larger containers can be used as portable toilet; not commercially available in Australia at present). Wagbag and Biobag liners are available.	Collect faeces in biodegradable bag, place within another bag or sealable container. Dump in composting toilet, compost or bury. Seat available.	Collect urine and faeces in biodegradable bag, which contains chemicals to gel liquid, place within another bag or sealable container. Dump in composting toilet, compost or bury. Seat available.
Intended uses	Climbing, hiking, skiing and camping, short and long duration (in use for upto 24 days)	General camping, hiking, skiing short and long duration.	General camping, hiking, skiing short duration (up to 7 days)	General camping, hiking, skiing short and long duration (up to 1 month)
Approximate Cost (from manufacturer March 2005)	$100 to $180 Australian depending on exact size and any modifications	Homemade PVC poo tube c. $15 materials, NZ poo pot commercially available.	Less than $1 per bag, seat ~ $100	$3-4 per bag, seat ~$200
Availability	Yes in U.S only at present	Yes	Yes	Yes
Manufacturer	United States	Poo tube homemade, Poo Pot - NZ	Italy, maybe South Australia	United States
Ease of Use	Easy	Easy	Easy	Easy
Suitable for disposal in flushing sewered or septic systems	Yes, manufacturers design is for sewerage/septic disposal.	Yes if progressively flushed in small quantities, and paper or no wrapping is used.	No Yes if highly macerated to prevent blocking and assist breakdown	No Yes if highly macerated to prevent blocking and assist breakdown
Suitable for disposal in composting toilet	No, however can be modified, requires water for clean out.	Yes, if wrapping is biodegradable.	Yes	Yes
Compatibility with pump-out vault systems	No, however can be modified, requires water for clean out.	Yes if wrapping is rapidly biodegradable. Not if Wagbags, Biobags or plastic bags used.	Yes – needs up to 3 months to decompose.	Yes – needs up to 2 years to decompose.
Incineration	No	Yes	Yes	Yes
Currently in use	Yes in US and Canada	Yes (poo tubes) in Main Range Yes (poo pot) in Mt Cook NZ	Yes	Not in main range
Weight - bags	Container weight varies with size and modifications ~400 grams	Poo tubes ~ 700 grams Poo pot ~ 300 grams	Low	Low
Seat	n/a	n/a	Fold up and less than 2 kgs	Fold up and less than 2 kgs

Doc 2.1B

Subject: ATT: ADRIAAN DREYER
From: "Carol Jacobs" <CJacobs@deat.gov.za>
Date: Thu, 15 Sep 2005 13:41:37 +0200
To: <marion@sanap.org.za>
CC: <henryv@antarc.wcape.gov.za>, <kusi@antarc.wcape.gov.za>, <noma@antarc.wcape.gov.za>, "Danie Smit" <Dsmit@deat.gov.za>, "Wynand Fourie" <Wfourie@deat.gov.za>, <Nico.Ras@dpw.gov.za>

Dear Adriaan

(1) PEO REPORT (MARION CONSTRUCTION VOYAGE - MARCH - MAY 2005), (2) BURNING OF WOOD & (3) INSPECTION OF CONSTRUCTION SITE

1. On behalf of the PEIMC, you are congratulated on a job well done with respect to your PEO report. The committee felt that all issues were adequately covered and were pleased to note that the Cape Town inspections were carried out.

The only concern was that some packing wood from the construction site was burnt and it was felt that such incineration should be avoided as far as possible.

2. This brings me to the second issue around which there has recently been some discussion.

As you are aware, the Prince Edward Islands enjoy a Special Nature Reserve (SNR) status - this is the highest status of conservation (higher than a National Park) awarded in terms of the Environmental Management Protected Areas Act. As such, minimum intervention is permitted, which is not negotiable at the risk of the possible revoking of these Islands' status as a SNR.

Thus, whilst noting Mike Murphy of NDPW's fax dated 26 May 2005 and his reference to section 9, item 9.5.7 of the Scoping Study document, this item does not give blanket approval for the burning of any/all waste and, as the PEIMC (the custodians of the Island) has now recommended that waste not be burned at all, we are obliged to adhere to this.

DEAT and the PEIMC's view is thus that the burning of waste can only be considered as an absloute last alternative and then, only if approved by the PEO and OIC/DCO - the wood used for the packing of construction material must thus please be returned to South Africa. It would be much appreciated if you could kindly ensure that this is implemented with immediate effect.

3. As regards the intermittent inspection of the construction site by the overwintering team Conservation Officer (CO) in periods of absence of the construction team on the Island, you are kindly requested to provide the necessary training and equipment (hard hats, etc.) to facilitate this process during the current construction period, so that these intermittent inspections may occur from when you leave the Island in November 2005 until the relief voyage in 2006. During the 2006 takeover, this training and equipment must be provided to the new team CO, to enable him/her to undertake the inspections until the next construction period.

These inspections are essential in terms of safety and to prevent any potential impact on the environment by collecting loose debris and securing material, in view of the Islands inclement weather.

Please convey a copy of this e-mail to Mike Murphy of NDPW as well, and I trust that I can rely on your cooperation in protecting Marion Island while you are busy with construction activities.

Kind regards
HENRY VALENTINE
for Director-General: DEAT

controlled burning c Env. Officer.
+ clean up.

Doc 2.9

-------- Original Message --------
Subject: Re: RAMSAR WETLAND INFO SHEET - PRINCE EDWARD ISLANDS
Date: Mon, 17 Oct 2005 10:39:08 +0200
From: Carol Jacobs <CJacobs@deat.gov.za>
To: Edward Netshithothole <Enetshithothole@deat.gov.za>
CC:<kusi@antarc.wcape.gov.za>, <noma@antarc.wcape.gov.za>

>>> Edward Netshithothole 10/14/05 9:00 AM >>>
Hi Carol

RAMSAR WETLAND INFO SHEET - PRINCE EDWARD ISLANDS

I am very busy presently with the position papers for Ramsar Ninth Meeting of the Contracting Parties, to be held in Uganda in early November 2005. This has take

We have however, since October 01, appointed a Senior Environmental Officer, who will assist in this process. I will sit down with him sometime next week and infc

Regards

****
Tshilidzi Edward Netshithothole
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Department of Environmental Affairs and Tourism
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Ramsar Nomination
help contact @

Doc 2.11

Annexure 3

ATTENDING FOREIGN CONVENTIONS, MEETINGS OR OFFICIAL TRIPS

NAME AND RANK	RJM Crawford Chief Specialist Scientist	DATE	17-25 July 2005

SUMMARY Brief description of the nature of the event, dates and who attended	The First Meeting of the Advisory Committee (AC) to the Agreement on the Conservation of Albatrosses and Petrels (ACAP) was held at Hobart, Tasmania, Australia from 20-22 July 2005. The meeting was attended by RJM Crawford (MCM). J Cooper (University of Cape Town), who is vice-chair of the AC, was also present. Three other Parties to the Agreement were represented (Australia, New Zealand, UK). In addition, two signatory states (Argentina, France) and three range states (Norway, Ukraine and USA) were represented. BirdLife International, Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR), Institute of Antarctic and Southern Ocean Studies (IASOS) and the Scientific Commission on Antarctic Research (SCAR) attended the meeting as Observers.

EVENT Detail and background leading up to the event	The Agreement came into force on 1 February 2004, following South Africa's ratification of it on 6 November 2003. The First Meeting of Parties (MOP) was held from 10-12 November 2004. Meetings to draft the Agreement, which was adopted under the Bonn Convention (Convention for the Conservation of Migratory Wild Animals), had earlier been held in Australia (Hobart) and South Africa (Cape Town).

AGENDA Describe the agenda and programme and indicate how officials participated in the programme	The agenda for the meeting was as follows: 1. Opening Remarks 2. Adoption of the Agenda 3. Report from Interim Secretariat 4. Report of Depository 5. Establishment of ACAP Secretariat 6. Financial Report 7. Rules of Procedure 8. Action Plan 9. Review of the Status and Trends of Albatrosses and Petrels Listed On Annex 1 of The Agreement 10. Taxonomy of Albatrosses and Petrels 11. Breeding Sites 12. Foraging Ranges and Overlap with Fisheries 13. Incidental Mortality in Fisheries 14. Advisory Committee Work Program 15. Reports from ACAP Observers At Other International Meetings 16. Advisory Committee Reporting to MOP2 16.1 Implementation of the Agreement 16.2 Activities of the Advisory Committee 17. Developing Indicators To Measure The Success Of ACAP 18. Second Meeting of the Advisory Committee 19. Second Session of the Meeting of the Parties to ACAP 20. Other Business 21. Closing Remarks 22. Adoption of Report South Africa contributed three papers to the meeting: ACAP/AC1/Doc.18 Second Meeting of the ACAP Advisory Committee. ACAP/AC1/Inf.4 Indexing the health of the environment for breeding seabirds in the Benguela system, South Africa. ACAP/AC1/Inf.8 Southern African Development Community Regional Symposium on Monitoring Control and Surveillance, Cape Town, 1-2 February. South Africa contributed information to: ACAP/AC1/Doc.11 Progress with the review of the status and trends of ACAP listed species. Information on demographic parameters and trends in population sizes of albatrosses and petrels at the Prince Edward Islands was submitted to ACAP's database. South Africa reported on its activities in connection with ACAP. The meeting agreed the AC was an appropriate forum for keeping Parties informed on progress in establishing a Headquarters Agreement; reviewed the Financial Report (South Africa along with Australia, New Zealand and UK had paid its subscription for 2005); adopted Rules of Procedure for the AC; noted that Australia, New Zealand, South Africa and UK had submitted information to the *Review of the Status and Trends of Albatrosses and Petrels*; agreed *Rules for Access and Use of Data on Albatrosses and Petrels Provided to the ACAP Secretariat*; developed *Draft Terms of Reference for the Breeding Sites Working Group*; established gaps in information on foraging distributions of albatrosses and petrels (which included sooty albatrosses at the Prince

	Edward Islands), the information being required to examine the overlap of foraging ranges with fisheries; agreed to seek observer status for ACAP at relevant Regional Fisheries Management Organizations and that ACAP should seek involvement, if possible, in the updating of FAO Fisheries Circular 937 on seabird bycatch mitigation; agreed a format for reporting to ACAP's second MOP in 2006; considered indicators for the success of ACAP. Offices for the Interim Secretariat of ACAP were opened by Tasmania's Minister for Economic Development, Lara Giddings, and MP for the Australian Government, Greg Hunt, during the meeting.

ACTIONS TO BE TAKEN Describe any follow-up actions to be taken	South Africa has been requested to consider hosting the second meeting of the AC in June 2006. South Africa needs to investigate the foraging ranges of the two sooty albatross species breeding at the Prince Edward Islands. South Africa was asked to work with New Zealand, BirdLife International and other interested representatives on development of indicators of success for ACAP. South Africa will need to report on its activities with respect to implementation of the Agreement at the next AC meeting in 2006.

not approved * cw MCM

IMPLICATIONS Describe in detail the implications for DEAT and South Africa in general	Because South Africa at its Prince Edward Islands supports substantial proportions of the global populations of several species of albatross and petrel, which generally range well beyond territorial waters, it is of considerable advantage that ACAP provides an international mechanism to co-ordinate conservation of these birds.

STATUS Please provide an assessment of the status and progress with regard to the implementation	A memorandum requesting the approval of DEAT management, the Minister, Cabinet and the Portfolio Committee to hold the second meeting of the AC in June 2006 has been submitted. Transmitters to satellites will be attached to Light-mantled and Dark-mantled Sooty Albatrosses breeding at Marion Island in 2005/06 to obtain information on their foraging ranges. A report on South Africa's activities during 2004/05 with regard to the Agreement was submitted to the first AC meeting. A report on activities in 2005/06 will be prepared prior to the second AC meeting.

*

FINANCES Please indicate whether they are sorted out	All necessary forms have been submitted and are being processed by the finance section.

PLEASE NOTE THAT A COPY OF THE FULL REPORT MUST ALSO BE FORWARDED TO THE INTERNATIONAL LIAISON AND COORDINATION SECTION.

3 wait gps.

DOC 2.12

DRAFT NATIONAL POLICY FOR SEALS, SEABIRDS AND SHOREBIRDS IN SOUTH AFRICA

INTRODUCTION

South African seabirds and seals are at present administered in terms of the *Sea Birds and Seals Protection Act* (SBSPA) *No. 46 of 1973*, as well as other acts (e.g. *National Parks Act No. 57 of 1976*) and provincial ordinances (e.g. *Nature Conservation Ordinance 19 of 1974* (Cape)).

In the SBSPA, "seabird" has a broad definition, including not only seabirds per se (Spheniscidae, Phalacrocoracidae, Laridae, Sternidae and other families), but also members of the families Threskiornithidae, Haematopodidae, Charadriidae and others. Seals are defined as any Cape Fur Seal *Arctocephalus pusillus pusillus*, Antarctic Fur Seal *A. gazella*, Subantarctic Fur Seal *A. tropicalis*, Southern Elephant Seal *Mirounga leonina*, Leopard Seal *Hydrurga leptonyx*, Weddell Seal *Leptonychotes weddelli*, Crabeater Seal *Lobodon carcinophagus* and Ross Seal *Ommatophoca rossi*.

In 2 (1) (a) of SBSPA, control over seabirds and seals is exercised "within the Republic and the territorial waters and fishing zone of the Republic as defined in sections 2 and 3, respectively, of the Territorial Waters Act, 1963 (Act No. 87 of 1963), on any island specified in Schedule 2 and, in respect of South African citizens, in Antarctica". Schedule 2 refers to Marion Island and Prince Edward Island. *Territorial Waters Act, 1963, Territorial Waters Amendment Act, 1977 and Territorial Waters Act, 1978* were repealed in whole by *Maritime Zones Act No. 15 of 1994*. The latter Act defines territorial waters as "The sea within a distance of twelve nautical miles from the baselines" and exclusive economic zone as "The sea beyond the territorial waters ... but within a distance of 200 nautical miles from the baselines."

At islands, below the high-water mark and within territorial waters and the fishing zone (exclusive economic zone), SBSPA prohibits the killing, capture or wilful disturbance of seals and seabirds, damaging of their eggs or collection of their eggs, feathers or guano, unless sanctioned in terms of a permit issued (at present) by the Minister of Environmental Affairs and Tourism (or his/her delegated representative).

Seabirds (*sensu stricto*) are often taken to be those birds that obtain a portion of their food from the sea (excluding the intertidal zone). Adopting this definition, there are 15 species of seabird that breed in continental South Africa (including its coastal islands, excluding Australian Gannet *Morus serrator* which hybridises with Cape Gannet) and at least 28 that breed at the Prince Edward Islands (excluding Lesser Sheathbill *Chionis minor*). Only Kelp Gulls *Larus dominicanus* breed in continental South Africa and at the Prince Edward Islands (as two distinct subspecies). Therefore, at least 42 seabirds breed on South African territory. Additionally, at least 62 other species of seabird visit southern African waters (Ryan, P.G. and Rose, B. 1979. Migrant seabirds. In: Oceans of Life off Southern Africa. Payne, A.I.L. and Crawford, R.J.M. (Eds), pp. 274–287. Vlaeberg; Cape Town), so that South Africa supports well over 100 species of seabird sensu stricto. South

Africa is a range state for 15 of the 30 species of oceanic seabirds that are seriously at risk from being killed by long-line fisheries throughout the world's oceans.

Of the 15 species of seabird that breed in continental South Africa, seven are endemic to southern Africa (including southern Angola). The nominate race of Swift Tern (*Sterna b. bergii*) and the race of Kelp Gull *L. d. vetula* also are endemic to this region. For the conservation of these endemic taxa, southern African states have sole responsibility. About 90% of the global populations of African Penguins *Spheniscus demersus*, Cape Gannets *M. capensis* and Hartlaub's Gulls *L. hartlaubii* breed in South Africa. Substantial proportions of the overall populations of Cape *Phalacrocorax capensis*, Bank *P. neglectus* and Crowned *P. coronatus* cormorants also breed in South Africa (Table 1). Of the 15 seabirds that breed in continental South Africa, nine are listed as Threatened or Near-threatened in terms of criteria of The World Conservation Union (IUCN) (Barnes, K. N. 2000. The Eskom Red Data Book of Birds of South Africa, Lesotho and Swaziland. BirdLife South Africa; Johannesburg).

Table 1: Estimates of the conservation status and the population sizes of seabirds that breed in southern Africa and South Africa. The proportions of the southern African and global populations of each species that breed in South Africa are indicated

Species	Conservation Status	Southern African population (breeding pairs)	South African population (breeding pairs)	Proportion of southern African population in South Africa	Proportion of global population in South Africa[a]
African Penguin[b]	Vulnerable	62 300[g]	56 900	0.91	0.91
Leach's Storm Petrel[b]	Endangered	25	25	1.00	0.00
Great White Pelican[c]	Near-threatened	7 350	3 650	0.50	0.08
Cape Gannet[b]	Vulnerable	166 200[g]	148 000	0.89	0.89
Cape Cormorant[b]	Near-threatened	215 500[g]	94 200	0.44	0.44
Bank Cormorant[b]	Endangered	3 132[g]	971	0.31	0.31
Crowned Cormorant[b]	Near-threatened	2 922	1 850	0.63	0.63
White-breasted Cormorant[c]	Least Concern	4 100	1 949	0.48	0.03
Kelp Gull[b]	Least Concern	23 000	18 600	0.81	0.02
Hartlaub's Gull[b]	Least Concern	7 325[g]	6 561	0.90	0.90
Grey-headed Gull[b]	Least Concern	3 255	2 649	0.81	0.26
Caspian Tern[d]	Least Concern	500	435	0.87	0.01
Roseate Tern[e]	Vulnerable	250	250	1.00	0.01
Swift Tern[f]	Least Concern	6 686	6 336	0.95	0.06
Damara Tern[e]	Near-threatened	4 620[g]	120	0.03	0.03

[a]Information on global populations was obtained from Delany, S. and Scott, D. 2002. Waterbird population estimates, third edition, *Wetlands International Global Series* 12, Wageningen; The Netherlands and from Hockey, P.A.R. *et al.* (Eds). *Roberts' Birds of Southern Africa*, seventh edition (in press).
[b]Estimates from Du Toit, M. *et al.* (Eds) 2003. *Conservation Assessment and Management Plan for Southern African Coastal Seabirds.* Cape Town; Avian Demography Unit and IUCN/SSC Conservation Breeding Specialist Group.
[c]Estimates include birds breeding inland in southern or South Africa and are from information in Hockey, P.A.R. *et al.*(Eds). *Roberts' Birds of Southern Africa*, seventh edition (in press).

[d]From Cooper, J. *et al.* Distribution, population size and conservation of the Caspian Tern in southern Africa. *Ostrich* 63: 58-67.
[e]From information in Delany, S. and Scott, D. 2002. Waterbird population estimates, third edition, *Wetlands International Global Series* 12, Wageningen; The Netherlands
[f]From information in Hockey, P.A.R. *et al.* (Eds). *Roberts' Birds of Southern Africa*, seventh edition (in press) and Ministry of Fisheries and Marine Resources, Namibia.
[g]The southern African population is also the global population.

Of the seabirds that breed at the Prince Edward Islands, 14 are listed as Threatened or Near-threatened, as also is Lesser Sheath-bill (Barnes, K. N. 2000. *The Eskom Red Data Book of Birds of South Africa, Lesotho and Swaziland.* BirdLife South Africa; Johannesburg). For some of the seabirds that breed at Prince Edward Islands, South Africa supports a substantial proportion of the global populations, e.g. Wandering Albatross *Diomedea exulans* (Table 2).

Table 2: Estimates of the conservation status and the population sizes of surface-nesting seabirds at the Prince Edward Islands (South African territory). The proportions of the global populations of each species that breed at the Prince Edward Islands are indicated

Species	Conservation Status[a]	Annual breeding population at Prince Edward Islands (pairs)[b]	Proportion of global population at the Prince Edward Islands[b]
King Penguin	Least Concern	221 000	0.13
Gentoo Penguin	Near-Threatened	1 319	<0.01
Macaroni Penguin	Near-Threatened	372 000	0.04
Eastern Rockhopper Penguin	Near-Threatened	112 000	0.17
Wandering Albatross	Vulnerable	3 719	0.44
Grey-headed Albatross	Vulnerable	9 229	0.10
Indian Yellow-nosed Albatross	Vulnerable	7 500	0.21
Dark-mantled Sooty Albatross	Near-Threatened	1 584	0.10
Light-mantled Sooty Albatross	Near-Threatened	329	0.02
Northern Giant Petrel	Near-Threatened	595	0.05
Southern Giant Petrel	Near-Threatened	2 830	0.09
Crozet Shag	Endangered[b]	394	0.33
Subantarctic Skua	Least Concern	796	0.11
Kelp Gull	Least Concern	54	<0.01
Antarctic Tern	Least Concern	<15	<0.01
Kerguelen Tern	Endangered	ca 60	0.03

[a]From Barnes, K.N. 2000. *The Eskom Red Data Book of Birds of South Africa, Lesotho and Swaziland.* BirdLife South Africa; Johannesburg.
[b]From Crawford, R.J.M. and Cooper, J. 2003. Conserving surface-nesting seabirds at the Prince Edward Islands: the roles or research, monitoring and legislation. *Afr. J. mar. Sci.* 25: 415-426.

SBSPA considers not only seabirds, but also shorebirds, including Haematopodidae and Charadriidae, which breed in or visit South Africa, the Lesser Sheathbill (Chionidae), and groups such as ibis and flamingos. However, many species of shorebird fall outside the ambit of current legislation but breed within South African territory or visit South African waters and constitute an ecologically important component of estuaries and the coastline.

There is concern that many of these shorebird species are negatively affected by habitat loss and disturbance within South Africa and that, in particular, migrant shorebird species are likely to be adversely affected by global climate change. South Africa has acceded to the African-Eurasian Migratory Waterbird Agreement (AEWA), and therefore has an international responsibility for the conservation of species listed in the Appendix to AEWA. Further, South Africa is a signatory of the Ramsar Convention on Wetlands of International Importance. Several of the registered Ramsar wetlands in South Africa are located in the 'coastal zone' and shorebirds were the motivation for registering these wetlands.

There is only one species of seal which breeds in continental South Africa, namely the Cape Fur Seal. It is endemic as a subspecies to southern Africa, with a population of 1.5–2 million individuals. On the Prince Edward Islands there are three breeding species of seals: the Antarctic Fur Seal, the Subantarctic Fur Seal and the Southern Elephant Seal.

In the absence of policy guidelines within SBSPA, its long title may be taken to indicate policy, namely: "To provide for the control over certain islands and rocks; for the protection and the control of the capture and killing, of sea birds and seals; and for the disposal of the products of sea birds and seals and for matters incidental thereto ...". More than thirty years have elapsed since SBSPA was promulgated and it is necessary to have an updated and more comprehensive national policy for seabirds (including shorebirds) and seals in South Africa. Such an updated policy is presented in section B. It is envisaged that this policy will be used to revise SBSPA.

The policy was developed during and following a meeting that was convened by Branch Marine and Coastal Management (MCM) of the Department of Environmental Affairs and Tourism (DEAT), at Sea Point, Cape Town, from 11–13 February 2002, to draft guidelines for a national policy for seabirds and shorebirds. The meeting also considered aspects of policy with regard to seals. It was attended by representatives of:

Department of Environmental Affairs and Tourism
Cape Nature
KwaZulu Natal Wildlife
Robben Island Museum
South African National Parks
South African National Defence Force
Avian Demography Unit, University of Cape Town
BirdLife South Africa
Percy FitzPatrick Institute of African Ornithology, University of Cape Town
Southern African Foundation for the Conservation of Coastal Birds
Overstrand Municipality.

Representatives from the conservation departments of Northern Cape and Eastern Cape were invited to the meeting but were unable to attend. Representatives from the following NGOs were invited but also were unable to attend:

Endangered Wildlife Trust
IUCN (The World Conservation Union) – South Africa
Society for the Prevention of Cruelty to Animals
University of Port Elizabeth
Wildlife and Environmental Society of Southern Africa
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DRAFT POLICY FOR SEALS, SEABIRDS AND SHOREBIRDS IN SOUTH AFRICA

1. Scope of the policy

This policy will apply to seals, seabirds and shorebirds that breed within South Africa's 'coastal zone', that occur within its exclusive economic zone (EEZ) or 'coastal zone' on passage between breeding and non-breeding areas and that utilize the EEZ or 'coastal zone' as a non-breeding area. The boundaries of this 'coastal zone' are deemed to extend as far inland and out to sea as necessary for the conservation and sustainable non-consumptive utilization of seals, seabirds and shorebirds and include estuaries, coastlands, coastline, offshore islands, the Prince Edward Islands, inland waters, coastal waters and the EEZ.

Schedule 1 of SBSPA should be expanded to include all islands and islets along the South African coast where breeding by seals, seabirds or shorebirds takes place, as well as mainland breeding sites for seals and seabirds. The schedule should include all non-breeding locations, haulout sites and roosts for seals and seabirds, whether on islands or on land, that are important for maintaining the populations of these animals. The policy will also apply to activities of South African citizens in Antarctica.

All species of seal listed in SBSPA should be covered by this national policy, as well as species of seabird and shorebird listed in Appendix 1 and Appendix 2, respectively.

2. Purpose of the policy

This policy serves the purpose of outlining an updated framework of principles and approaches, which will guide and direct the responsible and orderly management of seals, seabirds and shorebirds for the benefit of present and future generations in South Africa. It is based on the best available knowledge of the status of the populations of the species that it deals with and their natural environment and habitats. Simultaneously, it will guide and direct the drafting of revised adequate legislation that will govern and regulate activities associated with the subject species in terms of this policy.

3. Objectives of the policy

3.1 CONSERVATION OF SEALS, SEABIRDS AND SHOREBIRDS

Recognising that 15 species of seabird and one species of seal breed in continental South Africa and its coastal islands, that an additional 27 species of seabird and three species of seal breed at the Prince Edward Islands, that more than 60 species of seabird that do not breed on South African territory migrate to South African waters, that many species of shorebird breed within South African territory or visit South African waters, and hence that South Africa enjoys a high diversity of seabirds and shorebirds and valuable seal resources;

Further recognising that most of the seabirds and the single seal species that breed in continental South Africa and its coastal islands are endemic to southern Africa or form discrete, isolated populations, that South Africa supports substantial proportions of the global populations of several seabirds that breed at the Prince Edward Islands, that substantial numbers of some seabirds that do not breed in South Africa (including the Prince Edward Islands) may be at risk, e.g. from fishing activities, when visiting South African waters, that South Africa has acceded to several international agreements pertaining to the conservation of seals, seabirds and shorebirds and is thus obliged to conform with such policies, that many shorebird species are negatively affected by habitat loss and disturbance within South African territory, and hence that South Africa has a vital role to play in the conservation of both breeding and migratory seals, seabirds and shorebirds.

Further recognising the poor conservation status of many of the seabirds and shorebirds that breed in continental South Africa and its coastal islands, and at the Prince Edward Islands:

Policy will have as its prime objective the conservation of seals, seabirds and shorebirds in South Africa [including coastal islands, estuaries, coastline and coastlands], its territories [offshore islands] and its waters.

Conservation of species will necessitate ensuring that recruitment into breeding populations balances or exceeds losses from them. This may be achieved by minimizing mortality, increasing production, or by both. These aspects are addressed below.

3.1.1 *Minimizing mortality*

Mortality of seabirds and seals arises from a variety of sources, including:

3.1.1.1 *Oiling* — Policy will aim to minimize the numbers of seabirds and seals that are oiled (or orphaned through their parents being oiled or removed to prevent their becoming oiled), especially African Penguins and Cape Gannets that have proved particularly susceptible to oil spills in the past, but also rare or threatened species such as Bank Cormorants. It will also aim to have in place and support contingency

plans, networks and/or rehabilitation facilities for the rescue and subsequent rehabilitation of birds that are oiled or orphaned.

3.1.1.1.1 *Rehabilitation* - In order to prevent the proliferation of rehabilitation facilities, and costs associated with their functioning, specific rehabilitation facilities should be identified to take the lead in the care and rehabilitation of seabirds. Policy will aim to assist with funding of such facilities, which must satisfy specified criteria and report annually to government. Any banding of birds that is undertaken at rehabilitation facilities must be under permit issued by the South African Bird Ringing Unit.

For seals, which at present are not of conservation concern, government will not fund rehabilitation, but will encourage privately-funded rehabilitation facilities, which will be required to follow protocols determined by, and report annually to, government.

All rehabilitation facilities will be required to operate under permit, reviewable annually.

The Scientific Committee on Antarctic Research states that rehabilitated, vagrant seals and seabirds may not be released back into their normal breeding sites, because of the risks of disease transmission.

Policy should permit the rehabilitation and release (within the South African continental EEZ) of vagrant seals and seabirds provided that they are kept separate from local seals and birds and are certified by a qualified veterinarian to show no signs of disease.

3.1.1.2 *Other forms of pollution* — Seabirds and seals are at risk from other forms of pollution, e.g. ingestion of plastics, entanglement in discarded material, such as plastic or strapping cord used to offload tuna from fishing vessels and accumulation of poisons (e.g. polychlorinated bi-phenyls, organo-chlorine pesticides and heavy metals such as mercury and lead). Lights on boats in the Antarctic, Subantarctic and at the Marion Island base have the potential to blind and disorientate seabirds causing them to crash into fixed structures, where they are either killed on impact or make easy prey for predatory birds. Policy will aim to minimize these threats and may include control of the type and design of strapping or cord used to off-load tuna from fishing vessels.

3.1.1.3 *Incidental capture by fisheries* — Policy will adopt plans of action for reducing the incidental mortality of seabirds and seals caused by fishing operations, such as the FAO National Plan of Action for Reducing Incidental Catch of Seabirds in Longline Fisheries (NPOA-Seabirds). Fishing with gill nets in the vicinity of seabird breeding colonies will be restricted. Where possible, provision will be made for training of crew aboard trawlers in the disentanglement of seals caught in nets so that they may be released alive. Restrictions on the use or carrying of

firearms, ammunition and explosives aboard fishing vessels, with a view to the control of the illegal shooting of seals at sea, may be implemented.

3.1.1.4 *Losses to natural predators* — As humans have disrupted the natural functioning of marine ecosystems, e.g. by providing additional habitat for some species to breed, through decreasing the food of some species and through climate change, it is no longer satisfactory to view interactions between wild animals simply as natural processes. Policy will provide for interventive management to secure the future of threatened species, e.g. the culling of animals responsible for unsustainable levels of predation.

In cases where seals have been confirmed as preying on seabirds of conservation concern, either on land or at sea, and where the level of this predation is believed to pose a threat to the population status of the bird species or colony concerned, attempts should be made to identify and to cull the specific seals responsible for the predation but this would not preclude application of the precautionary principle (see 4.7).

3.1.1.5 *Losses to introduced predators* — Predators, such as feral and domestic cats, domestic dogs and rodents have been introduced to several bird breeding localities. Policy will be to eliminate these predators in the most humane manner affordable and to minimize the risk of further introductions of such predators. On mainland beaches that are important breeding localities the impact of domestic dogs on oystercatchers should be controlled.

3.1.1.6 *Mortality through disease* — Disease may cause high mortality and should be controlled. Policy will aim to minimize introductions of diseases to seal, seabird and shorebird populations (e.g. through the non-return of seals and birds exposed to disease to localities where they may introduce disease) and to control the spread of disease (e.g. through burning carcasses of infected birds).

3.1.1.7 *Potential mortality from fire* — Especially African Penguins are at risk from fire at breeding sites with abundant dry wood. Policy will aim to minimize the risk of fire (e.g. through removal of dead wood from breeding sites).

3.1.1.8 *Mortality from traffic and other forms of development* — At some bird breeding localities mortality is caused by traffic, by birds becoming trapped in ditches, etc. Off-road vehicles may cause mortality of seal pups and of eggs and nestlings of species breeding on the mainland, e.g. Damara Terns *Sterna balaenarum* and Afican Black Oystercatchers *Haematopus moquini*. Policy will aim to limit such mortality, inter alia through ensuring reasonable driving speeds and precluding off-road driving in the vicinity of breeding sites.

3.1.1.9 *Starvation* — Starvation is a major cause of mortality. Policy will aim to ensure sufficient availability of food in the wild to sustain populations (possibly through legislation to ensure adequate escapement of prey from commercial fisheries or

lower TACs) and, for Threatened or Near-threatened species, to reduce mortality through the captive rearing and subsequent release of birds that otherwise would starve, e.g. orphaned chicks, taking account of the desirability of controlling disease (see 3.1.1.6).

3.1.1.10 *Killing of seals and birds* — Policy will generally prohibit the killing of seals, seabirds and shorebirds and the collection or destruction of their eggs and nests, except where this is necessary for conservation management (e.g. seals may be killed when they prey on threatened seabirds and some Anatids may be culled in instances where naturalized species threaten to interbreed with indigenous species), or for scientific, educational, safety (e.g. to prevent strikes on aircraft), economic (e.g. seals eating fish in set nets or cormorants eating fish in impoundments), health or humane reasons. Killing that will threaten the viability of South African populations of species will not be sanctioned. All killing, except that for humane reasons, should be controlled by permit. All killing should be humanely undertaken (see 4.7). Accurate records should be kept of numbers of seals and seabirds killed and eggs collected or destroyed. The killing of seals and seabirds for profit will generally not be sanctioned.

3.1.1.11 *Exploitation of eggs* — Past utilization of seabirds in South Africa included the exploitation of large numbers of seabird eggs. Policy will preclude such exploitation for Threatened or Near-threatened species, or when disturbance of Threatened or Near-threatened species will ensue. The collection of live eggs for profit will generally not be sanctioned (see 3.5).

3.1.1.12 *Rough water/spring tides* — New-born seal pups and bird nests containing eggs or chicks may be swept off certain islands by heavy seas or high tides. These seal pups are poor swimmers and may be carried to the mainland dead or barely alive. Policy should make provision for the humane euthanasing of such pups, when they are assessed by a veterinarian as unlikely to survive. Where possible, pups showing a potential to survive may be returned to the colony from which they came or are thought to have come, taking account of the desirability of controlling disease (see 3.1.1.6). Chicks or eggs may be sent to a rehabilitation centre, but chicks should be euthanased if recommended by a veterinarian.

3.1.2 *Increasing production*

Seal and seabird production may be impaired by several factors, including:

3.1.2.1 *Insufficient food* — Inadequate supplies of food may cause a reduction in the breeding success of seals and seabirds or may cause seabirds not to breed or to postpone breeding. Seals and some seabirds compete with fisheries for food. It is important that policy ensure adequate availability of food for seals and seabirds, which for some species will necessitate providing for sufficient escapement of food from fisheries. Policy also should make provision for the prohibition of specified types of fishing in the vicinity of seal and seabird breeding localities, where such

fishing may reduce concentrations of fish available to the breeding seals and seabirds.

3.1.2.2 *Displacement of birds from breeding sites* — Seabirds are frequently displaced from breeding sites by larger animals, e.g. seals. This has been accentuated by modification of islands, where seabirds traditionally bred, through removal of accumulated deposits of guano. For example, at some localities African Penguins can no longer burrow into guano to prevent their nests being overrun by seals. Smaller, ground-nesting seabirds may be prevented from breeding at islands by feral or domestic predators. Policy must ensure retention of breeding space for Threatened and Near-threatened seabirds. Where seals have encroached into bird breeding areas, they may be persuaded to leave by a programme of deliberate disturbance, or removed by a programme of culling or by the construction and placement of artificial barriers. Non-lethal methods will be preferred. Other methods of assisting breeding are by the establishment of artificial nesting sites and removal of feral or domestic predators from breeding localities.

3.1.2.3 *Degradation of breeding habitat* — Degradation of breeding habitat of seabirds has arisen from activities such as removal of guano causing birds to breed in depressions that are subject to flooding, removal of shade, exclusion of birds from certain areas to facilitate collecting of eggs, etc. Habitat loss, particularly in estuaries, is a consequence of industrial and port development, waste discharge, sediment removal, bait collection, the development of recreational infrastructure and the construction of roads, bridges, marinas, etc. Islands should be protected from mineral mining too close to breeding or haulout areas. Policy should seek to maintain suitable breeding habitat, especially for Threatened and Near-threatened species, and that developers restore and/or create habitat to compensate for that lost to development and fund associated research.

3.1.2.4 *Disturbance by humans* — Disturbance by humans (e.g. construction activities, tourism, collection of guano, illegal landings, off road motoring, low-flying aircraft) may cause seals to stampede, resulting in the death of young pups, or to desert their colony. It may cause seabirds to leave nests, putting eggs and chicks at risk to predators, and discourage young adult seabirds from breeding. Suitable restricted areas should be declared surrounding breeding islands and mainland colonies but provision should be made for sustainable tourism (see 3.4). Over-flying of breeding colonies should be regulated by controlling the route paths and altitude of aircraft. The speed of recreational vessels close to breeding colonies should be restricted. Eco-tourism vessels/vehicles must be subject to permit conditions and a code of conduct. Policy will aim to minimize disturbance to seals, seabirds and shorebirds. Any disturbance to seals, seabirds and shorebirds, especially breeding animals, will be subject to the issuing of a permit.

3.1.2.5 *Destruction of nests* — Some species of seabird, e.g. Hartlaub's Gull, have learnt to nest on the roofs of buildings or to build nests on private property (e.g. gardens), often causing damage to buildings (e.g. by blocking gutters) or irritation to

residents (e.g. through noise). Policy will aim to discourage such nesting where possible, e.g. through exclusion fencing, laser technology and/or provision of alternative safe breeding sites, and where desired. It will allow for the removal of nests and the captive rearing of affected eggs and chicks. However, such removal of nests will not be considered if it is likely adversely to affect the conservation status of the species concerned. Any discouragement or intervention (including the artificial rearing of eggs and chicks) will be at the expense of the land or property owner concerned.

3.1.2.6 *Global climate change* — Global climate change may render natural breeding sites of seals and seabirds less suitable for breeding, e.g. through rising sea levels, increased ambient temperatures, increased frequency of storms, or altering the distribution and abundance of prey. Policy will seek to monitor possible changes in the environment at seal, seabird and shorebird breeding localities and take such remedial action as may be possible, e.g. the provision of shade or establishment of captive-breeding programmes for threatened species.

3.2 RECOGNITION OF INTERNATIONAL AGREEMENTS

Recognising that South Africa is signatory to (or intending to ratify) a number of international agreements that in whole or in part concern the conservation of seals, seabirds and shorebirds:

Policy will conform with the requirements of such international agreements, which may include:

- Antarctic Treaty System;
- African Convention on the Conservation of Nature and Natural Resources (Algiers Convention);
- Agreement on the Conservation of African-Eurasian Migratory Waterbirds (AEWA);
- Agreement on the Conservation of Albatrosses and Petrels (ACAP);
- Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR);
- Convention on Biological Diversity (CBD);
- Convention Concerning the Protection of the World Cultural and Natural Heritage (World Heritage Convention);
- Convention on the Conservation of Antarctic Seals;
- Convention on the Conservation of Migratory Species of Wild Animals (CMS or Bonn Convention);
- Convention on the Conservation of Southern Bluefin Tuna (CCSBT);
- Convention for Co-operation in the Protection and Development of the Marine and Coastal Environment of the West and Central African Region (Abidjan Convention);
- Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES Convention);
- Convention for the Protection, Management and Development of the Marine and Coastal Environment of the Eastern African Region (Nairobi Convention);

- Convention on Wetlands of International Importance, especially as Waterfowl Habitat (Ramsar Convention);
- FAO Code of Conduct for Responsible Fisheries;
- Indian Ocean Tuna Commission (IOTC);
- International Plan of Action for Reducing Incidental Catch of Seabirds in Longline Fisheries of the Food and Agriculture Organization of the United Nations (FAO IPOA-Seabirds);
- Man and the Biosphere Programme of the United Nations Educational, Scientific and Cultural Organization (MAB);
- MARPOL Convention;
- South East Atlantic Fisheries Organisation.

Any sale of seals and seabirds to institutions outside South Africa will take cognisance of the provisions of these agreements, will preferably be made from captive populations, and will only be sanctioned if there is reasonable evidence that the prospective destination institutions will provide suitable facilities and care.

Policy will preclude the passage through South Africa of seals and seabirds caught outside South Africa and its territories unless such capture is conducted legally, follows the best conservation and humane practices and there is reasonable evidence that the transit and prospective destination institutions will provide suitable facilities and care.

3.3 CO-OPERATIVE MANAGEMENT

Recognising the migratory nature of many of the seabirds and shorebirds that breed on South African territory, or visit South African waters, and the interchange, at varying time scales, of seals and seabirds between breeding colonies within South Africa, and between breeding colonies in South Africa, Namibia and Angola or between the Prince Edward Islands and other Subantarctic localities:

Policy will have as its objective the co-ordinated management of seal, seabird and shorebird colonies within South Africa and the desirability of regional and international co-operation with regard to management of seals, seabirds and shorebirds breeding in or visiting southern Africa and the Prince Edward Islands.

3.3.1 *Co-ordinated management of South African seal and seabird colonies*

National, statutory or provincial departments with responsibility for conservation and management of seals and seabirds or their habitat include DEAT, South African National Defence Force (SANDF), South African National Parks (SANP), Robben Island Museum (RIM) and the four coastal provinces. Additionally, regional councils and NGOs contribute to conservation and management. In terms of South Africa's Constitution (Act 108 of 1996), seals and seabirds as a marine resource (excluded from nature conservation in Schedule 4) fall within the functional area of national legislative competence. Hence national government will be responsible for determination and development of policy with regard to seals and seabirds. This is rational because seals and seabirds do not exist in isolation

from their environment, but are influenced by other resources (e.g. availability of food and interactions with other marine predators) and fisheries that are managed at the national level. Further, there is interchange of animals between localities administered by different organizations.

National government may delegate management of certain localities to other tiers of government. However, through DEAT, national government will be responsible for the management of seals, seabirds and shorebirds at a national level. This will necessitate unrestricted access by staff of DEAT to breeding, roosting and haulout localities of seals, seabirds and shorebirds in order to conduct the necessary research and monitoring to fulfil this function (see section 4.4 below).

The co-ordinated management of all interested parties is desirable and may best be achieved through a 'national advisory forum' or council, chaired by a representative of DEAT, on which all role players are represented and which advises the Minister through DEAT. However, it is recommended that seals be managed by DEAT alone.

The management of coastal islands and other localities where seals and seabirds breed is fragmented and in certain instances is inadequate. The legal situation regarding which department is responsible for management of islands and their resources (other than those administered by SANDF, SANP) is also not clear. Staatspresidents-minute 1109 of 23 November 1989 assigns some functions to the Administrator of the Cape of Good Hope under the *Sea Fisheries Act of 1973*, which however had been repealed by the *Sea Fisheries Act of 1988*. These functions included the harvesting of guano and seal pelts. A later President's Minute 29 of 5 July 1994 assigns administration of the *Sea Birds and Seals Protection Act* to the Minister of Environmental Affairs and Tourism. Policy needs to clarify which department is responsible for managing each seal or seabird breeding locality and make provision for the adequate administration of all breeding localities. A solution may be for DEAT to manage islands that provinces are unable (e.g. through financial constraints) to administer and for provinces to continue managing islands that they are both able and willing to administer, unless the ensuing outsourced cost to national government is too great. In this instance, administration of such islands should be assumed by DEAT.

3.3.2 *Regional management of seals and seabirds*

The Cape Fur Seal and many of the seabirds breeding in continental southern Africa and its coastal islands are endemic to the southern African region. There is movement (both short-term and long-term) of several species between southern Africa states, so that conservation will be enhanced by regional agreements, e.g. development of a memorandum of understanding between national management and research institutes or in terms of the Bonn Convention. Further to this, the establishment of a Southern African AEWA Seabird and Shorebird Working Group could have included in its terms of reference the harmonization of species action plans within southern Africa.

3.3.3 *International co-operation*

International co-operation can be implemented in terms of agreed conventions (see section 3.2). International co-operation should be encouraged to monitor impacts on seals and seabirds that breed within or visit South African territory and are at risk from the activities of other states (either within their exclusive economic zone or operating on the high seas) and vice versa. Research and development (e.g. measures to decrease incidental catches of seals and seabirds) can be enhanced through interaction with specialists in other countries.

3.4 ECOTOURISM

Recognising the rapidly increasing interest in tourism to seal, seabird and shorebird colonies, and the desirability of economic development in South Africa:

Policy will have as its objective the sustainable, non-consumptive use of seals, seabirds and shorebirds for ecotourism, provided provision is made for regulating access to colonies and preventing or controlling disturbance to seals and birds so as to ensure sustainable utilization.

Tourism to seal and seabird colonies has exhibited remarkable growth in South Africa in recent years. Together with the proposed inclusion of shorebirds in plans for the development of tourism in the coastal zone, this highlights the need to cater for an expanding industry and to seek its sustainability through ensuring (i) that it has no long-term negative impact on seals, seabirds and shorebirds and (ii) client satisfaction. There also is need to cater for tourism by persons of different income levels. A co-ordinated plan for development of tourism to seal, seabird and shorebird colonies nationwide seems desirable.

3.5 EXPLOITATION

Recognising the past utilization of seals and seabirds in South Africa for economic gain and the potential future use of seal and seabird products, but at the same time bearing in mind the poor conservation status of South Africa's seabirds:

Policy will have as its primary objective the conservation of seals, seabirds and shorebirds and will not sanction the exploitation of seal and seabird products other than the collection of guano at artificial sites or the use of non-viable products (such as abandoned eggs), where these will not be detrimental to the conservation status of species.

However, it is possible that collections of eggs may be sanctioned to limit the growth of some seabird species that are influencing the conservation status of other species, e.g. Kelp Gulls. Such eggs could provide employment through product enhancement and sale

but would need to be collected in such manner as not to cause excessive disturbance to breeding colonies.

From early in the 17th century until late in the 20th century, there was utilisation of seal and seabird products. This included the exploitation of skins, blubber oil and genitalia of seals and seabird guano and feathers and penguin eggs. Decreases in demand for seal products and in seabird numbers led to decreases in these products.

After World War 2, the introduction of artificial fertilisers reduced the demand for guano. However, from the 1990s there was renewed demand for natural fertilisers. Guano is still a sought-after commodity and potential resource. Its collection sometimes contributes to maintenance activities at certain facilities, e.g. removal of guano from the breakwater at Robben Island. Management policy will prohibit the collection of guano at breeding colonies where guano forms an integral part of the seabird's life cycle and breeding success (e.g. African Penguin, Cape Gannet). However, the commercial exploitation of guano, e.g. through the construction of seabird breeding platforms, may be sanctioned if deemed to have no detrimental influences on the species in question and provided an environmental impact assessment is conducted and indicates that such an operation will have no harmful environmental effects.

The capture of wild seals, seabirds and shorebirds for trade is not encouraged but may exceptionally be permitted. It will be subject to government's overall policy regarding the capture of wild animals for display in captivity. Capture of animals for trade will only be sanctioned under permit and for seals only at mainland colonies, e.g. Kleinzee. The conditions and timing of such captures should be controlled. The preferred mechanism for providing approved institutions in other countries and in South Africa with animals is to source them from captive populations.

3.6 JOB CREATION

The requirement to create jobs in South Africa needs to be borne in mind. With regard to seabirds and shorebirds, their generally poor conservation status dictates that their sustainable use will primarily be centred on tourism. A limited number of jobs will be created for guides, managers and researchers but benefits will accrue to associated industries, such as those dealing with catering, accommodation and transport. The possibility exists of establishing seabird guano platforms, at which guano may be exploited. For seals, it is also expected that utilization will be primarily through tourism.

Another important avenue for the creation of jobs will be the introduction of an observer programme on fishing vessels to monitor the by-catch of birds and seals and the compliance of vessels with mitigation measures to reduce the by-catch, especially of birds.

3.7 COMPATIBILITY OF LEGISLATION

Recognising the existence of other South African legislation relating to seabirds and seals:

Policy will aim to achieve compatibility of any revision of SBSPA with such other legislation to the extent that this is feasible and desirable.

The revision of SBSPA should have precedence over other legislation with regard to matters pertaining to seals, seabirds and shorebirds.

4. Other considerations

4.1 CAPTIVE POPULATIONS

Several populations of captive seals and seabirds exist in South Africa, many of which serve education or humanitarian functions. The proliferation of captive populations should be managed.

Policy will require permits for the holding of seals and seabirds in captivity. Holding institutions will be required to accord with prescribed standards for facilities and care.

A permit system for the transportation of seals within South Africa should be introduced. The desirability of requiring permits for the transportation of seabirds should be addressed.

Captive breeding programmes play a role in the conservation of Threatened species, and may need to be implemented for some southern Africa seabirds (e.g. Bank Cormorant) before their conservation status deteriorates further. Such programmes will have increased probability of success if conducted co-operatively with international agencies having experience in captive breeding for conservation purposes.

Policy should make provision for captive breeding programmes for Threatened species, if deemed desirable, both within and outside South Africa.

4.2 FEEDING OF WILD SEALS

Feeding of wild seals may only be undertaken under permit for purposes of research or rehabilitation.

4.3 PUBLIC INVOLVEMENT

The public contributes substantially to conservation of seals, seabirds and shorebirds, e.g. by collecting or reporting oiled, sick or injured individuals, reporting tag and ring numbers found on seals and seabirds and assisting during times of crisis.

Occasionally well-meaning involvement is misplaced, e.g. removal from the wild to a rehabilitation centre of a seal that has naturally hauled out or a bird that is naturally moulting. Liability for injuries incurred to volunteers rendering assistance may need to be addressed.

4.4 RESEARCH AND MONITORING

Recognising the desirability of basing management of seals, seabirds and shorebirds on sound scientific advice:

Policy will provide for research and monitoring to be undertaken to ensure the sound management and conservation of seal, seabird and shorebird populations, and for the sustainable non-consumptive utilisation of seals, seabirds, shorebirds and their products.

Policy must make provision for research aimed at monitoring the status of South Africa's seals, seabirds and shorebirds, especially those breeding in continental South Africa, its coastal islands and at the Prince Edward Islands, but also seabirds breeding in proximity to South Africa's base in Antarctica and seabirds and shorebirds at risk from South African activities while migrating through South African waters. It must also seek to understand factors influencing the status of seals, seabirds and shorebirds so that, where this is deteriorating, remedial measures can be considered for implementation. Further, research needs to be conducted to ensure that utilization of seals, seabirds and shorebirds (e.g. for tourism) is undertaken in a sustainable manner. Seals and seabirds are frequently long-lived animals (e.g. seals may live for 30 years in captivity and Wandering Albatrosses 50 years or more in the wild). Hence long-term research is often needed to understand the dynamics of seal and seabird populations. Long-term research is also required to investigate the type, the extent and the impact of interactions between seals and commercial fisheries.

The monitoring of shorebirds along South Africa's coastal zone will contribute data to international programmes aimed at determining population trends through surveys in non-breeding areas. Conducting research into the possible negative impacts of global climate change on migrant shorebirds could ensure that mitigating measures are timeously implemented.

For seals and many species of seabird there is interchange of individuals between different breeding colonies administered by various South African agencies. For example, during the last decade seals moved northward to Kleinsee in South Africa and to Cape Frio in Namibia, and African Penguins emigrated from Dyer Island to Robben Island, Boulders and Betty's Bay, each of these four localities administered by a different authority. Swift Terns and Hartlaub's Gulls frequently breed at different localities. Therefore, monitoring and research at the population level will best be co-ordinated at the national level. The long-term nature of much of the required monitoring suggests that it is primarily the responsibility of national government. Universities and other management agencies provide complementary skills, again suggesting the desirability of a council on which all role players are represented.

4.5 SEABIRDS AND SHOREBIRDS AS INDICATORS

Recognising the usefulness of seabirds in providing information on the state of fish and other resources on which they feed and on the general health of marine ecosystems:

Policy will provide for the collection of such information as is deemed desirable for monitoring the state of fish stocks and marine ecosystem health, provided such monitoring does not adversely impact seabird populations.

Indices derived from seabirds have proved valuable in the validation of survey estimates of fish stock abundance. Being near the apex of the food web, seabirds integrate changes lower down the food web. Further, they are susceptible to factors such as pollution. These attributes make them useful monitors of fish stock abundance and marine ecosystem health, both of which are necessary to attain the objectives of the Marine Living Resources Act No. 18 of 1998.

Undertaking research into the natural history of shorebirds, the threats that impact them, their migration routes and their role in ecosystem functioning should provide valuable indices of the health of the coastal zone, particularly at the level of the individual estuary.

Recognising that the Prince Edward Islands fall within the scope of CCAMLR, and that seal and seabird monitoring at these islands makes a key contribution to Southern Ocean indices:

Policy will recognize that South Africa needs to continue its international and national monitoring obligations at the Prince Edward Islands and to expand them as appropriate.

4.6 EDUCATIONAL VALUE

Recognising the value of seals, seabirds and shorebirds for education:

Policy will promote the public understanding of seals, seabirds and shorebirds and their role in marine ecosystems and provide for the use of seals, seabirds and shorebirds or their products for educational purposes, provided such use does not adversely impact seal, seabird and shorebird populations.

Seals, seabirds and shorebirds have considerable public appeal, which should be enhanced through increased media exposure. Seals, seabirds and shorebirds also have significant potential for education from a variety of perspectives, including:

- museums depicting the history of utilization of seals, seabirds and shorebirds and their products;
- conservation displays at breeding colonies, zoos and aquaria;
- their use for post-graduate studies and academic research.

To ensure that this potential is realised and that awareness of marine conservation issues is highlighted, guides at seal, seabird and shorebird breeding colonies should be well informed about their subjects. Educational material (e.g. signage and pamphlets) should be developed and made readily available. Television and international marketing could be used further to enhance environmental awareness.

Private collections of seabirds and their products (e.g. eggs) exist. These private collections should be registered and have a detailed inventory to prevent illegal additions. Policy should be to sanction existing private collections of seabird specimens and eggs through permit, to preclude the sale or trade of existing specimens and to prohibit future collections other than those approved by permit, issued in advance.

There is a need to educate fishers and other users of the marine environment on the harmful effects of some forms of fishing on seals and seabirds. Policy should aim to further conservation of seals and seabirds through targeted education programmes.

Provision should be made to allow DEAT to issue permits to control the making of educational films and documentaries on seals and seabirds. A requirement that an official guide or observer be present during filming may be a permit condition.

4.7 MANAGEMENT OF ADVERSE INTERACTIONS

Recognising that various marine predators may adversely affect seabirds of conservation concern, by direct predation or displacement from breeding areas:

Policy will make allowance for the management of interactions between Threatened or Near-threatened seabirds and other species (including other seabirds) that may influence the conservation status of seabirds adversely.

Interventive management may include the culling, removal or relocation of predators. This preferably will be preceded by the collection and evaluation of relevant scientific data that show a demonstrable adverse effect of the predator on the numbers or breeding success of the seabird. However, the precautionary principle will be adopted and even in the absence of conclusive data, the decision to cull, remove or relocate may still be invoked.

In cases where culling, removal or relocation is advocated, a motivated proposal must be submitted to a properly constituted ethics committee for approval of the ethical (but not management) requirements of such intervention.

Where abundant seabirds have adverse impacts on Threatened and Near-threatened seabirds, it will be necessary to manage the harmful impacts of the abundant species. Policy will aim to maintain the diversity of South Africa's seal, seabird and shorebird assemblages.

4.8 CONFLICT WITH DEVELOPMENT

Whenever initiatives or activities undertaken would seem to cause conflict with animals encompassed by this policy, the onus is on the developer to fund such measures as would prevent this conflict.

4.9 FUNDING

Recognising the cost of the above activities:

Policy will make provision for appropriate funding for monitoring, research and management of South Africa's seals, seabirds and shorebirds.

Possible sources of income include:
- a levy on tour operators (for management of breeding colonies);
- a tax on shipping (for structures to combat the harmful effects of oiling);
- support from the Marine Living Resources Fund (for conservation activities, because the poor conservation status of South Africa's seabirds and regional declines in seal populations, e.g. in the Eastern Cape, have in large part resulted from competition with fisheries for food and alteration of ecosystem functioning through fishing activities);
- entrance fees to seal, seabird and shorebird viewing facilities;
- support from Antarctic research programmes;
- ad hoc contributions from business, industry and NGOs, who are offered tax breaks as incentives;
- foreign aid;
- film making.

The procurement and management of funds for the various activities should be centrally co-ordinated by a national advisory forum.

5. Compliance

Compliance with policy should be enforced.

APPENDIX 1

Seabirds that need to be protected in terms of a national policy and a revised Seals, Seabirds and Shorebirds Protection Act (compiled by P. A. R. Hockey and P. G. Ryan, Percy FitzPatrick Institute of African Ornithology)

Family Scolopacidae [select species only]
Genus *Phalaropus* [select species only]
Red Phalarope *Phalaropus fulicaria*

Family Laridae [select species only]
Genus *Catharacta*
Subantarctic Skua *Catharacta antarctica*
South Polar Skua *Catharacta maccormicki*
Genus *Stercorarius*
Pomarine Jaeger *Stercorarius pomarinus*
Parasitic Jaeger *Stercorarius parasiticus*
Long-tailed Jaeger *Stercorarius longicaudus*
Genus *Larus*
Kelp Gull *Larus dominicanus*
Cape Gull *Larus vetula*
Herring Gull *Larus argentatus*
Lesser Black-backed Gull *Larus fuscus*
Grey-headed Gull *Larus cirrocephalus*
Hartlaub's Gull *Larus hartlaubii*
Common Black-headed Gull *Larus ridibundus*
Slender-billed Gull *Larus genei*
Franklin's Gull *Larus pipixcan*
Sabine's Gull *Larus sabini*
Genus *Rissa*
Black-legged Kittiwake *Rissa tridactyla*
Genus *Sterna*
Gull-billed Tern *Sterna nilotica*
Caspian Tern *Sterna caspia*
Royal Tern *Sterna maxima*
Lesser Crested Tern *Sterna bengalensis*
Swift Tern *Sterna bergii*
Sandwich Tern *Sterna sandvicensis*
Roseate Tern *Sterna dougallii*
Black-naped Tern *Sterna sumatrana*
Common Tern *Sterna hirundo*
Arctic Tern *Sterna paradisaea*
Antarctic Tern *Sterna vittata*
Kerguelen Tern *Sterna virgata*
Little Tern *Sterna albifrons*
Damara Tern *Sterna balaenarum*
White-cheeked Tern *Sterna repressa*
Bridled Tern *Sterna anaethetus*
Sooty Tern *Sterna fuscata*
Genus *Chlidonias* [select species only]
Black Tern *Chlidonias niger*
Genus *Anous*
Brown Noddy *Anous stolidus*
Lesser Noddy *Anous tenuirostris*

Family Phaethontidae
Genus *Phaethon*
Red-billed Tropicbird *Phaethon aethereus*
Red-tailed Tropicbird *Phaethon rubricauda*
White-tailed Tropicbird *Phaethon lepturus*

Family Sulidae
Genus *Morus*
Cape Gannet *Morus capensis*
Australian Gannet *Morus serrator*
Genus *Sula*
Red-footed Booby *Sula sula*
Brown Booby *Sula leucogaster*

Family Phalacrocoracidae [select species only]
Genus *Phalacrocorax* [select species only]
Crowned Cormorant *Phalacrocorax coronatus*
White-breasted Cormorant *Phalacrocorax [carbo] lucidus*
Bank Cormorant *Phalacrocorax neglectus*
Cape Cormorant *Phalacrocorax capensis*
Crozet Shag *Phalacrocorax [atriceps] melanogenis*

Family Pelecanidae [select species only]
Genus *Pelecanus* [select species only]
Great White Pelican *Pelecanus onocrotalus*
Pink-backed Pelican *Pelecanus rufescens*

Family Fregatidae
Genus *Fregata*
Greater Frigatebird *Fregata minor*
Lesser Frigatebird *Fregata ariel*

Family Spheniscidae
Genus *Aptenodytes*
King Penguin *Aptenodytes patagonicus*
@Emperor Penguin *Aptenodytes forsteri*
Genus *Pygoscelis*
Gentoo Penguin *Pygoscelis papua*
@Adelie Penguin *Pygoscelis adeliae*
Chinstrap Penguin *Pygoscelis antarctica*
Genus *Eudyptes*
Macaroni Penguin *Eudyptes chrysolophus*
Rockhopper Penguin *Eudyptes chrysocome*
Genus *Spheniscus*
African Penguin *Spheniscus demersus*
Magellanic Penguin *Spheniscus magellanicus*

Family Procellariidae
Genus Macronectes
Southern Giant-Petrel *Macronectes giganteus*
Northern Giant-Petrel *Macronectes halli*
Genus *Fulmarus*
Southern Fulmar *Fulmarus glacialoides*
Genus *Thalassoica*
Antarctic Petrel *Thalassoica antarctica*
Genus *Daption*
Pintado Petrel *Daption capense*
Genus *Pagodroma*
@Snow Petrel *Pagodroma nivea*
Genus *Aphodroma*
Kerguelen Petrel *Aphodroma brevirostris*
Genus *Pterodroma*
Great-winged Petrel *Pterodroma macroptera*
White-headed Petrel *Pterodroma lessonii*
Soft-plumaged Petrel *Pterodroma mollis*
Atlantic Petrel *Pterodroma incerta*
Genus *Halobaena*
Blue Petrel *Halobaena caerulea*
Genus *Pachyptila*
Broad-billed Prion *Pachyptila vittata*
Salvin's Prion *Pachyptila salvini*
Antarctic Prion *Pachyptila desolata*
Slender-billed Prion *Pachyptila belcheri*
Fairy Prion *Pachyptila turtur*
Genus *Bulweria*
Bulwer's Petrel *Bulweria bulwerii*
Genus *Procellaria*
White-chinned Petrel *Procellaria aequinoctialis*
Spectacled Petrel *Procellaria conspicillata*
Grey Petrel *Procellaria cinerea*
Genus *Calonectris*
Cory's Shearwater *Calonectris diomedea*
Streaked Shearwater *Calonectris leucomelas*
Genus *Puffinus*
Wedge-tailed Shearwater *Puffinus pacificus*
Flesh-footed Shearwater *Puffinus carneipes*
Great Shearwater *Puffinus gravis*
Sooty Shearwater *Puffinus griseus*
Manx Shearwater *Puffinus puffinus*
Balearic Shearwater *Puffinus mauretanicus*
Audubon's Shearwater *Puffinus lherminieri*
Little Shearwater *Puffinus assimilis*

Mascarene Shearwater *Puffinus atrodorsalis*
Genus *Diomedea*
Wandering Albatross *Diomedea exulans*
Tristan Albatross *Diomedea dabbenena*
Southern Royal Albatross *Diomedea epomophora*
Northern Royal Albatross *Diomedea sanfordi*
Genus *Phoebastria*
Laysan Albatross *Phoebastria immutabilis*
Genus *Thalassarche*
Black-browed Albatross *Thalassarche melanophris*
Shy Albatross *Thalassarche cauta*
Salvin's Albatross *Thalassarche salvini*
Chatham Albatross *Thalassarche eremita*
Grey-headed Albatross *Thalassarche chrysostoma*
Indian Yellow-nosed Albatross *Thalassarche carteri*
Atlantic Yellow-nosed Albatross *Thalassarche chlororhynchos*
Buller's Albatross *Thalassarche bulleri*
Genus *Phoebetria*
Dark-mantled Sooty Albatross *Phoebetria fusca*
Light-mantled Sooty Albatross *Phoebetria palpebrata*
Genus *Oceanites*
Wilson's Storm-Petrel *Oceanites oceanicus*
Genus *Pelagodroma*
White-faced Storm-Petrel *Pelagodroma marina*
Genus *Garrodia*
Grey-backed Storm-Petrel *Garrodia nereis*
Genus *Fregetta*
Black-bellied Storm-Petrel *Fregetta tropica*
White-bellied Storm-Petrel *Fregetta grallaria*
Genus *Hydrobates*
European Storm-Petrel *Hydrobates pelagicus*
Genus *Oceanodroma*
Leach's Storm-Petrel *Oceanodroma leucorhoa*
Matsudaira's Storm-Petrel *Oceanodroma matsudairae*
Genus *Pelecanoides*
Common Diving-Petrel *Pelecanoides urinatrix*
South Georgian Diving-Petrel *Pelecanoides georgicus*

@ = Not recorded in South African waters outside Antarctica

APPENDIX 2

Shorebirds that need to be protected in terms of a national policy and a revised Seals, Seabirds and Shorebirds Protection Act (compiled by P. A. R. Hockey and P. G. Ryan, Percy FitzPatrick Institute of African Ornithology)

Family Dendrocygnidae
Genus *Dendrocygna*
Fulvous Duck *Dendrocygna bicolor*
White-faced Duck *Dendrocygna viduata*
Genus *Thalassornis*
White-backed Duck *Thalassornis leuconotus*

Family Anatidae [select species only]
Genus *Oxyura*
Maccoa Duck *Oxyura maccoa*
Genus *Alopochen*
Egyptian Goose *Alopochen aegyptiacus*
Genus *Tadorna*
South African Shelduck *Tadorna cana*
Genus *Plectropterus*
Spur-winged Goose *Plectropterus gambensis*
Genus *Sarkidiornis*
Comb Duck *Sarkidiornis melanotos*
Genus *Nettapus*
African Pygmy-Goose *Nettapus auritus*
Genus *Anas* [select species only]
Cape Teal *Anas capensis*
African Black Duck *Anas sparsa*
Yellow-billed Duck *Anas undulata*
Cape Shoveler *Anas smithii*
Red-billed Teal *Anas erythrorhyncha*
Hottentot Teal *Anas hottentota*
Genus *Netta*
Southern Pochard Netta erythrophthalma

Family Alcedinidae [select species only]
Genus *Alcedo*
Half-collared Kingfisher *Alcedo semitorquata*
Malachite Kingfisher *Alcedo cristata*

Family Dacelonidae [select species only]
Genus *Halcyon* [select species only]
Mangrove Kingfisher *Halcyon senegaloides*

Family Cerylidae
Genus *Megaceryle*
Giant Kingfisher *Megaceryle maxima*
Genus *Ceryle*
Pied Kingfisher *Ceryle rudis*

Family Strigidae [select species only]
Genus *Scotopelia*
Pel's Fishing-Owl *Scotopelia peli*
Genus *Asio*
Marsh Owl *Asio capensis*

Family Gruidae [select species only]
Genus *Balearica*
Grey Crowned Crane *Balearica regulorum*

Family Heliornithidae
Genus *Podica*
African Finfoot *Podica senegalensis*

Family Rallidae [select species only]
Genus *Sarothrura* [select species only]
Red-chested Flufftail *Sarothrura rufa*
Genus *Rallus*
African Rail *Rallus caerulescens*
Genus *Amaurornis*
Black Crake *Amaurornis flavirostra*
Genus *Porzana* [select species only]
Baillon's Crake *Porzana pusilla*
Genus *Porphyrio* [select species only]
African Purple Swamphen *Porphyrio madagascariensis*
American Purple Gallinule *Porphyrio martinicus*
Genus *Gallinula* [select species only]
Common Moorhen *Gallinula chloropus*
Genus *Fulica*
Red-knobbed Coot *Fulica cristata*

Family Scolopacidae [select species only]
Genus *Gallinago* [select species only]
African Snipe *Gallinago nigripennis*
Genus *Limosa*
Black-tailed Godwit *Limosa limosa*
Bar-tailed Godwit *Limosa lapponica*
Hudsonian Godwit *Limosa haemastica*
Genus *Numenius*

Common Whimbrel *Numenius phaeopus*
Eurasian Curlew *Numenius arquata*
Genus *Tringa* [select species only]
Common Redshank *Tringa totanus*
Marsh Sandpiper *Tringa stagnatilis*
Common Greenshank *Tringa nebularia*
Greater Yellowlegs *Tringa melanoleuca*
Lesser Yellowlegs *Tringa flavipes*
Wood Sandpiper *Tringa glareola*
Genus *Xenus*
Terek Sandpiper *Xenus cinereus*
Genus *Actitis*
Common Sandpiper *Actitis hypoleucos*
Genus *Arenaria*
Ruddy Turnstone *Arenaria interpres*
Genus *Calidris*
Red Knot *Calidris canutus*
Sanderling *Calidris alba*
Little Stint *Calidris minuta*
Red-necked Stint *Calidris ruficollis*
Temminck's Stint *Calidris temminckii*
Long-toed Stint *Calidris subminuta*
White-rumped Sandpiper *Calidris fuscicollis*
Baird's Sandpiper *Calidris bairdii*
Pectoral Sandpiper *Calidris melanotos*
Dunlin *Calidris alpina*
Curlew Sandpiper *Calidris ferruginea*
Genus *Tryngites*
Buff-breasted Sandpiper *Tryngites subruficollis*
Genus *Limicola*
Broad-billed Sandpiper *Limicola falcinellus*
Genus *Philomachus*
Ruff *Philomachus pugnax*
Genus *Steganopus*
Wilson's Phalarope *Steganopus tricolor*
Genus *Phalaropus* [select species only]
Red-necked Phalarope *Phalaropus lobatus*

Family Rostratulidae
Genus *Rostratula*
Greater Painted-Snipe *Rostratula benghalensis*

Family Jacanidae
Genus *Actophilornis*
African Jacana *Actophilornis africanus*

Genus *Microparra*
Lesser Jacana *Microparra capensis*

Family Chionididae
Genus *Chionis*
Lesser Sheathbill *Chionis minor*
Greater Sheathbill *Chionis alba*

Family Burhinidae
Genus *Burhinus*
Water Thick-knee *Burhinus vermiculatus*
Spotted Thick-knee *Burhinus capensis*

Family Charadriidae [select species only]
Genus *Haematopus*
Eurasian Oystercatcher *Haematopus ostralegus*
African Black Oystercatcher *Haematopus moquini*
Genus *Himantopus*
Black-winged Stilt *Himantopus himantopus*
Genus *Recurvirostra*
Pied Avocet *Recurvirostra avosetta*
Genus *Pluvialis*
Pacific Golden Plover *Pluvialis fulva*
American Golden Plover *Pluvialis dominica*
Grey Plover *Pluvialis squatarola*
Genus *Charadrius*
Common Ringed Plover *Charadrius hiaticula*
Kittlitz's Plover *Charadrius pecuarius*
Three-banded Plover *Charadrius tricollaris*
Chestnut-banded Plover *Charadrius pallidus*
Kentish Plover *Charadrius alexandrinus*
White-fronted Plover *Charadrius marginatus*
Lesser Sand Plover *Charadrius mongolus*
Greater Sand Plover *Charadrius leschenaultii*
Caspian Plover *Charadrius asiaticus*
Genus *Vanellus* [select species only]
Blacksmith Lapwing *Vanellus armatus*
African Wattled Lapwing *Vanellus senegallus*

Family Glareolidae [select species only]
Genus *Dromas*
Crab Plover *Dromas ardeola*
Genus *Glareola* [select species only]
Collared Pratincole *Glareola pratincola*

Family Laridae [select species only]
Genus *Rynchops*
African Skimmer *Rynchops flavirostris*
Genus *Chlidonias* [select species only]
Whiskered Tern *Chlidonias hybridus*
White-winged Tern *Chlidonias leucopterus*

Family Acciptridae [select species only]
Genus *Pandion*
Osprey *Pandion haliaetus*
Genus *Haliaeetus*
African Fish-Eagle *Haliaeetus vocifer*
Genus *Gypohierax*
Palm-nut Vulture *Gypohierax angolensis*
Genus *Circus* [select species only]
African Marsh-Harrier *Circus ranivorus*

Family Podicipedidae
Genus *Tachybaptus*
Little Grebe *Tachybaptus ruficollis*
Genus *Podiceps*
Great Crested Grebe *Podiceps cristatus*
Black-necked Grebe *Podiceps nigricollis*

Family Anhingidae
Genus *Anhinga*
African Darter *Anhinga rufa*

Family Phalacrocoracidae [select species only]
Genus *Phalacrocorax* [select species only]
Reed Cormorant *Phalacrocorax africanus*

Family Ardeidae [select species only]
Genus *Egretta* [select species only]
Black Heron *Egretta ardesiaca*
Little Egret *Egretta garzetta*
Little Blue Heron *Egretta caerulea*
Yellow-billed Egret *Egretta intermedia*
Great Egret *Egretta alba*
Genus *Ardea*
Grey Heron *Ardea cinerea*
Black-headed Heron *Ardea melanocephala*
Goliath Heron *Ardea goliath*
Purple Heron *Ardea purpurea*
Genus *Bubulcus*
Cattle Egret *Bubulcus ibis*

Genus *Ardeola*
Squacco Heron *Ardeola ralloides*
Rufous-bellied Heron *Ardeola rufiventris*
Genus *Butorides*
Green-backed Heron *Butorides striatus*
Genus *Nycticorax*
Black-crowned Night-Heron *Nycticorax nycticorax*
Genus *Gorsachius*
White-backed Night-Heron *Gorsachius leuconotus*
Genus *Ixobrychus* [select species only]
Little Bittern *Ixobrychus minutus*
Genus *Botaurus*
Eurasian Bittern *Botaurus stellaris*

Family Scopidae
Genus *Scopus*
Hamerkop *Scopus umbretta*

Family Phoenicopteridae
Genus *Phoenicopterus*
Greater Flamingo *Phoenicopterus ruber*
Lesser Flamingo *Phoenicopterus minor*

Family Threskiornitidae [select species only]
Genus *Plegadis*
Glossy Ibis *Plegadis falcinellus*
Genus *Threskiornis*
African Sacred Ibis *Threskiornis aethiopicus*
Genus *Platalea*
African Spoonbill *Platalea alba*

Family Ciconiidae [select species only]
Genus *Mycteria*
Yellow-billed Stork *Mycteria ibis*
Genus Ciconia [select species only]
Black Stork *Ciconia nigra*
Woolly-necked Stork *Ciconia episcopus*
Genus *Ephippiorhynchus*
Saddle-billed Stork *Ephippiorhynchus senegalensis*

Family Passeridae [select species only]
Genus *Motacilla* [select species only]
African Pied Wagtail *Motacilla aguimp*
Cape Wagtail *Motacilla capensis*
Genus *Macronyx* [select species only]
Rosy-throated Longclaw *Macronyx ameliae*

Squacco Heron *Ardeola ralloides*
Rufous-bellied Heron *Ardeola rufiventris*
Genus *Butorides*
Green-backed Heron *Butorides striatus*
Genus *Nycticorax*
Black-crowned Night-Heron *Nycticorax nycticorax*
Genus *Gorsachius*
White-backed Night-Heron *Gorsachius leuconotus*
Genus *Ixobrychus* [select species only]
Little Bittern *Ixobrychus minutus*
Genus *Botaurus*
Eurasian Bittern *Botaurus stellaris*

Family Scopidae
Genus *Scopus*
Hamerkop *Scopus umbretta*

Family Phoenicopteridae
Genus *Phoenicopterus*
Greater Flamingo *Phoenicopterus ruber*
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Family Threskiornitidae [select species only]
Genus *Plegadis*
Glossy Ibis *Plegadis falcinellus*
Genus *Threskiornis*
African Sacred Ibis *Threskiornis aethiopicus*
Genus *Platalea*
African Spoonbill *Platalea alba*

Family Ciconiidae [select species only]
Genus *Mycteria*
Yellow-billed Stork *Mycteria ibis*
Genus Ciconia [select species only]
Black Stork *Ciconia nigra*
Woolly-necked Stork *Ciconia episcopus*
Genus *Ephippiorhynchus*
Saddle-billed Stork *Ephippiorhynchus senegalensis*

Family Passeridae [select species only]
Genus *Motacilla* [select species only]
African Pied Wagtail *Motacilla aguimp*
Cape Wagtail *Motacilla capensis*
Genus *Macronyx* [select species only]
Rosy-throated Longclaw *Macronyx ameliae*

DOC 2.13

From: Carol Jacobs
To: Chris De Beer; chrisdb@inbox.co.za; marion@sanap.org.za
Subject: ATT: ADRIAAN DREYER

Dear Chris

REQUEST FOR PENGUINS FROM MARION ISLAND FOR PRETORIA ZOO

Your e-mail and follow up (both below for easy reference) regarding the above dated 3 August 2005 refer.

In response to your various queries, I can advise you as follows:

1. You will definitely have to undertake the collection (if approved) during one of the construction voyages, as the annual relief voyage is fully utilised for scientific research. The provisional dates for 2006 are 2-20 March (19 days), 10-29 August (20 days) and November (dates not set yet). These dates are subject to change.

2. You will need to take along the minimum number of persons required to effectively undertake this exercise independently - i.e. collection, care for the birds, etc.

3. Duration of the construction voyages is between 13 - 20 days (may vary).

4. I would suggest that you meet at least with Adriaan Dreyer - Project Manager for the Construction Voyages, a member of the PEIMC, ornithology expert/s, the veterinarian that will be part of the team, etc. to work out the logistics, develop a plan of action and discuss potential problems and possible solutions.

5. You will need to discuss the conditions and infrastructural support available with Adriaan Dreyer - he is currently on Marion Island and will only be back in South Africa on 17 November 2005.

Folllow up:
You will NOT be charged for accommodation and subsistence on board the SA Agulhas and at the Marion base, however your travel, subsistence and accommodation costs prior to the departure of the voyage and after its return are your own responsibility.

Please note that before the PEIMC will endorse the collection of the birds, your new facility will have to be fully completed, up and running (temperature control systems tested, etc.) and subject to an inspection by a vet, a representative of the PEIMC and any other person/s as designated by the PEIMC.

Your request (with all the latest developments - including this correspondence) will be tabled again at the PEIMC meeting scheduled for 8 November 2005, and you will be advised on the outcome of their discussion thereafter.

Should you have anything further you wish to bring to this committee's attention at this stage, please advise me by Monday 17 October 2005 and I will include it in the documentation for the meeting.

I look forward to hearing from you.

Kind regards
Carol J

05/10/12

Sent: 03 August 2005 12:15 PM
To: Carol Jacobs
Subject: Penguins

Dear Carol

I have been informed by our management that our new penguin enclosure will be completed by 31 January 2006. The birds may therefore arrive at the National Zoological Gardens as early as February or March 2006.

Arrangements need to be made for the collection of the birds from Marion and to help me with the initial planning of the operation I need your advice on the following:

1. From our previous correspondence you indicated that we may have to undertake the voyage during August or November. Is this still the case?
2. How many people from our side would you like to see undertake this voyage? (We agreed that a veterinarian will be part of the team).
3. What will the duration of the trip be?
4. With whom should this team meet to work out the logistics, develop a detailed plan of action and to discuss anticipated potential problems and find possible solutions?
5. With whom should this team meet to be briefed about conditions and infrastructure that will be available for their use?
6. Please advise about any other requirements regarding preparations that need to be done.

As soon as we have the information from you, we will start with the preparations on our side.

Sincerely
Chris de Beer

Subject: Follow-up
Dear Carol

I was requested by our management to do a cost analysis for the collection of the penguins.

Can you please find out for me whether there will be any costs involved for the Zoo staff?s travelling to and accommodation on Marion to collect the penguins?

Sincerely,
Chris de Beer
Acting General Curator
Aquarium & Reptile Park
National Zoological Gardens of South Africa
P.O.Box 754, Pretoria, 0001, Rep of South Africa
Tel: +2712 3283265
Fax: +2712 3234540
Cell: 082 932 0295
E-mail: chris@zoo.ac.za

CC: henryv@antarc.wcape.gov.za; kusi@antarc.wcape.gov.za; noma@antarc.wcape.gov.za

SUE JACKSON'S COMMENTS ON PRETORIA ZOO'S REQUEST:

I have one question about the request: why do they require 20 birds? What is known about the influence of group size on breeding behaviour? If walking the birds between their sleeping quarters and the exhibit every day is the main reason for the birds not breeding, as the application states, then it is more appropriate to start with a group of, say, 10 or 12 birds. The number of 20 seems to me excessive and arbitrary.

Second, have they actually built the new building and enclosure yet. and do these correspond exactly to the plans that were submitted to DEAT? Until this is completed. and I presume you have heard no more on this matter because you have not communicated anything to me, permission to collect new birds should **most certainly not** be given, because the new birds will simply encounter the same stresses that are currently (according to the aplicants) preventing the birds from breeding. I suggest that once the new exhibit is finished and the temperature control systems have been tested to DEAT's satisfaction, a representative of the Management Committee inspect the faciltiy. Shoudl this prove satisfactory, I have no problem with the capture of 10 or 12 birds.

I'd like my name withheld in any communications DEAT may have with the Pretoria Zoo.

PEIMC'S COMMENTS ON SUE JACKSON'S RECOMMENDATIONS:

ANTIONET VAN WYK:

1. The number of penguins: I'll also support a smaller number of between 10 to 12 animals, if the experts regard this as a viable group. I do believe that the Pretoria Zoo will now have the opportunity to prove that they can successfully keep and breed penguins, and this one should be able to do with 10-12 birds. It also depends on what number of penguins PEIMC and DEAT already committed to make available.

2. Time of delivery: If the penguin facility will only be completed by 31 January 2006 (usually there is a delay in construction and hand over, retention period, etc.), I would rather support that the penguins be collected once the facility is ready and working. The facility will therefore be empty for 2-3 months (except if they still have some remnants of their previous population that can make use of the facility). The take-over voyage it seems might not be the best time to capture penguins since it might be difficult to identify breeding pairs (?). Which might leave us with a problem if the best time is November. and the facility will not be put to use for a period of 7 months.

3. Age groups: The success of the penguins in captivity will largely depend on the fact that there are established breeding pairs in the number of 10-20 penguins captured. One must therefore decide on a good mixture with adult breeding pairs. and sub-adults (consider male:female ratio). Can't remember if we took a decision on the age group and sex ratio.

JOHN COOPER:

1. I not too fussed about the total number of penguins collected per se, as long as the new facility is adequate for the actual number collected. I imagine a larger number is more likely to breed successfully. Whether 10 or 20 - there is no conservation significance.

2. I agree an on-site inspection next year on behalf of the PEIMC is warranted. Perhaps PTA-based member(s) of the Committee could do this, and then circulate comments and some pics? This might mean asking Marthan. If the PEIMC wishes an ornithologist to be involved then this might incur a travel cost to your office. In this regard I can suggest two persons with experience of captive penguins, both associated with SANCCOB in the past: Nola Parsons (a qualified Vet) and Samantha Petersen. I have their contacts. I suggest we discuss the inspection and who is best to undertake it at out next committee meeting.

MARIENNE DE VILLERS:

The original plan was to select about 5 adult breeding pairs and a number of chicks. If the number of penguins is to be reduced from 20 to 10-12 as suggested, then I guess this would affect how the selection is made? If it is decided that breeding pairs are a priority, then capture would be best timed for the beginning of the breeding season (November), when there is a good chance of finding partners together without offspring. If the priority is chicks, then time of year is probably not that important. My personal feeling is that it would be better to take large chicks than to take adults, since chicks have a high mortality rate in the wild and their chances of survival may actually be improved in a zoo, and since chicks are less likely to have problems adjusting to captivity.

MARTHAN BESTER:

I concur with the John's and Sue's take on the situation. This can be discussed at the next PEIMC Meeting. I shall be available for an inspection, but a SANCCOB person (especially a vet) would fit the bill much better.

DOC 2.15

SWAT PEST CONTROL

ENVIRONMENT CONSCIOUS

ant traps
cockroach traps.

(South) Tel: (021) 712-3431
Fax: (021) 712-1852
(North): Tel: (021) 531-6295
e-mail : swatpc@mweb.co.za
P.O. Box 344, Bergvliet. 7864

Registered with the Department of Agriculture in terms of Act 36 of 1947

QUOTATION AND ACCEPTANCE

Clients Name	DEPARTMENT OF ENVIRONMENTAL AFFAIRS		
Address	ISLAND CENTRE		
	NEREDA STREET		
	PAARDEN EILAND		
Contact Person	MR SAM OOSTHUIZEN		
Tel Home		**Work**	
Order Number		**Fax**	
Invoice Instruction		**Cell no**	**083 6270213**

Swat Pest Control cc hereby agree to treat and to control any infestation by

COCKROACHES FLEAS FISHMOTHS

Specified area to be treated	SANDTON, PASSAGES, HOSPITAL, ABLUTION BLOCK
MARION ISLAND BASE	FUEL STORE, MAMMAL LAB, SEA VIEW, SEA VIEW PASSAGES, BAR/LOUNGE, BIRD LAB, FOOD STORE (OLD WET LAB), EMERGENCY POWER SHACK, SWITCH ROOM , BROWN STORE, E-BASE, SATELLITE DISH BUG, SQUATTERS

The client agrees to make the premises available for treatment and to accept and to pay for the above service at the rate of

R **1875.00 INCL VAT PER DAY** (HACCP MANUEL WITH SAFETY DATA SHEETS TO BE ISSUED)

The payment is due on presentation of invoice which shall be rendered ON ACCOUNT

The agreement is binding and commences from the date of signature.

The parties agree to Terms and Conditions above.

Client prefers treatment to commence on		
Signed for SWAT Pest Control cc	P.17657	22 AUGUST 2005
Client's Signature		

It would be appreciated if you or your authorised agent would return a signed copy of this quotation in conformation of the acceptance of this quotations.

Members: E. Swanich, S.P. Swanich

DOC 2.16

-------- Original Message --------
Subject:CTBTO station at Marion
Date: Mon, 17 Oct 2005 16:34:06 +0200
From: Met Office <marion@sanap.org.za>
To:<Noma@antarc.wcape.gov.za>

Dear Norma

As I don't have any info regarding the dimensions (height, etc) of the new structure I'll base my reply on requirements regarding met equipment that might be affected. With the Gogga lab situated SSE (not prevaling wind direction) and about 35m (far enough) from the metsite it's safe to say that it has very little if any affect on met observations or any equipment.

Of concern to us especially is the height and any emissions (fumes) enough to have an influence on temperatures. Height of structure where it could be problematic when it comes to rain and wind measurements since it is required that the distance from the anemometer (wind mast) to any obstruction (building) is at least ten times the height of the obstruction. With the raingauge the distance from it should be twice the height of the building.

Regards

Piet

--
No virus found in this incoming message.
Checked by AVG Anti-Virus.
Version: 7.0.344 / Virus Database: 267.12.0/132 - Release Date: 13/10/2005

DOC3.1

SEABIRD RESEARCH

MONTHLY REPORT: September 2005

COMPILED BY: Linda Clokie & Ingrid Peters

REF: M62

To: K. BOOYSE

Department of Environmental Affairs and Tourism

Directorate Antarctica and Islands

Att: Dr. Rob Crawford – crawford@deat.gov.za

Dr. Peter Ryan – pryan@botzoo.uct.ac.za

Bruce Dyer – bdyer@deat.gov.za

Leshia Upfold – lupfold@deat.gov.za

Prof. Les Underhill – lgu@adu.uct.ac.za

John Cooper – jcooper@adu.uct.ac.za

Dr. Norbert Klages – coastal@upe.ac.za

Sylvia van Zyl – svanzyl@bayworld.co.za

Fred Kigozi – fkigozi@bayworld.co.za

EXTRACT

Find out what are procedures for waste treatment in new base.

9. GENERAL

- The dark mantled sooty albatross numbers have increased over the past few weeks, and can be heard calling around the Ship's Cove area constantly. On the 24th September, the first pair of dark mantled sooties was seen mating at Ship's Cove.
- The grey-headed albatrosses have been arriving at Grey-headed Ridge. All the marker poles have been re-marked, and we plan to start marking nest sites in the next few days.
- There are 2 skuas that arrived at base 3 weeks ago. They have since sat outside the kitchen looking at the windows. These birds must have been fed in the past, as they are unafraid of people, and always on the lookout for food. All personnel have been briefed on the dangers of feeding the birds, and we hope that feeding the skuas is not taking place. However, 3 nights ago, these 2 skuas killed 2 resident paddies (lesser sheathbills) and a Salvin's prion outside the kitchen at 4am.
- There is also concern over the "sloppy", which is emptied straight into the sea just after 8pm each night. We have assisted with the sloppy duty and monitored this with spotlights. The giant petrels (normally about 50 birds) are sitting waiting for "their food " each evening. They swim in from all directions. There have been discussions with the Marion 62 Conservation Officer about changing the times i.e. random times, that the leftover food is sent down the sloppy. However our concern is that it may cause the birds to hang around the chute throughout the day. This has only become a serious concern since the arrival of the construction team, as there are now 58 people in base and extra wasted food.

*

Recommend.

Kwekamije

Raina Kutranov

DOC 3.2

CONSERVATION REPORT

MARION ISLAND TAKE-OVER, APRIL-MAY 2005

John Cooper

Co-opted Member, Prince Edward Islands Management Committee
c/o Avian Demography Unit, University of Cape Town, Rondebosch 7701
South Africa
(jcooper@adu.uct.ac.za)

RECOMMENDATIONS

1. Cleaning procedures for SANAP protective clothing need to be altered so that propagules do not remain in pockets and on Velcro strips. It is once again strongly recommended that SANAP over-trousers be provided without Velcro on their ankle cuffs.

2. CHC should once again be asked to clean out the cobwebs and spiders from its hangar, commencing a few weeks before each Prince Edward Islands voyage

3. Sticky fly traps (at least two) should be placed in the ship's hangar before the next voyage to the Prince Edward Islands. one placed.

4. Consideration should be given to commencing an eradication programme for the alien isopod around the Base. Share Office

5. "Country clean-ups" should continue during the 2006 relief voyage, with helicopter support.

6. The open-air incineration of wood should be halted and wooden materials stored for return to South Africa. Consideration should also be given to storing dry paper and cardboard for recycling in South Africa, as takes place at Gough Island and SANAE. Container(s) should be supplied for this purpose

7. It is once again recommended that consideration be given to using biodegradable cleaning agents at Marion Island, including in the field huts.

8. It is strongly recommended that all new huts be placed on the exact sites of existing ones, utilizing their existing bases if possible, otherwise replacing bases on the same spot. This is so as to avoid exposing unvegetated ground which will be very slow to rehabilitate. Exceptions should only be made for scientific and logistic (e.g. water supply) reasons. The management committee should review all planned hut placements, given that the islands' management plan requires an EIA. (Environmental Impact Assessment) for "any new development". need info

9. All new field study sites should continue to be plotted and their GPS and site-marker information made available to the management committee and the island's Conservation Officer. All non-registered field markers should continue to be removed as found by Conservation Officers.

10. It is not too early to commence to give consideration to an Environmental Impact Assessment process for decommissioning and removing the current base and hydroshack, and rehabilitating their sites. The management committee should be fully involved with this process.

funding EIA.

DOC 4.2

DEPARTMENT OF ENVIRONMENTAL AFFAIRS AND TOURISM
SOUTH AFRICAN NATIONAL ANTARCTIC PROGRAMME (SANAP)

**** One form to be completed in respect of each SANAP project proposal submitted***
**** Details for each year of the project applied for to be outlined in each block to enable approval for up to 5 (rated scientists) or up to 2 (unrated scientists) years***

ENVIRONMENTAL IMPACTS

- **Researchers are expected to provide sufficient information in their answers to allow DST and DEAT (in conjunction with the Prince Edward Islands Management Committee (PEIMC) and the Gough Island Nature Reserve Advisory Committee (GINRAC) to make a thorough, complete and accurate evaluation of the environmental impact of the project.**
- **Insufficient information will require follow-up action and/or may prejudice the environmental acceptability of the project.**
- **To assist you in completing this form for research on Marion and / or Prince Edward please refer to the Prince Edward Islands Management Plan (PEIMP) and for Gough Island to the Management Plan for the Gough Island Wildlife Reserve (GIMP) - copies available on request (see end of form for contact details)**

1. **APPLICATION FOR *(please indicate appropriate location)*:**

____ Marion Island

____ Prince Edward Island

____ Both Marion and Prince Edward Island

____ Gough Island

____ Antarctica (SANAE IV)

____ Antarctica (Other) – please specify: _____

2. DURATION OF PROJECT: _____20____ to _____20____

DISCUSS ANY POTENTIAL IMPACT/S YOUR STUDY WILL HAVE ON THE ENVIRONMENT AND DESCRIBE MITIGATING ACTIONS WHICH YOU PROPOSE TO MINIMIZE OR ELIMINATE THIS IMPACT. ***The following guidelines are provided to assist applicants with questions relating to the potential environmental impact of a proposal.***

(i) Proposals should clearly outline all field methods, work programmes, camp sites, and timing, as well as any subsequent modifications for the duration of the project, i.e. a projection of activities for subsequent years MUST be provided in each block for the duration of the project.

(ii) The researcher should list aspects of the proposed activity or activities that might cause an impact/s on the environment (e.g. visual impact or other forms of disturbance).

(iii) In making all these assessments of impact, the researcher should briefly consider the nature, duration and intensity of the likely environmental effects, including the following:

a. the existing environment, its variability or dynamic nature, resilience to change, sensitivity to disturbance, previous disturbance, protected status, etc;

b. cumulative and possible indirect impacts;
c. the probability of accidents and their environmental consequences;
d. the adequacy of existing information and knowledge; and
e. necessary and possible amelioration/rehabilitation.

(iv) A map of the area should be included (sketch if necessary) to assist the interpretation of this section of the research application.

3. PRELIMINARY ENVIRONMENTAL EVALUATION

DETAILS OF ACTIVITIES

- ***If you answer "Yes" to any of these questions, a full description of the proposed activity, including proposals for mitigating and monitoring the impact/s, is required.***
- ***It is important that you provide maps detailing the proposed research areas (hand drawn sketches are acceptable – please scan and attach electronically).***

WILL YOUR OBJECTIVE:

a. Use a radionuclide? Yes ____ No ____

If yes, complete the following:

Radionuclide	Chemical form	Quantity (Curies)	Half Life (Years)

Detail procedures you will take to ensure that no radiation will enter the Antarctic or sub-Antarctic environment from use or spillage:

b. Take any chemical to the Antarctic or sub-Antarctic environment? Yes ____ No ____

If yes, complete the following:

Chemical	Formula	Quantity	Use

Unused chemicals will be: ____ Left at SANAE IV / Marion / Gough Base *(please indicate)*

____ Returned to South Africa

____ Other

If other, detail disposal procedure:

c. Release any chemical to the Antarctic or sub-Antarctic Environment? Yes ____ No ____

If yes, detail the need to release, the chemical, the amounts involved and the location:

d. Require the use of explosives? Yes ____ No ____

Explosive Type	Number of detonations	Charges per detonation (kg)	Total weight (kg)

If yes, how will the explosives be used?

Detail any precautions taken to minimise disturbance to any wildlife or plants:

e. Collect, capture, kill (destructive sampling) any terrestrial, freshwater or marine plants or animals?

Yes ____ No ____

If Yes, for each species (apart from those taken using plankton nets or trawl), estimate the proportion of the local population you will be collecting, capturing, killing:

Species	Method	Number	Proportion of population (%)

For each species, indicate the proportion of the local population you will be disturbing while carrying out the above activities:

AND / OR

Restrain, tag, band (non-destructive sampling for handling, marking or other purposes) any terrestrial, freshwater or marine plants or animals? Yes ____ No ____

If Yes, for each species (apart from those taken using plankton nets or trawl), estimate the proportion of the local population you will be restraining, tagging, banding (include period of restraint):

Species	Method	Number	Proportion of population (%)

For each species, indicate the proportion of the local population you will be disturbing while carrying out the above activities:

f. Enter any Protected Area in Antarctica (Specially Protected Areas - SPAs), Marion and/or Prince Edward (Zone 4 – see PEIMP) and/or Gough Island (zoned by GIMP)? Yes ____ No ____

If Yes, complete the following:

Name of Protected Area	Duration of Visit	Total person-days

Detail the type of work which will be carried out within the Protected Area:

Detail why the work must be carried out within the Protected Area:

g. Take to the Antarctica or sub-Antarctic region any animal, plant (including seeds, wooden marker poles not permitted), micro-organism or soil? Yes ____ No ____

If yes, complete the following:

Species	Quantity

Detail why these materials need to be taken to the Antarctic or sub-Antarctic:

Detail the quarantine procedures you will undertake to ensure that there is no release to the Antarctic or sub-Antarctic environment:

h. Significantly disturb by flooding, sampling, trampling, camp operations or any other means any ice-free area (bare ground / vegetated areas)? Yes ____ No ____

If Yes, complete the following:

Routes to be taken	Number of samples	Total person-days

Briefly describe any such significant disturbance:

Detail any steps you will take to minimise such disturbance:

i. Take or remove any physical (non-biological) specimens, e.g. rocks, fossils, etc.?

Yes ____ No ____

If yes, detail the general area and types of specimens to be collected:

Location	Specimen	Type	Total Number or Weight

j. Cumulative Impacts.

Occupy new or existing camp sites? ____ New

____ Old

____ Both old and new sites

If new, list these sites by name, if available, and GPS position (or on map) and indicate why a previously impacted site cannot be used:

Site (name)	Location (GPS position)	Reason for new site

Will you track previously untracked ground? Yes ____ No ____

If Yes, state why this is necessary:

Please indicate:

Routes to be taken	Total person-days	Safety precautions

k. Will you install equipment, markers, stakes, cairns etc. that will be left in the field?

Yes ____ No ____

If Yes, detail location and type of marker, stake, duration, etc. *(please motivate if markers at the Prince Edward Islands and on Gough Island are not unpainted, plastic markers, as prescribed):*

Location	Type of marker	Duration in field	Motivation if not unpainted, plastic

l. Do you expect your activities to have an environmental impact not covered in the above?

Yes ____ No ____

If yes, fully detail impacts:

m. Is the proposed activity likely to have more than a minor or transitory (>6months) impact?

Yes ____ No ____

If yes, a Comprehensive Environmental Evaluation (CEE) will be required:

n. Permit requirements *(please refer to PEIMP and GIMP):*

i. Standard Entry Permit (provide details):

ii. Research Permit (provide details):

iii. Collection Permit (provide details – number of samples to be collected, etc.):

iv. Permit for Protected (Special Entry) Area/s (provide details – all areas to be specified):

Should you require any assistance with the completion of this form, please contact:

Henry Valentine (Director: Antarctica & Islands & Chair: Prince Edward Islands Management Committee)
Department of Environmental Affairs & Tourism
P O Box 8172
ROGGEBAAI 8012

Tel: 021 405-9404
Fax: 012 405-9424
E-mail: henryv@antarc.wcape.gov.za

Subject: PEIMC QUERIES/CONCERNS ON SANAP PROPOSALS
Date: Fri, 04 Nov 2005 10:45:23 +0200
From: "Carol Jacobs" <CJacobs@deat.gov.za>
To: <jcooper@adu.uct.ac.za>, <Mdevill@adu.uct.ac.za>, <henryv@antarc.wcape.gov.za>, "Theressa Akkers" <Takkers@deat.gov.za>, <antionetv@sanparks.org>, <Howardh@sanparks.org>, <SLCHOWN@sun.ac.za>, <majodina@weathersa.co.za>, <mnbester@zoology.up.ac.za>
CC: <kusi@antarc.wcape.gov.za>, <Monwabisin@antarc.wcape.gov.za>, <noma@antarc.wcape.gov.za>, <tshepo.seekoe@dst.gov.za>, <candice@nrf.ac.za>, <Michael@nrf.ac.za>

Dear PEIMC & co-opt members

Attached for your perusal, please find a copy of your consolidated queries/concerns on the current round of SANAP project proposals submitted to the National Research Foundation (NRF) for consideration, as well as the Principle Investigators' (PIs) respective responses.

It would be much appreciated if you could kindly go through the attached documents in detail prior to the meeting on Tuesday 8 November 2005, so that the PEIMC's final recommendation/s on each application individually may be minuted for onward transmission to the NRF, who will advise the PIs on the outcome of their proposals.

Noma, please add an item to the agenda - "SANAP Proposals" and ensure that the PEIMC's recommendation for each applicant is minuted accordingly.

Many thanks & kind regards
Carol J

Carol Jacobs
for DIRECTOR-GENERAL
Environmental Affairs & Tourism

Antarctica & Islands
Private Bag x 447
PRETORIA, 0001

Tel: 012 310-3510
Fax: 012 351-1345 / 322-2682
~~~~~~~~~~~~~~~~~~~~~~~~~~~~
Many things in life will catch your eye, but only a few will capture your heart - pursue those.
~~~~~~~~~~~~~~~~~~~~~~~~~~~~

CILLIERS

CRAWFORD

ISSUES
NO SAND
NO SAT TRACK
IMP CORM COUT JUSTIFICATION
CORMS IN ZONE 4
∴ SPEC. PERM. REQUIRED
BESTOR = AVOID RUMEX

MEIKLEJOHN — Remove Plastic 20-mpeper ?

<<<<GWAVAsig>>>>

Remove pages

Subject: Bester (2) and Crawford
Date: Fri, 04 Nov 2005 12:14:04 +0200
From: UCT Staff Member - Jcooper <Jcooper@SCIENCE.uct.ac.za>
Reply-To: jcooper@adu.uct.ac.za
Organization: University of Cape Town
To: Carol Jacobs <CJacobs@deat.gov.za>

Dear Carol

I did not comment on the two Besters.

My only environmental comment is that advice from the Conservation Officer should be obtained while working on Boulder Beach so as to avoid tracking though areas with alien Agrostis gigantea and Rumex. * BESTER

I do not think I commented on the Crawford proposal, because I am now listed as co-Project Leader.

However, I note that as the cormorant colonies are now zoned four, a special entry permit to work on this species will be required. I am also uncertain of the value of attaching satellite trackers to such a sedentary bird. I will bring this issue to the meeting. * CRAWFORD

Have a good weekend

John

Carol Jacobs wrote:
>
> *Dear PEIMC & co-opt members*
>
> *SOUTH AFRICAN NATIONAL ANTARCTIC PROGRAMME (SANAP): PROJECT PROPOSALS - 2006/07*
>
> *Attached for your perusal and comments, here follows the second batch of applications, as promised.*
>
> *The due date for input remains Friday 14 October 2005.*
>
> *Dr P J Cilliers' application still to follow (awaiting outstanding form).*
>
> *Many thanks & kind regards*
> *Carol J*
>
> *Carol Jacobs*
> *for DIRECTOR-GENERAL*
> *Environmental Affairs & Tourism*
>
> *Antarctica & Islands*
> *Private Bag x 447*
> *PRETORIA, 0001*
>
> *Tel: 012 310-3510*
> *Fax: 012 351-1345 / 322-2682*
> *----------*
> *Many things in life will catch your eye,*
> *but only a few will capture your heart -*
> *pursue those.*
> *----------*

Subject: Cilliers proposal
Date: Fri, 04 Nov 2005 11:52:54 +0200
From: UCT Staff Member - Jcooper <Jcooper@SCIENCE.uct.ac.za>
Reply-To: jcooper@adu.uct.ac.za
Organization: University of Cape Town
To: Carol Jacobs <CJacobs@deat.gov.za>

CILLIERS

Dear carol

Your e-mail reminded me I never went through all the applications.

I am now chdcking the remaining ones against the comments and replies you have just sent out.

In terms of Cilliers, I note the request for and the reply that the sand will be sterilized. I am uncertain how this is to be done, and I guess the PEIMC should know of and approve of the technique.

However, I think I read in the new manplan draft that building sand is to be banned. If so, then perhaps the NDPW might be able to advise how to make anchor points without the need for concrete (perhaps long metal poless as used for some other cable supports around the base?)

I can bring the above point to the meeting verbally.

Apologies for not meeting all my deadlines!

Kind regards

John

Carol Jacobs wrote:
>
> *Dear PEIMC & co-opt members*
>
> *SANAP PROJECT PROPOSALS 2006/07 - DR PJ CILLIERS*
>
> *Attached for your perusal and comments, please find the last application received pertaining to the PEIs from Dr Cilliers.*
>
> *Your input on this proposal will also be appreciated by 14 October 2005, along with the others.*
>
> *Many thanks & kind regards*
> *Carol J*
>
> *Carol Jacobs*
> *for DIRECTOR-GENERAL*
> *Environmental Affairs & Tourism*
>
> *Antarctica & Islands*
> *Private Bag x 447*
> *PRETORIA, 0001*
>
> *Tel: 012 310-3510*
> *Fax: 012 351-1345 / 322-2682*
> *~~~~~~~~~~~~~~~~~~~~~~~~~~~~*
> *Many things in life will catch your eye,*
> *but only a few will capture your heart -*
> *pursue those.*

3.3a

FEEDBACK ON SANAP PROPOSALS (PEIs & Gough)
(PEIMC, GINRAC & Admin TdC)

PEIMC GENERAL COMMENT - Objectives for the management of the PEIs:

1. To ensure the long-term survival and maintenance of biological diversity, including genetic diversity, species diversity and the diversity of ecological processes;
2. To maintain geological and scenic features;
3. To minimise interference with natural processes and the destruction or degradation of natural features resulting from human interference;
4. To ensure that obligations to, and the provisions of, the Convention on the Conservation of Antarctic Marine Living Resources (CCAMLR), Agreement on the Conservation of Albatrosses and Petrels (ACAP) and all other international conventions to which South Africa is a signatory, are met;
5. To protect historic features and objects from human interference;
6. To encourage activities aimed at restoring and rehabilitating damage due to local human activities;
7. To encourage research that will contribute to understanding effects of human-induced changes, including long term climate change;
8. To seek cooperation with all parties interested in the conservation of the Southern Ocean and its islands;
9. To create an awareness of the value and fragility of the islands' ecosystems;
10. To allow scientific research not in conflict with these objectives.

ANSORGE, IJ: DYNAMICS OF THE STC IN THE SOUTH ATLANTIC

GINRAC1:

Speaking as a member of the GINRAC I am in support of this proposal, and do not see it having any environmental issues of note. However, I have the following comments:

1. I note it is intended to undertake inshore work at both Tristan and Gough from a dinghy, presumably using the island as a base, rather than the ship. Small boat requirements are not listed in the relevant form. I assume they should be even if SANAP small boats are not used (a "dinghy" is mentioned, presumably to be powered by an outboard). As inshore work appears planned to take place at Gough in the absence of the Agulhas (which is implied by the team staying ashore for two weeks) then the issue of safety needs to be carefully considered by your office. In the past I have used a small boat launched from the shore (by crane) at Gough but only when the ship was present. Either way, the vessel should have two engines, and it will need a cradle for recovery by the shore crane, and walkie-talkies for communication, and, I think, carry emergency gear in case they get stuck ashore away from the base. Boat users should wear wet suits so they can swim ashore if needs be.

I am copying this message to Tristan because they may well have views and/or regulations on small boat use at Gough (and at Tristan) from the safety point of view.

2. During inshore work, approaches at Gough should not be made to cetaceans (as set out in the manplan).

3. I note that there are set charges for use of Tristan Government vessels, and it may be necessary to budget something as a safety feature - in case a rescue is required.

GINRAC2:
I have no problem with this application. However, I would have expected perhaps greater comment on the existing oceanographic information available for the region (or its paucity), including the data collected by Tim Andrew during his 2 years on Tristan and the work done by the Proudman Institute in the UK.

Admin TdC:
We can endorse both projects (Ansorge & Ryan).

BESTER, MN: POPULATION DYNAMICS OF ELEPHANT SEALS

PEIMC1:
This project fits in with objectives 4 (CAS and CCAMLR, and proposed World Heritage nomination), 7 (33-year uninterrupted database), and 8 (collaboration with AAD and CENPAT) above. It will also provide information needed for management decisions aimed at conserving biodiversity (objective 1), including the proposed declaration of a Marine Protected Area around the islands. The project has a proven-track record, in terms of output. The environmental impacts of the proposed work are known to be minimal, from previous years of similar field work.

PEIMC4:
Has the PEIMC really declared seal breeding beaches Zone 4? Seems strange to me, but if they have then Bester needs a Zone 4 permit.

BESTER, MN: PHOTOGRAMMETRY OF ELEPHANT SEALS

PEIMC1:
This application ties in with the one above. The projected outcome – the refinement of non-invasive photogrammetric techniques for the prediction of body mass – will add value to future censuses, and improve the predictive value of demographic models based on data from these. It would be useful if more detail were supplied regarding the weighing equipment (presumably quite heavy; at what field sites will it be used on the island, and how will it be transported there, and how often) and the level of experience required for the field assistant who will be performing the chemical immobilizations.

PEIMC4:
Has the PEIMC really declared seal breeding beaches Zone 4? Seems strange to me, but if they have then Bester needs a Zone 4 permit.

NOT Zoned

CILLIERS, PJ: POLAR SPACE WEATHER STUDIES DURING IPY/IHY

PEIMC1:
The proposed project is in line with objectives 7 and 8 of the PEI Management Plan. From the environmental form, it appears that only one receiver (VLF) is planned for Marion Island. However, the main proposal also mentions a scintillation receiver for Marion Island (pp. 5, 6, 21). This discrepancy should be clarified and, if a scintillation antenna is also required, its specifications and proposed location be provided. This system is also proposed for the SA Agulhas, and the provision of its specifications would enable assessment of the potential threat of bird strikes on board the vessel. The environmental form mentions that the VLF receiver on Marion Island will be erected near the scientific base. It would be best if it was located between existing buildings, where it will pose the least threat in terms of bird strikes (not on any high

point adjacent to the base). The sand used for the concrete anchoring blocks should be sterilised to prevent the introduction of alien organisms.

PEIMC3:
The placement of anchors/VLF antennae at Marion are in the Service Zone, so no problem there. Perhaps some of the existing concrete blocks can be employed for some of the anchoring. The placement of the Observation Hut at SANAE close to the existing base should be no problem either, as is the monitoring antenna (only 1 m high) on top of a suitable structure.

CRAWFORD, RJM: SEABIRDS AT MARION ISLAND

PEIMC 1:
The proposal is in line with objectives 4 (CCAMLAR, ACAP and proposed World Heritage nomination) and 7 (long-term database, and ties in with research taking place on similar species at other sub-Antarctic and Antarctic locations) of the PEI management plan. It will provide information needed for management decisions aimed at conserving biodiversity (objective 1), including the proposed declaration of a Marine Protected Area around the islands.

The handling of birds in order to fit devices or gain information regarding diet is important to achieve the aims of this project and to provide information necessary to the management of the island. Many of these procedures have been carried out successfully in previous years, and field workers receive prior training from experienced Marine and Coastal Management staff.

For colonially breeding species, these procedures do not just affect the birds immediately involved, but may disturb numbers of breeding birds in the vicinity, and this should be reflected in part *f* of the environmental form. Regarding the use of remote tracking devices, the number of Sooty and Light-Mantled Albatrosses to be fitted with devices is not included in Table *e* of this form. Although the design of the current form does not accommodate this, it would be useful if the table could be adapted to include a mention of the stage of the breeding cycle at which devices will be fitted to the various species (this information is provided in the work plan of the proposal for some species, but not all). If devices are to be fitted to incubating or brooding adults, field workers need to take due care to prevent birds from trampling eggs or small chicks upon release, and should remain near nests until they are sure that the adults have returned to their offspring (since these are vulnerable to predators).

Note that on the projections form, the details filled in on the SANAE form actually refer to Marion and Prince Edward Islands. The proposed visit to Prince Edward Island should be reflected in the environmental form.

PEIMC2:
I do note that the projections form for this project has not been filled in properly (Marion and Prince Edward requirements placed together under SANAE). You may wish to request a new version, although it seems clear enough what is being requested.

PEIMC3:
Proportion of animals disturbed is usually more than the number of animals handled (see entries on the Environmental form). A whole colony of Gentoo penguins in particular can be disturbed when approached to restrain one or two animals only. The instrumentation of Gentoos should be done with a lot of care - the current research dealing with human disturbance of seabirds and seals can throw light on the level of disturbance that Gentoos can tolerate. Consultation with PEIMC member Marienne De Villiers is adviseable. Plastic pipes & cement pyramids have been used in the past to mark areas, and I assume that the cement slabs to be used will also be relatively small. Confirmation of this is needed.

PEIMC4:
I could find no methods in the proposal. This makes it very difficult to evaluate just what is being planned. The Cooper reference contains nearly 150 pages of text, including one paper on fur seals and one on invasive plants. It's not clear what is going to be done. So, I'm sorry but I don't think that clearance for the work can be given. Perhaps the addendum was supposed to be forthcoming, but I did not receive it. In any case I cannot understand why the Methods could not be provided in the application. Crawford et al. also wish to disturb Southern Giant Petrel colonies by counting. Some authors suggest that it is these very disturbances that are leading to SGP population declines. Is there an alternative? Methods here would have been useful.
Work intended on several IUCN red listed species. I can find no estimate of the likely impact of disturbance on these species in the former case. Ryan suggests only handled birds will be disturbed, but in colonial nesting species I wonder if this is the case?

JACOBS, K: BIODIVERSITY OF SOIL FUNGI ON MARION ISLAND

PEIMC1:
This project will provide information which will feed into objective 1 of the PEI Management Plan (maintenance of biodiversity). It appears that sampling will be limited to takeover periods (April) and if helicopter support is required for this (difficult to see from projections form, which combines requests for this with requests for field hut accommodation), I would encourage the use of hut re-stocking flights for this purpose, rather than using additional flights which could cause unnecessary disturbance to wildlife. There is no mention of the total soil surface area which will be disturbed over the years, but it seems that about 50 kg of soil will be removed from Marion Island per year (200 samples of 250 g each), which is not inconsiderable. Perhaps this could be clarified, and if the area to be disturbed is considered to be significant, rehabilitation actions should be considered. Sections *e* and *h* of the environmental form indicates no destructive sampling and no disturbance of ground, but from the description of methods it appears that this will take place.

I would also suggest that only one visit, instead of two, to Prince Edward Island should take place (unless strong motivation can be provided for why two visits in consecutive years are really necessary). Only previously sterilised or dedicated equipment (e.g. corers, grids) should be used on the islands, and equipment should not be used interchangeably between Marion and Prince Edward Islands. It is unclear how many researchers are planned for the PE Island visits – according to the environmental form, it seems to be 3 (4 days, 12 person-days) but according to the projections form, this seems to be 2 persons.

PEIMC2:
I have one concern with this project. Unless I missed it the justification for including Prince Edward Island is not strong.

It is desired to sample fungi in different habitats, but only six sites will be sampled on Marion. Perhaps six is not enough to sample a good range of vegetation, altitude, biotic influence. etc., and thus rather than sample two sites on Prince Edward, more sites should be sampled on Marion.

Given that the PEIMC and the manplan (existing) wish to keep PE visits to a minimum to reduce risks of introducing new alien species, I suggest that the applicant be asked to write half a page or so for the PEIMC justifying quite why it is desired to sample Prince Edward, when it appears not all Marion habitats will be sampled.

If a PE vsit is approved, then I wonder whether four days is needed each time, and for two years.

I recommend that diversity be assessed at Marion for ther first two years of the propject before a PE trip was planned, and when it could perhaps be better motivated.

PEIMC3:
Visit to Prince Edward Island - which is more important, altitude or aspect of island (at Marion Island, the coast around the huts are targeted, except for the Santa Rosa area, and the Katedraalkrans area that are at altitude)? If altitude, all sampling can be done around Cave Bay, from the coast and up the slope of the island. The site marked on the west coast is largely black lava. I would suggest that sampling be done on Marion Island (the focus of the project - see title) in the first couple of years, and then, if still desirable after preliminary analyses, a sortie to Prince Edward Island.

MCGEOCH, MA: DRIVERS OF SUBANTARCTIC TERRESTRIAL SYSTEMS

PEIMC1:
This proposal fits in strongly with objective 7 and will provide information which feeds into objective 1 of the PEI Management Plan. The impacts of the proposed field work are well described and will be minimal.

PEIMC2:
I see no environmental problems with this proposal and am happy to support in terms of the exsiting manplan requirements.

PEIMC3:
Metal tags for *Azorella* - plastic equivalents available?

MEIKLEJOHN, KI: GEOMORPHOLOGY AND CLIMATE CHANGE

PEIMC2:
I would like to see the PEIMC supplied with a page by the applicant that describes the drilling process and addresses the following:

1. What will be source of power from the drilling and what risks of pollution from it (e.g. if uses a diesel or petrol engine to generate electricity)?

2. Will "lubricant mud" be used?

4. What will happen to the extracted material?

5. What will be the diameter of the hole drilled?

6. Can the site be fully rehabilitated after the study is completed?

PEIMC3:
No mention in the Environmental Form about the 20 m boreholes to be drilled (see workplan) for which a drilling rig will be used. More information required. Noise pollution during drilling? Any other effects?

RYAN, PG: INDIVIDUAL VARIATION IN ALBATROSS REPRODUCTION

PEIMC2 & GINRAC1:

I am assessing this report as a member of GINRAC and of the PEIMC (co-opted). My comments are therefore restricted to environmental issues only, not to the quality of the science, assuming that the NRF is running this process as it did last year (but which I rate very high anyway).

1. I think the research to be conducted will materially aid the conservation management of a group of seriously threatened species, without harming them individually if carried out with care as set out. I note that the field project leaders (Ryan and de Villiers) have successfully practiced the invasive procedures outlined at Marion Island, especially the bleeding of Wandering Albatrosses, and have much experience of handling the species in the field.

2. I have no major environmental issues with this project, for both islands, and thus am happy to support it.

3. Cross-fostering of eggs will be done at "mid-incubation". I assume this will be standardized to match the actual number of days elapsed from laying for each exchange pair, so that the precise stage of incubation is not a compounding factor (since this could conceivably reduce hatching success, as well as obviate the experiment). Natural variation of a few days in the incubation period will allow this to be done with two-day nest checks.

4. Cross fostering will be achievable with Wandering Albatrosses and Northern Giant Petrels working from the island's base, (and for Yellow-nosed Albatrosses at Gough) but will most probably require an extended stay at the Grey-headed Albatross Ridge Hut for that species. There is no request for hut use in the relevant form, and I think this should be inserted for the GHA Ridge Hut during incubation time, since a stay of a week or more seems likley to be required (as not all birds lay on exactly the same day). Daily checks should then be possible.

5. It will be best, especially in the first test year, to avoid cross-fostering and bleeding during bad weather (primarily heavy rain), since released birds may not always immediately return to incubation leading to egg chilling. Again, the natural variation in incubation period should allow for this without invalidating the experimental protocol.

6. During all invasive procedures (bleeding, banding and cross-fostering) great care must be taken when releasing birds to ensure they return to their nests to incubate before the team moves away – to avoid egg loss to skuas. The field teams should realize that incubating birds may be less likely to "sit tight" as during chick-rearing (lower investment made at that stage).

PEIMC4:
Requests opportunistic banding of "other seabirds". I don't think clearance should be given. This is too vague.

Work intended on several IUCN red listed species. I can find no estimate of the likely impact of disturbance on these species in the former case. Ryan suggests only handled birds will be disturbed, but in colonial nesting species I wonder if this is the case?

Admin TdC:
We can endorse both projects (Ansorge & Ryan).

PIs RESPONSES ON PEIMC QUERIES/CONCERNS

BESTER, MN: POPULATION DYNAMICS OF ELEPHANT SEALS

I am not aware of the declaration of seal breeding beaches as Zone 4. If so, then we shall have to apply for a Zone 4 permit. The mark-recapture work has been conducted since 1983 with no detrimental effects, and the population has been stable since 1994.

BESTER, MN: PHOTOGRAMMETRY OF ELEPHANT SEALS

In order to verify the accuracy of the photogrammetric technique, animals photographed during the testing phase need to be weighed. We propose that due to the heavy equipment needed for this endeavour, the weighing only take place at Boulder Beach, next to the Base Station - and if need be Trypot Beach if a representative spread of individuals (age & sex) can not be obtained at Boulder Beach. Equipment will be kept at Marion Base and moved down to Boulders when a required (sex & age) animal is present. If no such animal is present at Boulders Beach, but available at Trypot Beach, the equipment can be carried the short distance to that beach. The following equipment will be utilized:
1) Large weighing Tripod: each leg ~ 3.5m in length. The legs bracketed so as to avoid extensive spread of the three legs and constructed of galvanised iron/equivalent so as not to buckle under the weight.
2) 3 Ton capacity Block-and-Tackle, with sufficiently strong chain/rope.
3) High strength nylon/parachute chord net and "safety straps" (20-30cm width), in order to briefly lift the animal without causing injury.
4) "Ruddweigh" livestock scale (3 ton capacity) which the animal can be placed on with the use of:
5) Aluminium/equivalent lightweight 2x4m weighing grid to be placed on the Ruddweigh cells.
If a sufficiently strong strain guage scale can be sourced/purchased, the need for the Ruddweigh scale and weighing grid will fall away.
We are investigating ways of getting the animal onto the weighing grid without the need for the tripod and block-and-tackle.
The field assistant responsible for the chemical immobilisation of the animals will have successfully passed the course dealing with "Chemical Restraint of Wild Animals" which is presented by the "Game Capture School" at the Sondela Nature Reserve, Bella Bella District, Limpopo Province (www.gamecapture.info). The person will also be trained, on site, during the April 2006 Marion Island Takeover, by current personnel responsible for the chemical immobilization of southern elephant seals to the end of deploying satellite transmitters.

I am not aware of the declaration of seal breeding beaches as Zone 4. If so, then we shall have to apply for a Zone 4 permit. The mark-recapture work has been conducted since 1983 with no detrimental effects, and the population has been stable since 1994.

CILLIERS, PJ: POLAR SPACE WEATHER STUDIES DURING IPY/IHY

In reply to PEIMC1:

Two scintillation receivers are envisaged to be installed: One at the SANAE IV base in 2006 and one on Marion Island in 2007. We regret the omission on the environmental form of the scintillation receiver antenna on Marion Island.

If possible we would like to make observations using the scintillation receivers on board the SA Agulhas, while en route to or from the two destinations. We will arrange a visit to the SA Agulhas next week to inspect and discuss the possible locations for the antennas for both the scintillation receiver and the GPS receiver.

The NIMS satellite receivers mentioned in the proposal will no longer be considered.

Regarding the onospheric scintillation monitor antenna Marion Island:

I attach an updated environmental form with corrections pertaining to the scintillation monitor antenna on Marion Island and SANAE IV indicated in red. The key addition is the following:

Scintillation monitor antenna Marion Island: The Antenna for the proposed ionospheric scintillation monitor on Marion Island requires an elevated location e.g. on top of any existing structure. The antenna is a dome antenna with a diameter of at most 0.3 m on top of a pole of 50 mm dia anodised aluminium about 1 m high and mounted with four cable anchors. Alternatively the pole of the antenna could be made about 2 m long and attached to the wall of an existing structure, provided that the antenna would be about 1 m higher than the top of the structure. We could ask one of the present team members to do a survey of possible sites for the scintillation antenna.

Regarding the scintillation monitor antenna on board SA Agulhas:

If a suitable location can be found for the scintillation monitor antenna on board the SA Agulhas it would be valuable to perform measurements on board the SA Agulhas while en route to SANAE IV and Marion Island. The scintillation monitor antenna is a dome antenna with a diameter of at most 0.3 m on top of a pole of 50 mm dia anodized aluminium about 1 m high. It should preferably be mounted as far away from other structures as possible, but may be attached to any existing mast or structure on board the SA Agulhas. If the pole of the antenna is attached to an existing mast or pole or railing no cables would be required and hence the the potential threat of bird strikes would be minimised.

Regarding the VLF antenna on Marion Island:
It would be acceptable to locate the VLF antenna between existing buildings, provided that the walls of the nearest buildings would be more than 3 m from the antenna. We will arrange that the sand used for the concrete anchoring blocks be sterilised to prevent the introduction of alien organisms.

In reply to PEIMC3:

The VLF antennae at Marion can be mounted using existing concrete blocks or other suitable anchoring points in the Service Zone, where available. An on-site survey for suitable mounting configuration could be done by a member of the science team currently resident on Marion in liaison with the IPY research team, using the existing layout at SANAE IV as a guideline.

CRAWFORD, RJM: SEABIRDS AT MARION ISLAND

PEIMC 1 and PEIMC 2

The information had been incorrectly filled in on the projections form. A revised form is appended.

PEIMC 1 and PEIMC 3

Numbers of birds affected being more than number handled. This refers to environmental form e, which has been amended to account for this.

PEIMC 3

Gentoo Penguins will not be instrumented at colonies; only between colonies and beach. Every care will be taken to minimize both disturbance and stress.

Cement slabs are those that have been at the large Macaroni Penguin colonies for several decades. Environment form has been modified to reflect this.

PEIMC 1

Sooty and Light-mantled Albatrosses had been omitted from Table e; they have been added.

Instrumentation of birds during incubation and brooding. A sentence has been added in environmental form e.

PEIMC 4

Counting Southern Giant Petrels. Techniques were not adequately specified. Part f of the environmental form has been modified.

PEIMC 4

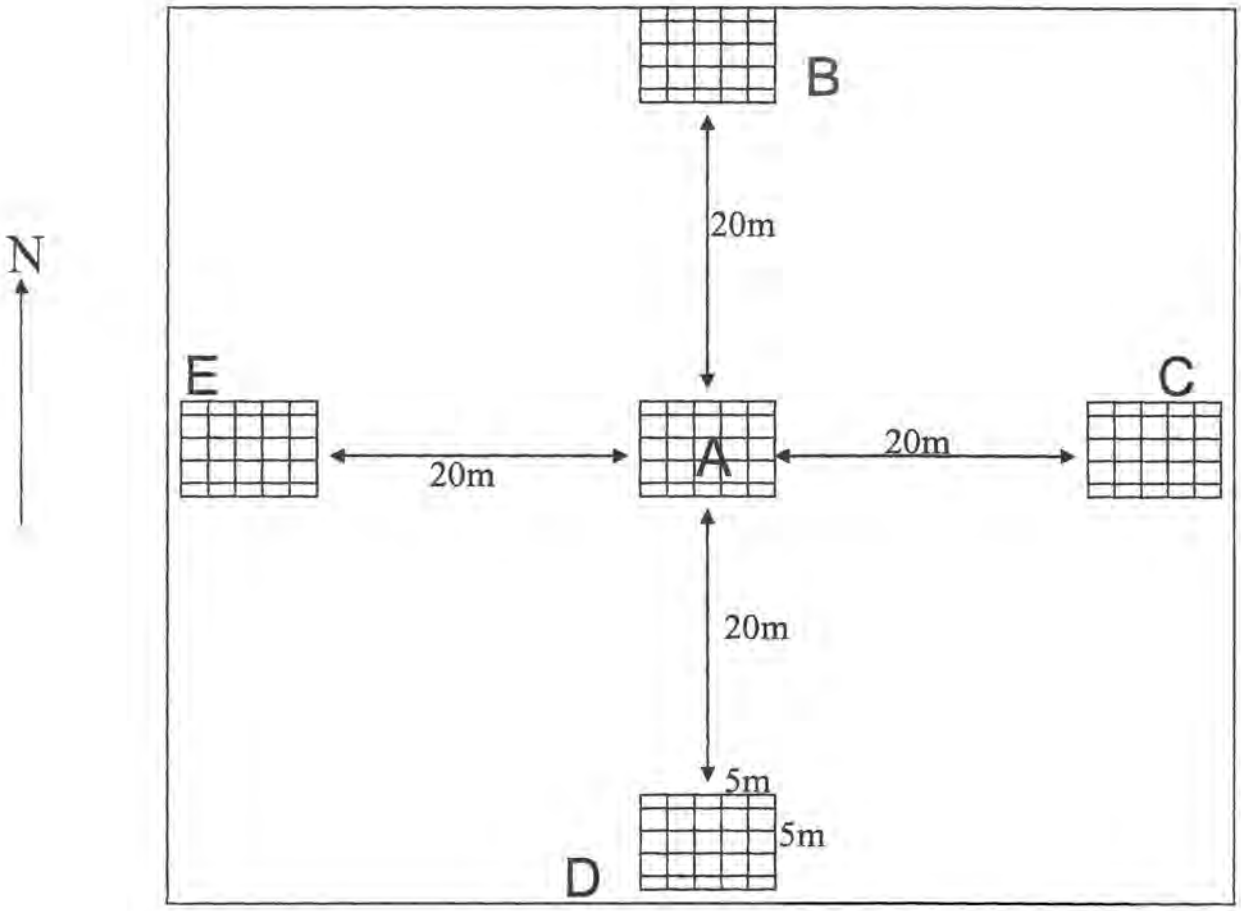
Inadequate methods. This is valid comment. The methods table used previously probably was not submitted. This table has been updated and is appended.

JACOBS, K: BIODIVERSITY OF SOIL FUNGI ON MARION ISLAND

To clarify the amount of soil to be removed. The samples will be taken with a core sampler (3cm diam at a depth of 10 cm). This is the least destructive way of sampling. We propose to sample at 6 sites on Marion Island (indicated on the map). At each site we will construct a grid and sample at 5 sites about 20m apart. (See attached graph of our grid). At each of the 5 places on a site, we will create a smaller grid and take 6 random samples of about 30g. Thus the total amount of soil will be 6 x 30g (per small grid) x 5 places per site = 900 g per site. 900g per site x 6 sites = 5 kg/ year spread across the Island. We found the this sampling method does not cause disturbance as the holes are small enough to be filled in.

I would agree with the commitee and restrict our first visit to Marion Island for the first part of the project. We will purchase dedicated equipment for this project as we are also concerned about cross contamination. For the Marion Island part we plan to take 3 researchers in the first year and the second year. There is no need for these personnel to overwinter as our project will be largely lab based. We would like to stick to 6 sites on Marion as this will largely be a pilot project. This could be adjusted at a later stage at which point a request will be submitted. We would, therefore, withdraw our application to visit Prince Edward Island and restrict our initial visits to Marion Island. Should we wish to include Prince Edward Island at a later stage, we would resubmit an application.

Sampling per site



MCGEOCH, MA: DRIVERS OF SUBANTARCTIC TERRESTRIAL SYSTEMS

It seems there was only a single query, regarding the use of plastic rather than metal tags. If plastic tags are preferred, then we will use plastic rather than metal. I will use the revised Management Plan as a guide to designing a preferred tag type (i.e. with minimum environmental impact), made of plastic rather than metal, to mark Azorella cushions.

MEIKLEJOHN, KI: GEOMORPHOLOGY AND CLIMATE CHANGE

My sincerest apologies for not including the details on the required forms. I could only have attached the wrong versions of the DEAT forms to my proposal - I hope the others are correct!.

The drilling rig is one that is custom designed and used by the Italian researchers in the Antarctic. It is a relatively portable tripod structure with a small petrol engine, similar to the generators used at huts on Marion.

I have answered the questions below.

~~~~~~

I would like to see the PEIMC supplied with a page by the applicant that describes the drilling process and addresses the following:
~~~~~~

1. What will be source of power from the drilling and what risks of pollution from it (e.g. if uses a diesel or petrol engine to generate electricity)?

Small diesel

2. Will "lubricant mud" be used?

No

4. What will happen to the extracted material?

It will largely comprise scoria, so will be spread out on the surface.

5. What will be the diameter of the hole drilled?

10cm, it will only house a PVC pipe with extruding temperature sensors (each 5mm in diameter).

6. Can the site be fully rehabilitated after the study is completed?

Yes

Need to remove pipes!

* Can PVC pipe be removed from 20 m?

No mention in the Environmental Form about the 20 m boreholes to be drilled (see workplan) for which a drilling rig will be used. More information required. Noise pollution during drilling? Any other effects?

Noise pollution will minimal and confined to the area in the vicinity of the borehole. Noise will be the same as the generators at the existing huts.

RYAN, PG: INDIVIDUAL VARIATION IN ALBATROSS REPRODUCTION

Many thanks for the feedback on the proposal from the PEIMC and GIWRAC.

Regarding the specific comments, it is our intention at least initially to limit cross-fostering to Wandering Albatrosses at Marion Island. We fully agree that logistical constraints around access will preclude cross-fostering on Grey-headed Albatrosses at Marion or Tristan Albatrosses on Gough Island. Cross-fostering will initially be done on a very limited scale to ensure the protocol causes no significant disturbance; if it works smoothly we might attempt it on Yellow-nosed Albatrosses at Gough Island too, where the study colony is readily accessible from the base, but this would require a dedicated researcher on the island, and there is no plan or this in the current application (although further funding may become available from the UK).

We also concur with the comments about carefully controlling for timing of laying, to limiting sensitive fieldwork to periods of relatively fine weather, and to reducing as much as possible the risk of even temporary nest desertion after handling. Clearly we will make every effort to reduce disturbance to the minimum, and will assess the impacts of the study by having a control area where no birds are handled.

We are quite happy to drop the request to band other species of seabirds on an opportunistic basis.

I hope this clarifies these points.

DEPARTMENT OF ENVIRONMENTAL AFFAIRS AND TOURISM
SOUTH AFRICAN NATIONAL ANTARCTIC PROGRAMME (SANAP)

**** One form to be completed in respect of each SANAP project proposal submitted***
**** Details for each year of the project applied for to be outlined in each block to enable approval for 5 (rated scientists) or 2 (unrated scientists) years***

ENVIRONMENTAL IMPACTS

- **Researchers are expected to provide sufficient information in their answers to allow DST and DEAT (in conjunction with the Prince Edward Islands Management Committee (PEIMC) and the Gough Island Nature Reserve Advisory Committee (GINRAC) to make a thorough, complete and accurate evaluation of the environmental impact of the project.**
- **Insufficient information will require follow-up action and/or may prejudice the environmental acceptability of the project.**
- **To assist you in completing this form for research on Marion and / or Prince Edward please refer to the Prince Edward Islands Management Plan (PEIMP) and for Gough Island to the Management Plan for the Gough Island Wildlife Reserve (GIMP) - copies available on request (see end of form for contact details)**

1. **APPLICATION FOR *(please indicate appropriate location)*:**

_X_ Marion Island

____ Prince Edward Island

____ Both Marion and Prince Edward Island

____ Gough Island

_X_ Antarctica (SANAE IV)

____ Antarctica (Other) – please specify: _____

2. **DURATION OF PROJECT:** _____Nov_____2006__ to ____December__2008___

DISCUSS ANY POTENTIAL IMPACT/S YOUR STUDY WILL HAVE ON THE ENVIRONMENT AND DESCRIBE MITIGATING ACTIONS WHICH YOU PROPOSE TO MINIMIZE OR ELIMINATE THIS IMPACT. ***The following guidelines are provided to assist applicants with questions relating to the potential environmental impact of a proposal.***

(i) Proposals should clearly outline all field methods, work programmes, camp sites, and timing, as well as any subsequent modifications for the duration of the project, i.e. a projection of activities for subsequent years MUST be provided in each block for the duration of the project.

(ii) The researcher should list aspects of the proposed activity or activities that might cause an impact/s on the environment (e.g. visual impact or other forms of disturbance).

(iii) In making all these assessments of impact, the researcher should briefly consider the nature, duration and intensity of the likely environmental effects, including the following:

a. the existing environment, its variability or dynamic nature, resilience to change, sensitivity to disturbance, previous disturbance, protected status, etc;
b. cumulative and possible indirect impacts;
c. the probability of accidents and their environmental consequences;
d. the adequacy of existing information and knowledge; and
e. necessary and possible amelioration/rehabilitation.

(iv) A map of the area should be included (sketch if necessary) to assist the interpretation of this section of the research application.

3. PRELIMINARY ENVIRONMENTAL EVALUATION

DETAILS OF ACTIVITIES

- ***If you answer "Yes" to any of these questions, a full description of the proposed activity, including proposals for mitigating and monitoring the impact/s, is required.***
- ***It is important that you provide maps detailing the proposed research areas (hand drawn sketches are acceptable – please scan and attach electronically).***

WILL YOUR OBJECTIVE:

a. Use a radionuclide? Yes ____ No _X__

If yes, complete the following:

Radionuclide	Chemical form	Quantity (Curies)	Half Life (Years)

Detail procedures you will take to ensure that no radiation will enter the Antarctic or sub-Antarctic environment from use or spillage:

b. Take any chemical to the Antarctic or sub-Antarctic environment? Yes ____ No _X__

If yes, complete the following:

Chemical	Formula	Quantity	Use

Unused chemicals will be: ____ Left at SANAE IV / Marion / Gough Base *(please indicate)*

____ Returned to South Africa

____ Other

If other, detail disposal procedure:

c. Release any chemical to the Antarctic or sub-Antarctic Environment? Yes ____ No _X__

If yes, detail the need to release, the chemical, the amounts involved and the location:

d. Require the use of explosives? Yes ____ No _X___

Explosive Type	Number of detonations	Charges per detonation (kg)	Total weight (kg)

If yes, how will the explosives be used?

Detail any precautions taken to minimise disturbance to any wildlife or plants:

e. Collect, capture, kill (destructive sampling) any terrestrial, freshwater or marine plants or animals?

Yes ____ No _X___

If Yes, for each species (apart from those taken using plankton nets or trawl), estimate the proportion of the local population you will be collecting, capturing, killing:

Species	Method	Number	Proportion of population (%)

For each species, indicate the proportion of the local population you will be disturbing while carrying out the above activities:

AND / OR

Restrain, tag, band (non-destructive sampling for handling, marking or other purposes) any terrestrial, freshwater or marine plants or animals? Yes ____ No _ X___

If Yes, for each species (apart from those taken using plankton nets or trawl), estimate the proportion of the local population you will be restraining, tagging, banding (include period of restraint):

Species	Method	Number	Proportion of population (%)

For each species, indicate the proportion of the local population you will be disturbing while carrying out the above activities:

f. Enter any Protected Area in Antarctica (Specially Protected Areas - SPAs), Marion and/or Prince Edward (Zone 4 – see PEIMP) and/or Gough Island (zoned by GIMP)? Yes ____ No __X__

If Yes, complete the following:

Name of Protected Area	Duration of Visit	Total person-days

Detail the type of work which will be carried out within the Protected Area:

Detail why the work must be carried out within the Protected Area:

g. Take to the Antarctica or sub-Antarctic region any animal, plant (including seeds, wooden marker poles not permitted), micro-organism or soil? Yes ____ No __X__

If yes, complete the following:

Species	Quantity

Detail why these materials need to be taken to the Antarctic or sub-Antarctic:

Detail the quarantine procedures you will undertake to ensure that there is no release to the Antarctic or sub-Antarctic environment:

h. Significantly disturb by flooding, sampling, trampling, camp operations or any other means any ice-free area (bare ground / vegetated areas)? Yes ____ No _X___

If Yes, complete the following:

Routes to be taken	Number of samples	Total person-days

Briefly describe any such significant disturbance:

Detail any steps you will take to minimise such disturbance:

i. Take or remove any physical (non-biological) specimens, e.g. rocks, fossils, etc.?

Yes ____ No _X___

If yes, detail the general area and types of specimens to be collected:

Location	Specimen	Type	Total Number or Weight

j. Cumulative Impacts.

Occupy new or existing camp sites? __0__ New

__0__ Old

__0__ Both old and new sites

If new, list these sites by name, if available, and GPS position (or on map) and indicate why a previously impacted site cannot be used:

Site (name)	Location (GPS position)	Reason for new site

Will you track previously untracked ground? Yes ____ No __X__

If Yes, state why this is necessary:

Please indicate:

Routes to be taken	Total person-days	Safety precautions

k. Will you install equipment, markers, stakes, cairns etc. that will be left in the field?

Yes __X__ No ____

If Yes, detail location and type of marker, stake, duration, etc. *(please motivate if markers at the Prince Edward Islands and on Gough Island are not unpainted, plastic markers, as prescribed):*

VLF Antenna Marion Island: *On Marion Island, five concrete blocks to anchor the VLF receiver antenna near the Science Base needs to be installed. The rhombic VLF antenna to be used on Marion Island is about 4 m high with sides about 3 m long, requiring a concrete block, possibly with anchoring pylons, of about 0.5 cubic metre at the centre to anchor the base of the antenna and 4 other similar anchor points on a radius of about 3 meter to anchor the sides. Detailled drawings will be provided upon request. Alternatively existing pylons can be used for anchors, dispensing with the need for a concrete blocks.*

Scintillation monitor antenna Marion Island: *The Antenna for the proposed ionospheric scintillation monitor on Marion Island requires an elevated location e.g. on top of any existing structure. The antenna is a dome antenna with a diameter of at most 0.3 m on top of a pole of 50 mm dia anodised aluminium about 1 m high and mounted with four cable anchors. Alternatively the pole of the antenna could be made about 2 m long and attached to the wall of an existing structure, provided that the antenna would be about 1 m higher than the top of the structure. We could ask one of the present team members to do a survey of possible sites for the scintillation antenna.*

Observation hut for absolute magnetometers at SANAE IV: *A wooden hut without any magnetic materials in it is to be constructed and placed near the base at SANAE IV for the dIdD absolute magnetometer and dI-flux magnetometer-theodolite. The magnetometer hut should have a window facing the base or the riometer antennas to observe any fixed beacon that can be used for azimuth calibration, and should be supplied with electric power. The hut must be anchored to the rock, most probably to the south of the base, if possible to minimise its drift during the period of observation. Any metal used for the construction of the hut or anchors of the hut will have to be non-magnetic. Power supply and cabling can be achieved by laying a pipe or making use of heavy duty wear-resistant cabling from the base to the hut. We could ask one of the present team members to do a survey of possible sites for the hut.*

Scintillation monitor antenna SANAE IV: *The Antenna for the ionospheric scintillation monitor requires an elevated location e.g. on top of any of the existing observation huts or on top of the SANAE IV base. The antenna is about 1 m high and is mounted using a single pole with cable anchors. Alternatively the antenna could be bolted to a large rock to the south of the base. We could ask one of the present team members to do a survey of possible sites for the scintillation antenna.*

no sand, use poles

Location	Type of marker	Duration in field	Motivation if not unpainted, plastic
Marion Island: Near Science Base	5 Concrete blocks for VLF antenna the top of which will be level with the ground	2 years: 2007-2008	Not intended as a marker, but as an anchor. Therefore concrete made with sterilised sand, not plastic.
Marion Island: At or near Science Base	Scintillation monitor antenna 0.3 m dome antenna mounted on top of 1 meter pole of 50 mm dia pipe. If not	2 years: 2007-2008	Antenna and pole not intended as markers, made out of anodised aluminium.

	mounted to a wall, it may require 3 anchor cables.		
SANAE IV: Near, but outside the base	Magnetometer hut made from wood	2 years: 2007-2008 The instrument may be left at SANAE IV for future measurements after IPY	Wood required to be free from any materials that can be magnetised and affect the absolute measurements.
SANAE IV: Near, but outside the base	Scintillation monitor antenna 0.3 m dome antenna mounted on top of 1 meter pole of 50 mm dia pipe anchored to the rock with four cables.	2 years: 2007-2008	Antenna and pole not intended as markers, made out of anodised aluminium.

l. Do you expect your activities to have an environmental impact not covered in the above?

Yes ____ No _X_

If yes, fully detail impacts:

m. Is the proposed activity likely to have more than a minor or transitory (>6months) impact?

Yes ____ No _X__

If yes, a Comprehensive Environmental Evaluation (CEE) will be required:

n. Permit requirements *(please refer to PEIMP and GIMP):*

i. Standard Entry Permit (provide details):

ii. Research Permit (provide details):

iii. Collection Permit (provide details – number of samples to be collected, etc.):

iv. Permit for Protected (Special Entry) Area/s (provide details – all areas to be specified):

DEPARTMENT OF ENVIRONMENTAL AFFAIRS AND TOURISM
SOUTH AFRICAN NATIONAL ANTARCTIC PROGRAMME (SANAP)

**** One form to be completed in respect of each SANAP project proposal submitted***
**** Details for each year of the project applied for to be outlined in each block to enable approval for up to 5 (rated scientists) or up to 2 (unrated scientists) years***

ENVIRONMENTAL IMPACTS

- **Researchers are expected to provide sufficient information in their answers to allow DST and DEAT (in conjunction with the Prince Edward Islands Management Committee (PEIMC) and the Gough Island Nature Reserve Advisory Committee (GINRAC) to make a thorough, complete and accurate evaluation of the environmental impact of the project.**
- **Insufficient information will require follow-up action and/or may prejudice the environmental acceptability of the project.**
- **To assist you in completing this form for research on Marion and / or Prince Edward please refer to the Prince Edward Islands Management Plan (PEIMP) and for Gough Island to the Management Plan for the Gough Island Wildlife Reserve (GIMP) - copies available on request (see end of form for contact details)**

1. **APPLICATION FOR *(please indicate appropriate location)*:**

__X__ Marion Island

_ Prince Edward Island

__ _ Both Marion and Prince Edward Island

____ Gough Island

__ Antarctica (SANAE IV)

__ _ Antarctica (Other)– please specify:

2. DURATION OF PROJECT: ___1 April_____2006___ to _1 April_____2011___

DISCUSS ANY POTENTIAL IMPACT/S YOUR STUDY WILL HAVE ON THE ENVIRONMENT AND DESCRIBE MITIGATING ACTIONS WHICH YOU PROPOSE TO MINIMIZE OR ELIMINATE THIS IMPACT. ***The following guidelines are provided to assist applicants with questions relating to the potential environmental impact of a proposal.***

(i) Proposals should clearly outline all field methods, work programmes, camp sites, and timing, as well as any subsequent modifications for the duration of the project, i.e. a projection of activities for subsequent years MUST be provided in each block for the duration of the project.

(ii) The researcher should list aspects of the proposed activity or activities that might cause an impact/s on the environment (e.g. visual impact or other forms of disturbance).

(iii) In making all these assessments of impact, the researcher should briefly consider the nature, duration and intensity of the likely environmental effects, including the following:

a. the existing environment, its variability or dynamic nature, resilience to change, sensitivity to disturbance, previous disturbance, protected status, etc;
b. cumulative and possible indirect impacts;
c. the probability of accidents and their environmental consequences;
d. the adequacy of existing information and knowledge; and
e. necessary and possible amelioration/rehabilitation.

(iv) A map of the area should be included (sketch if necessary) to assist the interpretation of this section of the research application.

3. PRELIMINARY ENVIRONMENTAL EVALUATION

DETAILS OF ACTIVITIES

- ***If you answer "Yes" to any of these questions, a full description of the proposed activity, including proposals for mitigating and monitoring the impact/s, is required.***
- ***It is important that you provide maps detailing the proposed research areas (hand drawn sketches are acceptable – please scan and attach electronically).***

WILL YOUR OBJECTIVE:

a. Use a radionuclide? Yes ____ **No** ____

If yes, complete the following:

Radionuclide	Chemical form	Quantity (Curies)	Half Life (Years)

Detail procedures you will take to ensure that no radiation will enter the Antarctic or sub-Antarctic environment from use or spillage:

b. Take any chemical to the Antarctic or sub-Antarctic environment? **Yes** ___ No ____

If yes, complete the following:

Chemical	Formula	Quantity	Use
Ethanol	CH3-CH2-OH	20 litres p.a.	Preserve diet samples

Unused chemicals will be: ____ Left at SANAE IV / Marion / Gough Base *(please indicate)*

____ **Returned to South Africa**

____ Other

If other, detail disposal procedure:

c. Release any chemical to the Antarctic or sub-Antarctic Environment? Yes ____ **No** ____

If yes, detail the need to release, the chemical, the amounts involved and the location:

d. Require the use of explosives? Yes ____ **No** ____

Explosive Type	Number of detonations	Charges per detonation (kg)	Total weight (kg)

If yes, how will the explosives be used?

Detail any precautions taken to minimise disturbance to any wildlife or plants:

f. Collect, capture, kill (destructive sampling) any terrestrial, freshwater or marine plants or animals?

Yes ____ **No** ____

If Yes, for each species (apart from those taken using plankton nets or trawl), estimate the proportion of the local population you will be collecting, capturing, killing:

Species	Method	Number	Proportion of population (%)

For each species, indicate the proportion of the local population you will be disturbing while carrying out the above activities:

AND / OR

Restrain, tag, band (non-destructive sampling for handling, marking or other purposes) any terrestrial, freshwater or marine plants or animals? **Yes** ____ No ____

If Yes, for each species (apart from those taken using plankton nets or trawl), estimate the proportion of the local population you will be restraining, tagging, banding (include period of restraint):

Species	Method	Number (per annum)	Proportion of population (%)
Gentoo Penguin	Chick weight at fledging	50 (each individual restrained for approximately 5 minutes)	About 12% of annual chick production handled. An equivalent number not handled.
	Deployment of satellite transmitters (PTT's)	4 (each individual restrained for approximately 20 minutes twice; away from colony)	About 0.25% of adult population
Macaroni Penguin	Adult weight on arrival at breeding colony	200 (each individual restrained for approximately 5 minutes at beach)	Less than 0.05% of breeding population
	Diet studies	45 (each individual restrained for approximately 10 minutes at beach)	Less than 0.05% of breeding population
	Chick weight at fledging	250 (each individual restrained for approximately 5 minutes)	Less than 1% of annual chick production
	Deployment of PTT's	8 (each individual restrained for approximately 20 minutes)	Less than 0.01% of breeding population
Eastern Rockhopper Penguin	Adult weight on arrival at breeding colony	200 (each individual restrained for approximately 5 minutes at beach)	0.2% of breeding population
	Diet studies	30 (each individual restrained for approximately 10 min at beach)	About 0.05% of breeding population
	Chick weight at fledging	250 (each individual restrained for approximately 5 minutes)	Less than 1% of annual chick production
	Deployment of PTT's	6 (each individual restrained for about 20 minutes twice)	Less than 1% of breeding population

King Penguin	Deployment of PTT's	2 (each individual restrained for about 20 minutes)	Less than 0.01% of breeding population
Crozet Shag	Deployment of PTT's	2 (restrained for about 20 minutes)	Less than 1 % of the adult population
Burrowing petrels	Identification and Banding	250 (each individual restrained for approximately 5 minutes)	Less than 1% of the estimated overall population
White-chinned Petrel	Banding	200 (each individual restrained for about 5 minutes)	Less than 1% of the estimated overall population
Terns and gulls	Banding	50 (each individual restrained for approximately 5 minutes)	As much of annual production of chicks as is possible
Sub-antarctic Skua	Banding	50 (each adult/chick restrained for about 5 minutes)	As many pairs of adults and their chicks around the Base as feasible.
Wandering Albatross	Banding	1000 (500 adult and 500 chicks - each individual restrained for approximately 5 minutes)	7% and 40% of the population
Grey-headed Albatross	Banding	100 adult and 100 chicks (each individual restrained for about 5 minutes)	Less than 2% and 4% of the population
Sooty and Light-mantled Sooty Albatross	Deployment of PTT's	4 (2 of each species – each restrained for approximately 10 minutes)	Less than 1% and 2% of adult population
Indian Yellow-nosed Albatross	Banding	500 (adults and chicks each restrained for approximately 3 minutes)	Less than 5% of adult population
Northern Giant Petrel	Banding	200 (100 adult and 100 chicks - each individual restrained for approximately 5 minutes)	30% and 70% of the population

more to ~~*~~ perform

VALUES?

PEDRO

Lesser Sheathbill	Banding	100 (each individual restrained for approximately 3 minutes)	About 10% of annual chick production

When birds are caught for instrumentation that are incubating eggs or brooding chicks field workers will take due care to prevent birds trampling eggs of chicks and will remain near nests until adults have returned to their offspring.

For each species, indicate the proportion of the local population you will be disturbing while carrying out the above activities:

Refer to preceding Table. (Refer to attached Table at end of document for application methods.)

f. Enter any Protected Area in Antarctica (Specially Protected Areas - SPAs), Marion and/or Prince Edward (Zone 4 – see PEIMP) and/or Gough Island (zoned by GIMP)? **Yes** ____ No ____

If Yes, complete the following:

Name of Protected Area	Duration of Visit	Total person-days
Grey-headed Albatross colonies	Six times per year for two days	12
Wandering Albatross colonies	Throughout breeding season	20 p.a.
Gentoo Penguin colonies	Throughout breeding season	200 p.a.
Southern Giant Petrel colonies	Twice annually	10 p.a.

note
Cape
Islands
Low
Zone 4

Detail the type of work which will be carried out within the Protected Area:

Census, banding and/or diet sampling

Detail why the work must be carried out within the Protected Area:

Monitoring of the Grey-headed Albatross colony involves counts of active nest sites in January, March, May and October of each year. An extra two visits will be necessary to recover all the GLS devices. The topography of the area is such that it will be necessary to approach the colony closer than 200 m. Access to the Wandering Albatross monitoring colonies is essential for establishing the demographic parameters for these populations.

Southern Giant Petrel colonies will be counted twice annually to establish trends in the breeding population – once when adults are incubating and a second count to establish numbers of chicks produced. This may necessitate approaching closer than 100 m at times, but incubating or brooding birds are not closely approached. Counts are made from as great a distance as possible.

Gentoo Penguins are one of the species selected by CCAMLR for monitoring. Application of the monitoring procedures necessitates approach to colonies closer than 100 m at times.

g. Take to the Antarctica or sub-Antarctic region any animal, plant (including seeds, wooden marker poles not permitted), micro-organism or soil? Yes ____ **No** ____

If yes, complete the following:

Species	**Quantity**

Detail why these materials need to be taken to the Antarctic or sub-Antarctic:

Detail the quarantine procedures you will undertake to ensure that there is no release to the Antarctic or sub-Antarctic environment:

j. Significantly disturb by flooding, sampling, trampling, camp operations or any other means any ice-free area (bare ground / vegetated areas)? **Yes** ____ No ____

If Yes, complete the following:

Routes to be taken	**Number of samples**	**Total person-days**

Briefly describe any such significant disturbance:

Detail any steps you will take to minimise such disturbance:

k. Take or remove any physical (non-biological) specimens, e.g. rocks, fossils, etc.?

Yes ____ No ____

If yes, detail the general area and types of specimens to be collected:

Location	Specimen	Type	Total Number or Weight
Marion Island	Dead seabirds	Analysis of cause of death, measurements, preservation	Maximum of 20 per annum
Marion Island	Abandoned seabird eggs	Measurements, preservation	Maximum of 50 per annum

j. Cumulative Impacts.

Occupy new or existing camp sites? ____ New

____ **Old**

____ Both old and new sites

If new, list these sites by name, if available, and GPS position (or on map) and indicate why a previously impacted site cannot be used:

Site (name)	Location (GPS position)	Reason for new site

Will you track previously untracked ground? **Yes** ____ No ____

If Yes, state why this is necessary:

Yes, previously untracked ground may be tracked if this is required to estimate the populations of breeding seabirds. However, most of the ground is likely to have been tracked previously.

Please indicate:

Routes to be taken	Total person-days	Safety precautions
Standard routes between huts at Marion as well as untracked ground off the paths that exist.	200 p.a.	Protective clothing; GPS; spare batteries; torch; hand – held radios; space blankets.

k. Will you install equipment, markers, stakes, cairns etc. that will be left in the field?

Yes ____ No ____

If Yes, detail location and type of marker, stake, duration, etc. *(please motivate if markers at the Prince Edward Islands and on Gough Island are not unpainted, plastic markers, as prescribed):*

Location	Type of marker	Duration in field	Motivation if not unpainted, plastic
Van den Boogaard Trypot Fault & Hole	Plastic pipe	Duration of project for all sites	
Macaroni Bay (North)	Plastic pipe		
Bullard Beach (North)	Plastic pipes; cement slabs and pyramids*		
Kildalkey Bay	Plastic pipes; cement slabs and pyramids*		
Skua Ridge (North & South)	Plastic pipes – ice-cream tubs above some nests		
Albatross Lakes Sealers Beach Goney Plain Grey-headed Albatross Ridge	Plastic pipe markers		
Between Skua Ridge and Hansen River coastal and Hydro shack and Tom, Dick & Harry interior	Plastic pipes for NGP nests		

* please note that the cement slabs and pyramids have been at both sites for more than three decades and are currently only maintained in that they define measureable squares to determine nesting density of Macaroni Penguins.

I. Do you expect your activities to have an environmental impact not covered in the above?

Yes ____ **No** ____

If yes, fully detail impacts:

m. Is the proposed activity likely to have more than a minor or transitory (>6months) impact?

Yes ____ **No** ____

If yes, a Comprehensive Environmental Evaluation (CEE) will be required:

n. Permit requirements *(please refer to PEIMP and GIMP)*:

i. Standard Entry Permit (provide details):

Marion Island - Two over-wintering staff for 14 months plus two for the annual takeover – all zones

ii. Research Permit (provide details):

Marion Island - Two staff for one year and two for the annual takeover – all zones
- 22 for 10 days in December 2006 – all zones

iii. Collection Permit (provide details – number of samples to be collected, etc.):

Marion Island – 45 Macaroni Penguin diet samples p.a.;
30 Rockhopper Penguin diet samples p.a.;
50 opportunistic diet samples p.a. – all species, but excluding penguins;
20 seabird carcasses p.a. – all species;
50 abandoned eggs p.a. – all species.
10 feather samples each for penguins/shags/gulls/terns – for genetic analysis

iv. Permit for Protected (Special Entry) Area/s (provide details – all areas to be specified):

Marion Island – All seabird colonies within Zone 4 (see 3f and j)
All seabird colonies in Zone 3 (see 3f and j)

Annex 3 – Crawford Table of methods to be applied to seabirds

Species	Method	Techniques
Penguins	Chick weight at fledging	Chicks caught with a lasso attached to a pole, weighed while suspended on a strop and released.
	Deployment of GPS data loggers or PTTs	Devices attached by either overlaying strips of tape on feathers or gluing Velcro to feathers on back. Data loggers removed after a week and data captured on computer. PTTs removed after about 50 days (or fall off after glue weakens at about 70 days); information captured by satellite.
	Adult weight on arrival at breeding colony	Adults caught by hand at beach, placed in a bag and weighed.
	Resightings of banded birds	Colony scanned with binoculars. Band numbers recorded when seen.
	Diet studies	Birds caught by hand en route to colony from beach. Thin tube attached to a funnel fed down throat. Water is fed into stomach through funnel. Bird inverted and pressure applied while massaging throat to induce vomiting. Samples recovered in bucket and taken back to Base for analysis.
	Breeding success and breeding chronology	Selected nests and colonies monitored throughout breeding season to record presence of adults, eggs, brooded chicks and chicks in crèches.
	Census	Several methods are employed to census penguins. Not all are applied to each species. For large Macaroni Penguin colonies number of pairs estimated from area occupied by breeding birds and density of nests. Large King Penguin colonies counted on digital images. Smaller penguin colonies counted visually aided by binoculars. All methods aim to cause minimal disturbance to incubating/brooding birds.
Crozet Shag	Banding	Chicks still nest bound are banded with stainless steel rings.
	Breeding success	Selected nests and colonies monitored throughout breeding season to record presence of adults, eggs and chicks using binoculars.
	Feather samples	One or two growing feathers are plucked from the chicks back and preserved for DNA analysis.
	Census	Colonies are counted from vantage points at a distance that does not cause birds to leave the nest.
do not see value	Instrumentation	Devices attached by either overlaying strips of tape on feathers or gluing Velcro to feathers on back. PTTs removed after about 50 days (or fall off after glue weakens at about 70 days). Data downloaded to satellite.

Burrowing petrels	Banding	Adults are downed with a spot-lamp. Measurements are taken and moult scored. Bird is banded and released. Resightings of banded birds are recorded.
	Breeding success	Selected nests and colonies monitored throughout breeding season to record presence of adults and chicks.
Giant petrels, albatrosses, skuas, terns, Kelp Gulls and Lesser Sheathbills	Banding	A proportion of the adult breeding population and some chicks produced are banded.
	Breeding success	Selected nests and colonies monitored throughout breeding season to record presence of adults, eggs and chicks.
	Feather samples	One or two growing feathers are plucked from the chicks back and preserved for DNA analysis.
	Census	Nests are counted – for colonial birds this is done by walking transects through known sites or by using binoculars from vantage points. Close approach that results in displacing breeding birds is not encouraged.
	Deployment of PTTs	Devices attached by gluing under central tail feathers and placing cable tie around feathers and instrument. Devices lost on moult of feathers or after about 70 days as glue lifts.

MARION (AND/OR PRINCE EDWARD) ISLAND/S

Marion:

Year	Number of research overwintering expedition members	Number of shore-based relief voyage (takeover) personnel (excluding overwinterers)	Number of ship-based relief voyage (takeover) personnel (usually oceanographers)	Dedicated ship's time & sampling locations at sea (NB-attach map) AND equipment requiring deployment	Dinghy (zodiac) use (persons, location/s & time)	Dedicated air support (persons, location/s & time) AND field hut requirements	Cargo requirements & number of DEAT containers (including radioactive / hazardous)	Laboratory & office space (on ship / at base) AND equipment to be installed	Accessories (hand held radios, fuel, backpacks, etc.)
2006/07	2	2	0	n/a	1 for standby at PEI - Search and rescue option	6 – Prince Edward Island – Kent Crater/Cave Bay. August.	1	Base space	
2007/08	2	2	0	n/a	n/a	No	1	Base space	
2008/09	2	2	0	n/a	n/a	No	1	Base space	
2009/10	2	2	0	n/a	n/a	No	1	Base space	
2010/11	2	2	0	n/a	n/a	No	1	Base space	

Prince Edward:

Year	Number of persons	Number of days on island	Locations (east / west coast, etc.) NB-attach map	With annual Marion voyage / separate dedicated voyage	Dedicated ship's time required	Dinghy (zodiac) use (persons, location/s & time)	Dedicated air support (persons, location/s & time)	Cargo requirements (including radioactive / hazardous)	Accessories (tents, camping equipment, hand held radios, etc.)
2006/07	6	10	3 Kent Crater 3 Cave Bay	SDV	Nil	S & R only	Nil	nil	Some protective clothing from DEAT stores may be requested

exceeds current allowance

LIST OF ACTIONS
19th PEIMC MEETING (2 March 2005)

	ACTION	WHO?	STATUS
1	Testing of portaloos: - To investigate which chemicals can be used	Marienne	
2	Protected Areas Act and Amendment Bill: -To draft request for inclusion of Prince Edward Islands birds under threatened species	John/Henry	Response received from Dr Willemse & forwarded to PEIMC for noting & to Prof SL Chown for revision of PEIMP
3	Removal of rubble and building waste: - 2005 Marion Island relief voyage CO to continue with clean-ups – may request helicopter support where necessary - Poles next to huts to be removed during erection of new huts	John	
4	- Possibility of appointing overwintering Aliens Officer – DEAT to advise - Convey message to Dr Niek Gremmen that he will be 2005 Marion Island relief voyage Aliens Officer	Henry Marienne	*Marienne, was this done?*
5	Rat guards on SA Agulhas - Draft letter of appreciation to Smit Marine	Sam/Kusi	Letter sent to Ian Calvert
6	World Heritage Site: - Quote received from Environomics - Follow steps as on Doc 2.6	Henry/ Kusi/Carol	Approval received from the DG and Environomics tasked to revise nomination
7	Feedback on illegal fishing: - Educate patrol vessels & future team members on conservation issues	Marienne/John	
8	Extension of Special Nature Reserve Status to include territorial waters up to 12 nautical miles: - To update committee in the next PEIMC meeting	John/Theressa	
9	RAMSAR Wetland Reserve status for the PEI's: - Will revise and submit to Pretoria Ramsar Department - Requires PEIMP, A4 size maps of Marion zonation to accompany application - To investigate availability of digital maps?	John Kusi Henry	Complete application with Edward N – Henry to advise on funding, and then to be gazetted for public comment for 30 days
10	House Mouse update: - To draft brief framework on how to do application - Request for specific funding	John Henry	Draft brief with NRF – they will run the feasibility study. DEAT to authorize funding
11	National Policy on seals, Seabirds and Shorebirds	Theressa	Final draft received from Rob Crawford
12	Penguin request from National Zoological Gardens of SA (Pta Zoo): - Facility will be completed in December 2005 - Follow up with Sue Jackson	Carol	Comments received from PEIMC re: SueJ & Zoo's e-mails (will be discussed at next PEIMC meeting)
13	New huts at Marion" - To draft 1 pager on Environmental Impact Assessment (EIA) for new location of Cape Davis hut (to stand till the next meeting)	John	
14	Response from MCM regarding outcome of SANAP proposal to monitor seabirds in the Southern Ocean: - Write to Dr Crawford addressing some of his queries: 1. state clearly that PEIMC refers to flipper banding 2. must submit motivation for dedicated PEI voyage, if required 3. inform that DEAT does not support research on construction voyages	Kusi	Finalised – e-mail sent to Dr Crawford (visit to PEI not approved)

15	CTBTO Station RN62 at Marion: - Obtain specifications for designs for discussion at next PEIMC meeting - Not to influence Met observations (to advise SAWS overwintering team member to look at the matter) - Wind direction	Kusi	Specs and designs received – sent to Marion Island for the Senior Met's attention
16	Notification for voyage participants regarding gear checks: - Send gear checks document (Doc 5.3) to Marion Island participants, and possibly include some brochures - Send to Steven Chown to include in new PEIMP	Marienne Carol	*Marienne, was the gear checks doc circulated to voyage participants?* This (& various other policies) to PEIMC for comments – will send final versions to Prof SL Chown
17	Marking of stand of alien vegetation at Gentoo Lake: - The current CO to advise participants to avoid these areas	John	*John/Marienne, was this done?*
18	Pollution at Marion Island base: - To investigate when attending ACAP workshop in Australia which products (harmless chemicals) can be used	John	
19	Re-zonation of Crozet Shags and lava tunnels: * - To request Acting DG's approval	Marienne Henry	Approval received from the DG and sent to Prof SL Chown for revised PEIMP
20 21	Completion of minutes of 19th PEIMC meeting Next PEIMC meeting	Noma/Kusi Kusi/Henry	Distributed to PEIMC Availability requested from 31 Oct – 11 Nov

* LAVA TUNNELS
? all or only Fred's Hill

BRIEF FOR A CONSULTANCY TO ASSESS THE FEASIBILITY OF ERADICATING THE HOUSE MOUSE *MUS MUSCULUS* FROM SUB-ANTARCTIC MARION ISLAND

A number of publications has reported on the known and potential impacts of introduced House Mice *Mus musculus* on sub-Antarctic Marion Island, including on plants, invertebrates, and indirectly, on birds. It is considered that the climate amelioration taking place at the island, as a consequence of global warming, is exacerbating these effects.

In terms of the management plan for the Prince Edward Islands, there is a requirement "To elucidate the ecological impact arising from the introduction of the House-mouse *Mus musculus* population to Marion Island and to make recommendations for its control;".

At its 19th meeting held in March 2005, the Prince Edward Islands Management Committee (PEIMC) agreed that a consultancy should be undertaken to advise it on what actions should be taken that might lead to the eventual eradication of the House Mouse on Marion Island.

The consultancy should cover the following matters:

1. Review available knowledge on the ecology of the House Mouse on Marion Island, concentrating on its known and likely effects on the natural biota and environment.

2. Review known effects of the House Mouse on other oceanic islands, with special reference to synthesizing information of value to its eradication at Marion Island.

3. Review methods used or proposed, with indications of their successes to date, for the eradication of rodents, especially the House Mouse, on oceanic islands.

4. Undertake a feasibility study for the eradication of the House Mouse on Marion Island. The feasibility study should identify the preferred option(s) for eradication, taking account of the likelihood and consequences of incidental mortality of biota (and how to minimize them) and include a break-down of the likely costs of an eradication programme, and its logistic requirements.

5. Review the existing and proposed quarantine measures adopted by the South African National Antarctic Programme (SANAP) to reduce the risks of rodents reaching Marion and Gough Islands in relation to quarantine measures adopted or proposed elsewhere in the world in similar situations, and produce a revised list of measures for adoption by SANAP.

It is envisaged that the consultant will need to visit the island for a short period (up to several weeks) during a relief voyage to assess the situation and conditions first-hand. Such a visit will require the consultant to undertake extensive walking trips to field huts scattered around the island, for which a good level of fitness is required.

South African citizens/permanent residents who wish to tender for this consultancy should submit their tender in writing by day month 2005 to:

The Chair, Prince Edwards Islands Management Committee
Department of Environmental Affairs and Tourism
PO Box 8172
Roggebaai 8012

Attention: Ms Kusi Ngxabini
kusi@antarc.wcape.gov.za
Fax: (021) 405-9424; Tel (021) 405-9421

The tender should include a statement on the person's experience with and knowledge of eradication efforts conducted at oceanic islands and of rodent ecology.

The Director-General
Department of Environmental Affairs and Tourism
Pvt Bag X447
Pretoria 001

For Attention: Dr G Willemse, Species Listing Team
Fax: 012-320-7026

xx March 2004

Dear Dr Willemse

INCLUSION OF THREATENED SEABIRDS BREEDING AT THE PRINCE EDWARD ISLANDS WITHIN THE NATIONAL ENVIRONMENTAL MANAGEMENT: BIODIVERSITY ACT

The Prince Edward Islands Management Committee (PEIMC) is an advisory body of expert scientists and conservationists appointed by DEAT's Director-General to advise the South African National Antarctic Programme (SANAP) on all matters pertaining to the conservation management of South Africa's sub-Antarctic islands. At its most recent meeting the PEIMC took account of South Africa's new environmental legislation as it may affect the Prince Edward Islands.

Specifically, the committee considered the status of a suite of 14 species of globally (IUCN) threatened albatrosses and petrels that breed at the islands, and that have been listed within the international Agreement on the Conservation of Albatrosses and Petrels (ACAP), to which South Africa is a signatory and founder member. It was agreed that the conservation status of these species within South African law would be improved by their listing as threatened species within the National Environmental Management: Biodiversity Act. It was agreed that Illegal, Unreported and Unregulated (IUU or "pirate") fishing should be listed as the "restricted activity" in terms of the definitions sub-clause (x), which allows the Minister to prescribe a restricted activity not already specifically defined by the Act.

The Committee understands that the *ad hoc* Expert Group on Birds, appointed by the Species Listing Team of your sub-directorate to draw up a candidate list, has already submitted this suite of birds for consideration and thus your office will already have their names on file, along with the group's justification for their inclusion. However, it was noted by the committee that these birds have not been included with the species of birds proposed for listing in terms of the Act, that were gazetted for public comment on 18 February 2005.

With the above information as background, I have been asked by the PEIMC to request that careful consideration be given anew to the listing of the 14 ACAP albatross and petrel species that breed at the Prince Edward Islands within the Act by the Species Listing Team. If you see compelling reasons why these species should not be included within the Act, I would be pleased to hear from you, so that I may inform the PEIMC accordingly, and so that it can continue to consider the matter at its next meeting.

Yours sincerely

Mr Henry Valentine

Director: Antarctic and Islands, DEAT; and Chair, Prince Edward Islands Management Committee

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Mr J Cooper
Department of Statistical Sciences (ADU)
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Dear Mr Cooper

PRINCE EDWARD ISLANDS MANAGEMENT COMMITTEE (PEIMC)

1. Many thanks for your dedication in serving as a member of the above-mentioned committee since its inception for the past eight years.

2. Due to your knowledge, expertise and particular commitment to the "Country Clean-ups" on Marion, it is my pleasure to invite you, to continue to serve as a co-opt member of the PEIMC for a period of two years as from 1 January 2005 to 31 December 2006. The current terms of reference and the contact details of the new committee are attached for easy reference.

3. The first meeting of the new PEIMC will be scheduled for mid-end February 2005 and I will be in touch with you shortly in this regard.

4. I look forward to a continued fruitful association with you as a co-opt member of this committee

Yours sincerely

Dr Crispian Olver
DIRECTOR-GENERAL
DATE: 3.2.05

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Dr C. Olver
Director-General
Department: Environmental Affairs and Tourism
Pvt Bag X447
Pretoria 0001

21 February 2005

Dear Dr Olver

MEMBERSHIP OF THE PRINCE EDWARD ISLANDS MANAGEMENT COMMITTEE

Thank you for your welcome letter of 3 February inviting me to serve for a further two years, this time as a co-opted member, on the Prince Edward Islands Management Committee.

I take pleasure in accepting this invitation and look forward to continuing to help with the conservation and environmental management of South Africa's sub-Antarctic islands and their biota.

With kind regards

John Cooper

Chief Research Officer

MEMBERS OF THE PRINCE EDWARD ISLANDS MANAGEMENT COMMITTEE

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The Prince Edward Islands Management Committee

TERMS OF REFERENCE:

To advise the Director-General of the Department of Environmental Affairs and Tourism (DEA & T) on the management of the Prince Edward Islands in accordance with the Management Plan for the Prince Edward Islands and on any amendments required to this Management Plan

FUNCTIONS:

1. Advise on the implementation of the Management Plan and/or any amendments
2. Compile an Annual Report to the Director-General
3. Review of scientific proposals from the South African Committee for Antarctic Research (SACAR) concerning their management impact
4. Evaluate and recommend research projects to SACAR with regard to their impact on the environment
5. Review annual Progress Reports from Project Leaders in terms of environmental impacts
6. Identify specific management objectives to be addressed
7. Advise the Director-General on the issue of Entry Permits
8. Provide the Director-General with a list of Special Entry Areas, recommend new areas and delist areas as and when it becomes necessary
9. Define the boundaries of Zone 1 - Service Zone, Zone 2 - Natural Zone, Zone 3 - Wilderness Zone and Zone 4 - Protected Zone (Special Entry Areas)
10. Advise the Director-General regarding requests for private visits to the Prince Edward Islands and make recommendations for the issue of permits in this regard
11. Advise the Director-General on the frequency, duration and number of visitors per entry to Prince Edward Island
12. Establish an Environmental Impact Assessment (EIA) procedure for any new structural developments on these Islands
13. Draft a Rehabilitation Plan for old waste disposal sites
14. Determine the scope, duration and reporting of bulk fuel spillage
15. Advise the Director-General, in consultation with Sea Fisheries, on specific quantities of fish to be captured for a specified purpose
16. To recommend, if necessary, the development of a Tourist Access Plan