

Gough Island Environmental Inspection Report to Tristan da Cunha September-October 2010

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N.B. The structure of this report has followed the same format as used in previous Environmental Inspection reports in order that topics are consistently dealt with. If the same observations have been noted, then in some instances the same recommendations are listed as for previous reports.

MAIN RECOMMENDATIONS

In South Africa

Action: Antarctica & Islands, DEA

- 1. Prompt removal of surplus packaging from the food packing area.**
- 2. As previously requested, all old over-trousers and jackets that are issued have Velcro removed.**
- 3. Essential for the rodent poison bait stations in the container packing area to be serviced at monthly intervals, contractor required to provide proof that servicing is taking place.**
- 4. Dock-side waste skips be emptied regularly to ensure that fitted lids can close properly, with if necessary extra waste collections made upon the return/departure of the *S.A. Agulhas*.**
- 5. Weed plants growing on the quay and on the sea wall be removed and these areas regularly sprayed with herbicides.**

6. DEA review the cleaning/washing processes that are in place for all containers and identify what has changed in comparison to previous years and reinstate stricter cleaning and inspection protocols prior to packing and loading.

In South Africa and on Gough Island

Action: Antarctica & Islands, DEA

7. DEA place rodent bait stations as standard in all containers that are going to and departing from the islands in order to minimise the risk of live rodents being brought to or departing from the islands. Due consideration should be given to any potential health hazards of this action, particularly for containers holding food produce (although all food is canned or boxed). All waste containers leaving the islands should have bait stations.

8. DEA ensure that rubber bungs or other seals are in place in all containers prior to packing and departure in order to ensure that containers are rodent proof.

On Gough Island

Action: all takeover personnel and overwintering team members

9. The ban on fresh produce coming ashore should be strictly enforced year round and all personnel reminded of their responsibilities.

Action: Antarctica & Islands, DEA, Royal Society for the Protection of Birds and Tristan Conservation Department

10. Liaison between parties on potential options for temporary alternative disposal of food waste in order for necessary steps to be put in place in the event of a future mouse eradication operation.

11. Continued support for and continuation of *Sagina* eradication programme and quarantine measures to prevent further spread of this species.

Introduction and itinerary

Richard Cuthbert from the RSPB was appointed Environmental Inspector for the 2010 relief voyage to Gough Island by Trevor Glass, Head of Tristan's Conservation Department, on behalf of the Administrator and Island Council of Tristan da Cunha. Peter Ryan acted as an assistant inspector prior to Richard's arrival in Cape Town, and John Cooper acted as an assistant inspector on the voyage back from Gough Island to Cape Town due to Richard staying on Gough Island for an extended period.

The *S.A. Agulhas* left Cape Town on 2 September and arrived at Tristan on 9 September. Richard Cuthbert went ashore for the morning and met briefly with David Morley (departing Administrator) and for a longer period with Trevor Glass (Head of the Conservation Department). The *S.A. Agulhas* left Tristan later the same day, arriving at Gough Island on 10 September. The *S.A. Agulhas* left Gough on 29 September, spending two nights at Tristan on the way back and returned to Cape Town as scheduled on 8 October.

Pre-sailing inspections and activities

Pre-sailing inspections were undertaken by Peter Ryan on 23 and 24 August, and by Richard Cuthbert on 27, 30 and 31 August.

Visits to the DEA stores on 23 and 24 August indicated that they were reasonably clean and with rodent traps in place. All external doors were closed unless access was required. The food packing area was not in use as most food for the Gough takeover was already packed. A pile of empty food cartons piled in the corner contained a live fishmoth.

Recommend:

1. Prompt removal of surplus packaging from the food packing area.

A second set of visits to the DEA stores was made at the end of September just prior to departure. Both the kit issue area and the main container storage area were found to be clean and in good order. However, waterproof over-trousers issued by the stores to takeover personnel were still found to have Velcro closures at the cuffs, despite repeated requests that these be removed (including in last year's inspection report). Inspection of the Velcro during the "boot-washing" ceremony on the *S.A. Agulhas* prior revealed considerable numbers of plant seeds and plant material stuck within the Velcro. Where this was found the Velcro was removed from the over-trousers and if necessary a new pair of over-trousers was issued from the emergency stores on Gough Island. It was pleasing to see that all waterproof over-trousers issued to over-wintering team members did not contain Velcro and instead had press-stud/buckle closures as recommended.

Recommend:

2. As previously requested, all old over-trousers and jackets that are issued have Velcro removed.

Inspection of rodent poison bait stations just prior to sailing revealed that 7/12 traps contained no bait and that the remaining 5 traps had dried old bait in them. The dates of last inspection, as indicated by writing on the top of the traps were all from March 2010, with apparently no further checks since this date.

Recommend:

3. Essential for the rodent poison bait stations to be serviced at monthly intervals, contractor required to provide proof that servicing taking place.

The *S.A. Agulhas* was visited at bunker on 27 August (2 days after she returned from Marion Island). The helideck and hanger were found clean, with helicopter cases left on board from recent trip to Marion Island.

The Titan Helicopters head office at Cape Town International Airport was visited on 27 August. There was little to inspect as most equipment and helicopters were left on the *S.A. Agulhas*. Pest control inspection records were up to date.

Time constraints prevented a visit to the National Department of Public Works stores prior to departure.

East Pier

The pier was generally clean and tidy. Waste skips had a fitted lid as recommended from previous years report, however the skip was overflowing with waste preventing the lid from being closed and the rubbish was open. Weed plants were again seen growing on the quay and on the sea wall alongside the *S.A. Agulhas* increasing the risk of seeds and plants hitching a ride with the ship.

Recommend:

4. Dock-side waste skips be emptied regularly to ensure that fitted lids can close properly, with if necessary extra waste collections made upon the return/departure of the *S.A. Agulhas*.

5. Weed plants growing on the quay and on the sea wall be removed and these areas regularly sprayed with herbicides.

Activities aboard ship

S.A. Agulhas

The *S.A. Agulhas* was inspected during the voyage, after consultation with the Captain. Pest control certificates were also provided by the Captain which were up to date for the current voyage. The ship was very clean and tidy. Both the galley area and food storage areas all containing insect UV lights with sticky traps and rodent bait stations. All rodent bait stations were new and/or recently serviced. Rat guards and glue boards were in place on most of the hawsers prior to departure. The helicopter hanger was inspected and again found to be very clean with up to date rodent bait stations in place. The hold space on the ship was not inspected during this voyage. No improved recommendations are made for the *S.A. Agulhas* whose crew are to be congratulated on the ship's clean order.

An environmental talk was given to all interested passengers and was mandatory for all personnel heading to Gough. A mandatory (for passengers landing at Gough) "boot-washing" ceremony was undertaken on the poop deck on the morning of 9 September. All team leaders and personnel turned out and took this seriously. No major problems were encountered, other than repeated discovery of trapped plant material and seeds in the Velcro of waterproof over-trousers, as referred to previously.

Inspections on arrival at Gough Island

The meteorological station and surrounding areas were inspected on 9 September, immediately following the first flight ashore. The base and surrounding area were in generally very good and clean order and the Gough 55 team has kept the base in good condition. No litter was seen around the base.

Off-loading of containers and equipment

Inspection of container off loading sites was made with the DCO and NDPW team leader, with suitable sites agreed between all. No *Sagina* plants could be found on the concrete platform at Crane Point and this site was suitable for containers. All containers were offloaded on the wooden platform surrounding the helipad, at Crane Point, or on areas of introduced grasses behind the kitchens and close to the Brown Store/Skivvygat.

All containers were opened and inspected by the Environmental Inspector prior to unpacking and all teams cooperated fully with this request. Additional parcels and packages that were sent ashore from the *Edinburgh* during the takeover were also inspected upon opening.

All blue containers and other equipment belonging to the NDWP teams were checked and found to be scrupulously clean, with no propagules of any form being seen.

All orange containers from the DEA stores were checked and confirmed to be “G” Gough containers. Inspection revealed major problems with the cleanliness of these containers, with the lids in particular harbouring numerous spider silk nests, with between 20-40 cocoons being common. No live spiders or insects were found in the containers and the duration of the voyage from Cape Town to Gough made it unlikely that any of the spiders would have hatched. The lids, and if required the contents of all containers that were found to be infested (the majority of containers), were sprayed thoroughly with a multi-purpose insecticide (Raid). Previous visits to Gough have revealed the presence of single or at the most a few insects/spiders in containers and the major infestation present in this year's relief voyage indicates a major failing in washing/cleaning of containers in comparison to previous years, greatly increasing the risks of new species arriving at Gough.

Recommend:

6. DEA review the cleaning/washing processes that are in place for all containers and identify what has changed in comparison to previous years and reinstate stricter cleaning and inspection protocols prior to packing and loading.

A problem from last year's relief voyage was the back-loading of containers with live house mice (*Mus musculus*) to the *S.A. Agulhas*, which are thought most likely to have come with an old “can-crusher” or with containers used to store waste from the overwintering team. To avoid the risk of back-loading mice on the *S.A. Agulhas* in this year's relief voyage two small boxes with toxic rodent pellets were added to all waste-containers in order to provide an attractive rodent food source and bait to these containers. Furthermore, discussions with the DCO indicated that occurrences of house mice returning to the DEA stores from both Marion and Gough islands were not uncommon. All orange containers used by DEA have a small (*ca.* 20 mm diameter) drainage hole in the floor to allow washing and draining to take place. These holes are normally blocked with a rubber bung, but when this is not in place the drainage hole provides a site of ingress and egress for mice to all containers.

Recommend:

7. DEA place rodent bait stations as standard in all containers that are going to and departing from the islands in order to minimise the risk of live rodents being brought to or departing from the islands. Due consideration should be given to any potential health hazards of this action, particularly for containers holding food produce (although all food is canned or boxed). All waste containers leaving the islands should have bait stations.

8. DEA ensure that rubber bungs or other seals are in place in all containers prior to packing and departure in order to ensure that containers are rodent proof.

No fresh produce was brought on to Gough Island during the takeover, however after the departure of the *S.A. Agulhas* fresh fruit (an orange) was discovered in one of the rooms used by a member of the changeover team. The DCO and relevant team leader has been informed. Details on the requirement to not bring any fresh items on to Gough were outlined in full during the environmental talk on the *S.A. Agulhas*.

Recommend:

9. The ban on fresh produce coming ashore should be strictly enforced year round and all personnel reminded of their responsibilities.

All eggs that came ashore were inspected and found to be irradiated. Only deboned poultry meat was sent ashore.

Small boat operations

Small boat operations were only utilised during the diesel pumping operation and to assist the *Sagina* eradication team in accessing Archway Rock close to Crane Point (see below).

Flying operations

No-fly zones were followed as set out in previous years and with the full cooperation of Titan Helicopters. The only flying operations undertaken away from base were in support of science projects these were:

1. A single flight dropping off a new orange container and removing the old container from Gonydale was made on the 10 September. The new container was flown off from an area of introduced grasses (mainly *Poa annua*) from behind the kitchen area, away from any known infestation of *Sagina*. On the same flight, 2 personnel and 2 tote bins of food and plastic marker poles were dropped off at Low Hump in order to establish a study on Southern Giant Petrels, with a second landing made close to Waterfall Camp to leave 3 tote-bins of food at the camp site. The same flight also deployed 4 personnel and camping gear at "GP Valley" in the north of the island in order to facilitate the island count of Tristan Albatrosses.
2. A second flight was made on the 10 September in order to fly two eradication experts and the science team leader around the island, in support of the science programme which was preparing a draft operational plan for the eradication of mice during this relief voyage.

Flying operations for the back-loading of containers (including those containing accumulated wastes and boxed *Sagina* plants) proceeded without any incident.

Waste management and clean-up

All relevant guidelines for waste management were duly followed during the relief voyage, with eggshells and bones being separated and frozen, other food waste dumped in Skivvygat, and all glass, tins, plastics and mixed burnables placed in to containers and flown from the island. No waste was burnt on the island, as has been policy for a number of years. All sewage and grey water was disposed of untreated either in to Skivvygat or at sea from the emergency base.

Should a house mice eradication operation take place on Gough Island in the future, as is planned, then consideration of an alternative means of dumping food waste and possibly sewage waste will need to be given, as currently this waste provides a potential food source for mice which is highly undesirable in the event of an eradication operation.

Recommend

10. Liaison between RSPB personnel and DEA on potential options for temporary alternative disposal of food waste in order for necessary steps to be put in place for a future mice eradication operation

Due to waste clean up operations put in place over the three previous takeover voyages there was only a limited amount of waste to be removed from the island. Approximately 1.5 containers were filled with waste, mainly consisting of disused metal items (scaffolding poles) and the rotted wooden rungs and ropes from two removed ladders removed from the Diesel Cove area. The disused fuel pump in Diesel Cove was not removed during this relief voyage, despite an assurance from the NDPW team last year that this would be undertaken. A further container was filled with plastic bait buckets containing mouldy non-toxic bait pellets that were unused from a previous season of research. This bait was dumped at sea at 48°S, 08 28'E on 6 October during the return voyage. The bait is made from grain products and contained a harmless red dye (rhodamine) and no toxic material. An additional two tote bins with *Sagina* plants and infested soil were also placed in this container and removed from the island. These plants and soil were dumped at sea at 35 01'S, 03 49'E on 5 October approximately midway between Tristan and Cape Town.

A “chicken run” (litter picking) session was undertaken on the day prior to departure with a good turnout from all teams. Small amounts of litter and rubbish were collected from around the weather base and added to the waste containers.

The old wooden helipad currently used for siting containers near the helipad continues to rot and deteriorate, with increasingly large holes appearing in this structure.

Management activities

Sagina eradication programme

Efforts to control and eradicate the invasive plant *Sagina procumbens* continued during the relief voyage period with the assistance of staff from Tristan da Cunha Conservation Department and the Royal Society for the Protection of Birds, following funding from a UK Government Grant from the Overseas Territories Environment Programme. The plant eradication team consisted of Jan Bradley (RSPB employee and Rope Access Leader), Steven Lucocq (RSPB employee, Rope Access worker), Patrick Green and Julian Repetto (Tristan da Cunha Conservation Department, Rope Access workers), John Cooper (Core Initiatives) and Richard Cuthbert (RSPB, Rope Access worker and team leader). In addition the two new overwintering RSPB field biologists (Ross Cowlin and Jeroen Lurling) and two departing RSPB field biologists (Kalinka Rexer-Huber and Graham Parker) also participated in the eradication work.

Over 140 abseil descents were made in order to check for the presence and remove any *Sagina* plants in the cliff areas around the weather base and at Snoekgat. All other areas of infestation around the weather base and Snoekgat were checked on foot. *Sagina* plants remain on the island however the size and distribution of the plants reveal no further spread in the plant's range and that very few plants were likely to have reached maturity and set seed in the previous year. Stripping of vegetation and herbicide spraying proceeded at Snoekgat and in the Crane area. The plan for stripping is to create a "fire break" around the edge of the plant's distribution in order to minimise the risk of any further spread in range. Once this boundary is established stripping can proceed within the infested zone to ever decrease the area of occupancy. In the mean time these internal areas will be controlled with regular (1-3 monthly) herbicide spraying in order to kill any mature and germinating plants. Ross Cowlin and Jeroen Lurling have been fully briefed on this and a *Sagina* stripping and herbicide spraying work plan for the year has been developed. Trials during the previous year has established that spreading salt crystals and spraying with salt water was ineffective at killing *Sagina* plants and this practise has been stopped.

An evening and two morning training courses were given by Jan Bradley on cliff rescue methods. This training was given to all team members in the new Gough 56 team and included practising scenarios for bringing up a cliff an injured climber both with and without the use of a rescue stretcher.

All takeover personnel were reminded of the need to wash boots and over-trousers if they had visited areas where *Sagina* plants were known to have occurred. A ban on takeover teams members visiting and fishing at Snoekgat was also put in place during the relief period, in order to reduce the risk of seeds spreading from this area. All takeover and teams members were seen to comply with these requests.

Recommend:

11. Continued support for and continuation of *Sagina* eradication programme and quarantine measures to prevent further spread of this species.

Other alien plants

No signs of Tall Vervain *Verbena bonariensis* were found at Skivvygat where this plant was seen in previous years. Potato plants *Solanum tuberosum* were found growing close to the chute at Skivvygat. These plants were dug up and removed (down Skivvygat) and the location of these plants was shown to the new team's Conservation Officer.

Science team activities

A large programme of research and activities was undertaken during the relief voyage, some of which are of direct relevance to proposed management activities (particularly the eradication of mice). Details on this research is listed in a separate Science Report produced by the Science Team leader (Richard Cuthbert).

Fuel pumping and replacement of diesel tanks

A major task of the NDPW team was the replacement of all ten fuel storage tanks, due to deterioration in their condition. Following discussions it was agreed that during lifting operations to remove and replace fuel tanks that tanks could be temporarily placed on areas of native vegetation just to the north of the tanks. While this area of tussock did contain bird burrows, the timing of the removal was prior to the return of the Great Shearwaters that were using this area. Inspection of the areas surrounding the fuel tanks after this job had been completed revealed negligible impact on these tussock areas.

Fuel pumping was completed on 22 September with 71,500 litres pumped ashore. Pumping proceeded without a single hitch and no diesel was spilled. A planning meeting the evening before organised by the NDPW team and DCO greatly facilitated the fuel pumping operation, and all contingency measures (dispersants on board the *S.A. Agulhas's* two small boats, cotton wadding and tote bins around all major joins) were in place in the event of any spillage.

Light pollution

Window blinds at the station were closed at dusk each evening to reduce the risk of bird strikes. Following discussions with NDPW permission was granted for lights to remain on in the night in the Brown Store and areas around the fuel tanks, in order to allow the necessary work in replacing the fuel tanks to be completed in the time available. No incidents with bird strikes occurred during the takeover period.

Paths and erosion issues

All the paths around the base were walked, including paths to Gonydale, Tafelkop (via the "normal" and the "Ruin Ridge" routes) and South Peak. Paths over the Rowetts and skirting around from "Cooper's Col" to Low Hump were also walked. Despite the presence of a team of two biologists for a year and hence considerable use of all the paths, all paths remained in similar condition to that observed over the last ten years. The normal route of Tafelkop path remains very muddy and eroded in sections, but to no greater extent than previously. Paths up South Rowett from Michael's Col have recovered to some degree, although are still prone to erosion. The path down to Seal Beach remains eroded and heavy use during the takeover added to this. A lower frequency of use during the coming year should allow this to recover.

Recreational fishing

Fishing by rod and hand line took place from the ship in both Tristan and Gough waters and from the shore on Gough, under permit from Tristan's Fishery Department. No issues were encountered, with all recreational fishers taking the size limit and bag limit seriously.

Controlling import of materials during the year

Following incidents in the previous year team, the new Gough 56 team were reminded of their duties and of the need to prevent any fresh produce coming ashore during takeover and during the coming year. An official public notice on Tristan was also posted in June 2010 reminding islanders and Ovenstone Agencies on the requirement not to send any fresh products to the overwintering team. This public notice is copied in Appendix One of this report.

As previously mentioned, the only incident of note during takeover was the discovery of an orange in one of the bedrooms following the departure of the *S.A. Agulhas*.

Appointment of a voluntary Team Conservation Officer

Michelle Steenkamp, Assistant Meteorologist, took up the voluntary responsibilities of the over-wintering Team Conservation Officer for the year (see Appendix One). Michelle has a background in geology, prior to training with the Weather Service, and showed a keen interest in the wildlife and conservation issues on Gough Island during the relief voyage and has already participated in assisting the two RSPB biologists with some of their fieldwork. The guidelines for the Team Conservation Officer (updated in September 2009) are included in Appendix Two of this report.

Acknowledgements

I would like to thank all the participants of the 2010 Gough relief voyage, who without exception were helpful and took the environmental issues seriously. Particular thanks to the Master and crew of the *S.A. Agulhas* for assistance with boat operations, to Titan helicopters for flights around Gough, and to Shiraan Watson, DCO, and to all team leaders for their support and good company. Thanks to Peter Ryan and John Cooper for acting as assistant environmental inspectors prior to the departure of the *S.A. Agulhas* and on its return to Cape Town.

Richard Cuthbert

13 October 2009

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APPENDIX ONE

TRISTAN DA CUNHA



PUBLIC NOTICE

BIOSECURITY ON GOUGH ISLAND

I'd like everyone to be aware of the rules about sending things to the South African weather station team on Gough Island. What follows also applies to any conservationists working there (including islanders).

Under no circumstances should anyone take or send fresh food to Gough. This especially applies to fruit and vegetables. It is against the South African Government's rules for anyone at the Gough Station to receive such items.

I know this seems a bit harsh, but there are sound conservation reasons behind this rule. So please don't think you are doing anyone on Gough any favours by sending them food parcels. You will just get them into trouble.

I am copying this to Ovenstone, who will ensure that Captain Clarence and his crew are aware of these rules. Anyone with any questions about this Notice should consult Trevor Glass at Conservation Department who will be able to offer good advice.

APPENDIX TWO

Note: this document has been left largely unchanged, pending the new management plan

TEAM CONSERVATION OFFICER GUIDELINES – GOUGH ISLAND

The Team Conservation Officer is responsible for conservation issues on Gough Island during the over-wintering period. Decisions regarding such issues should be made in conjunction with the Team Leader. This document is meant as a guideline and is by no means all-inclusive. All regulations pertaining to the Gough Island Nature Reserve (GINR) are dealt with in more detail in the GINR management plan. If in doubt, please consult with the Tristan Administrator and Tristan Conservation and Fisheries Departments (see contact details below).

RELIEF DUTIES

Relief activities should be undertaken by the Environmental Inspector, appointed by Tristan da Cunha, in conjunction with the outgoing and incoming Team Conservation Officers:

1. Inspect all premises where cargo and equipment is stored (i.e. DEA, NPWD and all freighting companies' stores), to ensure that these premises are clean, have a rat-free certificate, employ effective means of preventing rodent infestation, and are free of any other propagules.
2. Ensure that all containers are clean and dedicated Gough Island containers.
3. Inspect the *SA Agulhas* to ensure that the vessel has a rat-free certificate, that rat guards are effectively deployed on all mooring lines and that propagules are reduced to the minimum.
4. Inspect the hold of the *SA Agulhas* before reaching the island, for any signs of rodents and other propagules (i.e. soils, seeds or insects).
5. Present a lecture aboard the *SA Agulhas* to all personnel visiting Gough Island dealing with the conservation status, the ecological sensitivity of the island and environmental conduct while on the ship and on the island during the relief period.
6. Inspect Zone 1, at the start of the relief, with the Team Leaders to ensure that the base is in an acceptable condition.
7. Inspect all food coming ashore, to ensure that no fresh fruit and/or vegetables are landed, that only de-boned poultry is supplied, and that the number of eggs is kept to the minimum required and are irradiated.
8. Inspection of the logistic zone for signs of introduced weeds, especially *Sagina procumbens*. Affected areas should be clearly marked out and treated as soon as possible. All personnel should be advised about the position of affected areas.

9. The Environmental Inspector should ensure that the incoming Team Conservation Officer is completely with *Sagina* eradication procedures, as well as the working of the equipment (especially the boiler).
10. Inspect all paths leading out of the logistic zone for any signs of newly introduced species, especially *Sagina procumbens*.
11. Present an information session to all personnel on the island regarding alien plants, their whereabouts, and measures needed to avoid assisting their spread, the risks of bird strike and how to avoid this, and all other provisions of the GINR management plan, including codes of conduct regarding animal approach distances.
12. Provide the necessary information to helicopter crews regarding seabird and seal colonies and their proximity to flying operations. Monitor helicopter activities to ensure that sensitive areas on the island (especially the east coast Southern Elephant Seal colony) are avoided.
13. Monitor the pumping of diesel from the supply vessel to the base. Ensure that the line is pressure tested with air and that no leaks have been detected, before diesel is pumped through. Ensure that dispersant and buckets and brushes are placed at critical points along the line on the island. Dispersant should also be aboard the small boat monitoring the line between the supply vessel and the island.
14. Monitoring all logistic activities to ensure that they comply with the provisions of the GINR management plan.
15. Update this document (with approval of the Tristan authorities).

ANNUAL DUTIES

These duties are to be performed and/or coordinated by the over-wintering Team Conservation Officer. The Team Conservation Officer is encouraged to consult with the Environmental Inspector, the Tristan authorities, the out-going Team Conservation Officer, any biologists present on the team and any other contact persons provided at the end of this document.

Alien Species

1. The logistic zone, as well the entire area where *Sagina procumbens* has been recorded, should be searched thoroughly at least two-month intervals during the summer (September to March) and three-month intervals during the winter. Any seedlings detected should be recorded and treated according the procedures set out in Niek Gremmen's "Manual for monitoring and eradication of invasive weeds". Detailed notes should be made in the "*Sagina* log-book".
2. The over-wintering team should be reminded of the importance of washing their boots before and after leaving the logistic zone, in order to prevent assisting the spread of alien plants.
3. The over-wintering team should be reminded to wash their boots after they have stepped off the catwalks within the logistic zone.

4. Areas where *Sagina* has been recorded should be clearly marked and avoided, except when absolutely necessary. In this case boots should be washed thoroughly immediately afterwards.

Indigenous Species

1. The over-wintering team should be reminded to not disturb animals in any way, especially when they are breeding.
2. Bird strikes should be minimized by turning off all outside lights and by keeping blinds drawn after dark. On misty nights, interior lights should also be kept to the minimum.
3. Birds that hit the base and are stunned should be collected in a container (beware of packing too many birds into a container) and released farther away from the base, once they have recovered and during the night. Do not release them during daylight hours or on the helipad as this is where skuas congregate.

Path Degradation and Peat Slips

1. The over-wintering team should be reminded of the danger of causing unnecessary peat slips through irresponsible hiking routes.
2. All recreational hikes and commuting hikes (for scientists) should be restricted to approved hiking paths as far as possible.
3. A register of all walks should be kept by the Team Conservation Officer, for safety reasons, as well to quantify the impact on various paths.
4. The state of all hiking paths should be assessed regularly and modifications suggested.

Visits by Ships

1. All visits are strictly regulated by the Administrator of Tristan da Cunha, who should be contacted for permission prior to landing any visitors or parcels. The exception is in the case of medical emergencies. In this case, DEAT and the Administrator of Tristan da Cunha should still be notified at the earliest possible opportunity (preferably prior to landing).
2. In the cases of approved visits and medical emergencies, the protocol for visiting ships should be followed.

Waste Management at the Base and Field Camps

1. The Conservation Officer must ensure that waste is separated and contained and/or disposed of as prescribe by the GINR management plan and by current practices.
2. Special attention and precaution should be given to the storage of hazardous wastes.
3. Any serious chemical or fuel spills should be quantified and reported to the Tristan authorities and to DEAT within 24 hours.

4. The incinerator is no longer to be used and the only exposed fires allowed are in the braai/barbecue pits at the base using charcoal briquettes. Braais with open fires are not allowed away from the base (e.g. at Swemgat).

Other Activities

1. The Conservation Officer will ensure that no human-made structures are erected on the island without an Environmental Impact Assessment (EIA) being first conducted and subsequent approval from Tristan da Cunha.
2. The Conservation Officer should make detailed notes (including date, time and location) of any incidences of deleterious effects to the environment that could possibly be human-related (e.g. animals entangled in debris or oiled).
3. Monitoring of the Yellow-nosed (Base) & Tristan (Gonydale and Green Hill Tafelkop) Albatross study colonies, following procedures set out in instructions in Gough Laboratory.
4. Collect and record debris washed up at Seal Beach.
5. Collect all used wood, paper, cardboard, plastics, glass, metals (including cans) for return to South Africa .
6. Ensure poultry waste (including egg shells), meat bones and dried fruit, olive and prune pips go into the poultry waste container.
7. Remove and seal in plastic fertilizer bags any potato plants (including tubers) found growing at Skivvygat and elsewhere.
8. Check the exposed sand about 20 metres past the German GPS receiver for alien plants. Remove any and keep herbarium specimens.
9. Weed out thistles as seen around base and anywhere away from coast before flowering.
10. Record ship and yacht visits (date, time, names etc.) and any evidence of poaching vessels.
11. Check pantry and food store for presence of invertebrates, especially weevils in flour, pasta etc. Collect specimens in alcohol. Fumigate if necessary.
12. Collect any "odd" invertebrates seen in base, including moths etc.
13. Keep an approximate record of number of mice killed in and around base.
14. Record all "night bird strikes" (on buildings).
15. Record all birds killed by hitting aerials, stays, etc. and keep corpses.

CONTACT PERSONS

Sean Burns, Administrator, Tristan da Cunha
Trevor Glass, Head, Tristan Conservation Department
James Glass, Head, Tristan Fisheries Department

Revised 03 October 2009

Same version of guidelines provided to team conservation officer, September 2010

APPENDIX THREE

REGISTER OF FIELD AIDS ON GOUGH ISLAND

An updated list of field aids (mainly fixed ropes and ladders) on Gough Island was provided in the 2009 inspection report. The list below only refers to field aids where they have been altered or removed during September 2010.

In terms of the island's current management plan, placement of new field aids will require prior approval from the Tristan authorities.

Crane cliff

40° 21.022'S, 09° 52.699'W; 34 m

Fixed rope among tussock adjacent to crane has been REMOVED as unsafe. Access to this area should be by approved rope-access methods only.

Diesel Cove

40° 21.014'S, 09° 52.763'W; 35 m

Two 'pilot-type' wooden-runged rope ladders gain access to Diesel Cove. These two ladders were REPLACED in September 2010 (following rotting and breakage of the previous ladders) with two new ladders manufactured from synthetic (nylon) braided rope.

Snoekgat

The thin yellow synthetic rope fixed to a tussock/rock bulge has been REMOVED as unsafe, and REPLACED with a new thick orange synthetic rope.

Admirals

The long aluminium ladder at this site was REMOVED in September 2010 and a knotted synthetic rope was also removed. Old 'pilot-type' ladders remain in place lower down, however these are rotten and SHOULD NOT be used. Access down to the Admiral's area and the Admirals penguin colony should only be undertaken via abseil on a two-rope system and by people experienced in rope-access work.

Gonydale

Orange container placed at central camp site in September 2010. For non-emergency use by field researchers only.

Waterfall Camp

Food cache (three tote boxes) placed under a small overhang on the left bank adjacent to waterfall in September 2010 in addition to two tote boxes that were left there the previous year. For non-emergency use by field researchers only.

Low Hump Giant Petrel colony

Food cache (one tote box) placed under a small rock overhang above the giant petrel colony in September 2010. For non-emergency use by field researchers only.

Updated 10 October 2010

APPENDIX FOUR

REGISTER OF FIELD MARKERS

A register of long-term markers in use on the island, either for research or for management, was listed in full in the 2009 inspection report. Only new markers placed during the September 2010 relief are listed below.

Southern Giant Petrel Demographic Study

Commenced September 2010 and ongoing.

To the west and below Low Hump close to the coastal cliffs overlooking Saddle Island.

Markers: one metre white plastic poles with numbered stamped metal tags (1 to 163) as nest markers.

Contact person: John Cooper, CORE Initiatives; John.Cooper61@gmail.com.

Great Shearwater and burrowing petrel long-term monitoring transects

Commenced September 2010 and ongoing.

Transects established in three sites, over Gonydale River in area of coastal tussock on seaward side of path running out to Tumbledown, in coastal tussock close to base on seaward side of path heading to Seal Beach, and in coastal tussock on seaward side of Admirals Path.

11, 12 and 11 white conduit poles with drilled holes as markers in a straight line at each locality.

Contact person: Richard Cuthbert, Royal Society for the Protection of Birds; richard.cuthbert@rspb.org.uk.

Updated 12 October 2010