

Foreword

When the Portuguese navigator Joao da Nova discovered St Helena in May 1502, he found a green, luxuriant island covered in gumwood forest and home to six bird species which were found nowhere else in the world. Today, the unique flora and fauna of St Helena continues to attract visitors to the island but, sadly, there is only one endemic bird species remaining: the St Helena Wirebird.

The Wirebird is the national symbol and a source of pride for the people of St Helena. It is heartening to see that the vision of the plan is for 'the people of St Helena to find a way to happily coexist; allowing St. Helena to develop and the Wirebird to thrive'. The plan recognises that the Wirebird and its habitat present St Helena with important economic opportunities. Tourism is a major contributor to the economy of St Helena and many visitors come to the island because they are interested in and value the natural environment. Protection of the Wirebird could support the development of nature tourism, which is currently not fully exploited. At the same time, the habitats and ecosystems of which the Wirebirds are a part provide essential environmental goods and services, including livestock management and soil conservation. It is, therefore, in all our interests to safeguard the Wirebird and its habitat for now and for future generations.

The Wirebird is, however, under such serious threat that it is on the brink of extinction. Between 2001 and 2005, its population fell by over 40%. This recent decline in Wirebird numbers emphasises the urgent need for a Species Action Plan as it would be a disaster both environmentally and economically for the island to lose its last endemic bird.

The preparation of the Action Plan is only the beginning. It is down to everyone on St Helena to ensure the objectives are delivered on the ground, and it is encouraging to see how much support the Plan has already attracted. I would like to thank everyone who has collected data and attended the workshops and meetings to develop the Plan. In particular, I would like to thank the graziers, the St Helena National Trust and Agricultural and Natural Resources Department. I wish St Helena every success in taking the Plan forward so that the Wirebird can be enjoyed for many years to come by all who live on or who visit the island.

A handwritten signature in black ink, appearing to read 'Ethel Yon', is written over a solid black rectangular redaction box.

Ethel Yon, OBE
Deputy Chief Secretary

Executive summary

1. The Wirebird *Charadrius sanctaehelenae* is a small plover, endemic to and resident on St Helena. It is the only endemic bird on the island; as such it is the National Bird. All other 5 endemic birds have gone extinct.
2. Wirebird numbers have only been monitored by standard methods on a number of occasions since 1988 and have declined from c450 birds (425 adults) to c350 adults between 1998-2001, to an estimate of just c208 adults in 2005/6. This indicates that there has been a decline of about 43% in numbers since 2001, at a rate which has placed it in IUCN's Critically Endangered category (IUCN Red List 2007). It is this continuing decline in the population that has prompted action to conserve the Wirebird, including the development of this Species Action Plan. Since 2007 the number of adults has averaged 350 with annual variations of up to nearly 50 birds. Although this is a welcome contrast to the 2005 position, there appears to have been a reduction of adults since 1988 of about 75 birds or 3 birds per annum (1% pa). It is not clear if the estimated rate of decrease of 3.76% pa (Burns, in litt) based on breeding success and survival data since between 2008 and 2010 represents a recent increase in the rate of population decline and should alter the critically endangered status.
3. The Species Action Plan's long-term vision is to '*find a way to happily co-exist - allowing St Helena to develop and the Wirebird to thrive*'. Within this framework the plan will work towards stabilising the population of the Wirebird and reducing its threatened status from Critically Endangered to Vulnerable (because of its small and isolated population) with a sustainable population by 2017.
4. Wirebirds occur in dry and wet grassland and semi-desert habitats which are characterised by having grassland or other vegetation of mostly <5cms in height and patches of bare or near bare ground on which to nest. Taller vegetation or isolated small trees may be tolerated if other vegetation is suitable. Most of the areas where it occurs lie between 300 and 600 metres and tend to be fairly flat, although some can be found nesting on moderately sloping ground. The majority of Wirebirds now live on pastureland.
5. Wirebirds have been recorded breeding in 28 locations since 1988 (McCulloch 2006), 14 of which have supported 10 adults or more in at least one year. Sites holding at least 20 adults in any one year are:- Deadwood Plain, Bottom Woods, Horse Point Plain, Prosperous Bay Plain, Upper Prosperous Bay, Woody Ridge, Broad Bottom, Southern Pastures (otherwise known as Western Pastures), Man and Horse.

6. The majority of Wirebirds live on pastureland in the island and there is evidence that changes to its nature have been fundamental in the reduction of Wirebirds in recent years.
7. The decline in wirebird numbers is likely to be associated with changes in the vegetation due:
 - to an increase of a wide range of non-native invasive plants,
 - increase in vegetation height due to changing land-use patterns, reductions in grazing levels and changes in grazing management, and
 - predation, probably principally by cats although some has been recorded by rats and Common Mynas
8. The proposed development of an airport on Prosperous Bay Plain, ancillary development and haul routes would eliminate an estimated 11-12 territories and is likely to indirectly impact a further 11-14 territories based on 2006 data. This represents approximately 44-50 adults, or 12-15% of the long term average of the world population. Other tourism developments such as in the Broad Bottom area are also a potential threat.
9. Good and appropriate pasture management is thought to be the key priority at least in the timescale of this Plan. Positive results have already been achieved from the OTEP demonstration project on Deadwood Plain in collaboration with members of the Deadwood Plain syndicate and ANRD in 2006/07. Information from the demonstration project has been used to inform the development of proposals to compensate and mitigate for the impacts from the Access Project and the wind turbine project. Additionally the mitigation plan has been refined in parallel with the Species Action Plan so that the most efficient outputs can be achieved. The mitigation work for the Access Project has improved certain pastures resulting, initially, in an increase in the number of territories from 24 to 34; however, as the overall population has not increased this means they are being drawn into the managed sites from other existing areas.
10. The Wirebird is not only a symbol of biodiversity success for the island but it has the potential for providing an important component of a thriving tourist industry and support an increased production capacity in locally produced meat. Tourists bring in money and jobs and improve the standard of living. With a higher standard of living more money can be put into environmental projects, protection and management, which in turn improves the quality of the environment which keeps tourists coming. Damaging the environment and the extinction of its endemic species will inevitably cause the reverse to happen.

This plan is based on the Species Action Plan developed in 2007. It is slightly abridged from that plan and it should be read in conjunction with it. However, this revision is based on a detailed review of Wirebird issues and conservation held in February 2011 and provides a comprehensive, updated analysis of the ecology and issues surrounding the Wirebird.

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Acronyms

ANRD	Agriculture and Natural Resources Department
DEFRA	UK Department for Environment, Food and Rural Affairs
DFID	UK Department for International Development
DEPD	Department for Economic Planning & Development
IUCN	World Conservation Union
JNCC	UK Joint Nature Conservancy Council
LLPD	Legal, Lands and Planning Department
OTEP	Overseas Territories Environment Programme
RSPB	Royal Society for the Protection of Birds
SHDA	St. Helena Development Agency
SHG	St. Helena Government
SHNT	St. Helena National Trust
SHTB	St. Helena Tourist Board
LDCP	Land Development Control Plan
NPA	National Protected Area
OTEP	Overseas Territories Environment Programme
PBP	Prosperous Bay Plain
SOWG	Southern Oceans Working Group
SPCA	St Helena Society for the Prevention of Cruelty to Animals
UKOTCF	UK Overseas Territories Conservation Forum

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Figure 1. Wirebird census areas

1. Introduction

The Wirebird *Charadrius sanctaehelenae* is a small plover, endemic to and resident on St Helena. It is the only endemic bird on the island, all other 5 endemic birds have gone extinct, and is the National Bird. Numbers have only been monitored by standard methods on a number of occasions since 1988 and have declined from c450 birds (425 adults) to c350 adults between 1998-2001, to an estimate of just c208 adults in 2005/6. This indicates that there has been a decline of about 43% in numbers since 2001, at a rate which has placed it in IUCN's Critically Endangered category (IUCN Red List 2007).

It occurs in dry and wet grassland and semi-desert habitats which are characterised by having grassland or other vegetation of mostly <5cms in height and patches of bare or near bare ground on which to nest. Taller vegetation or isolated small trees may be tolerated if other vegetation is suitable. Most of the areas where it occurs lie between 300 and 600 metres and tend to be fairly flat, although some can be found nesting on moderately sloping ground.

It had been thought that it breeds principally between October and February but in some locations, possibly seasons, birds breed at other times if conditions are suitable. It normally lays two eggs, occasionally one, in a scrape on bare ground, has an incubation period of c28 days and the nidifugous young may take c35 days to reach the fledging stage. In the non-breeding season immature birds may form small flocks and be found away from the main breeding areas although the adults move less.

Its main threats are:-

- predation, principally by cats *Felis catus* and to a lesser extent by rats (probably principally *Rattus norvegicus*) and Common Mynas *Acridotheres tristis*
- changes in the vegetation due to increase of a wide range of non-native invasive plants
- reductions in grazing levels and changes in grazing management.

Probably of importance are:-

- increasing development pressure through infrastructure and other development proposals
- increasing level of disturbance and vehicle use in breeding areas

The proposal for the construction of an airport on Prosperous Bay Plain, its ancillary development and haul routes would eliminate an estimated 11-12 territories and is likely to indirectly impact a further 11-14 territories based on 2006 data. This represents approximately 44-50 adults, or just over 12-15 of the long-term world population, though it was c20% at the time they data were collected.

The Wirebird is not only a symbol of biodiversity success for the island but it has the potential for providing an important component of a thriving eco-tourism business.

The goal of this plan is to ensure the stabilisation of the population of the Wirebird and to ensure that it moves from Critically Endangered to Vulnerable (because of its small and isolated population) with a sustainable population by 2017. The aim for the plan is that by 2012 the population will have stabilised and increased somewhat so that it qualifies at least as Endangered.

2. Background

2.1 Taxonomy

Class: Aves
Order: Charadriiformes
Family: Charadriidae
Genus: Charadrius
Species: sanctaehelenae
Other name: St Helena Plover

2.2 Global distribution and population status

Country: St Helena
Population: c208 adults, 17 juveniles, 10 chicks in 2005/06 (McCulloch 2006)
Distribution: through much of the island at 300-600 m asl
Population trend: An estimate of 'just under 1,000' was made in 1957 (Pitman 1965). But a decline since first detailed census of c425 adults 1988-1989 (McCulloch 1991), apparent stabilisation 1998-2001 at c350 adults, rapidly decline to 2005 though there is some sign of a possible recent increase to the c350 level during the last five years with the numbers counted ranging from 322 to 397.

2.3 Distribution on St Helena

Recorded breeding in 28 locations since 1988 (McCulloch 2006), 18 of which have supported 10 adults or more in at least one year. Sites holding at least 20 adults in any one year are:-

- **Deadwood Plain**
- **Bottom Woods**
- Horse Point Plain
- **Prosperous Bay Plain**
- **Upper Prosperous Bay**
- **Woody Ridge**
- **Broad Bottom**
- **Southern Pastures**
- **Man and Horse**

Those with 20 or more adults in any one year between 2005/06 to 2010/11 are indicated in bold

Annex 2 is a table that shows the results of census counts of 31 Wirebird sites carried out between 1998/9 and 2011. Figure 1 shows the distribution of the Wirebird census areas.

Of these sites, Deadwood Plain & PBP have National Protected Area status within the Land Control Development Plan (2007).

An NPA is an area that has been recognised as having special natural or historical features that makes it worthy of national protection. The LDGP sets out proposals for 14 NPAs, that will need to be designated under the National Parks Ordinance, 2003 and will have their own management plan which will determine the level of protection (National Park, Nature Reserve, Sanctuary) afforded to the site and what if any development can take place. Deadwood Plain is proposed for the protection of the wirebird, pastureland and Boer POW camp. PBP, for its special desert habitats and associated plants and animals. The review of protected areas including NPAs underway in 2011, will further refine the boundaries, interests of and management for these areas.

2.4 Ecology

The Wirebird is closely related to Kittlitz's Sand Plover *Charadrius pecuarius* of Africa and probably shares the same ancestry. Nothing is known about the biology of the Wirebird prior to the ecological changes brought about as a consequence of human colonisation (McCulloch, 2006). It is likely that it has always been a bird of open habitats. Prior to colonisation the island was extensively wooded (Cronk, 1989). In which case it is likely that the Wirebird population was always small. However, when mature the Millennium Forest may provide an interesting opportunity to assess Cronk's theory that the Wirebird may have also inhabited the open forest floor, as gumwood woodland once covered much of the island at mid altitudes. Today the majority of Wirebirds inhabit dry, middle altitude pasture and semi-desert areas.

2.4.1 Habitat requirements

The key habitat requirements of the species were first identified by McCulloch (1991) and further refined by McCulloch (1992), McCulloch & Norris (2001), McCulloch & Norris (2002) and McCulloch (2006). They identified:-

1. Open views with relatively gentle sloping ground, usually <7%.
2. Grass length of less than 5 cms; Kikuyu grass seems to be preferred.
3. Often a good mixture of broad-leaved herbs
4. In grassland, some bare ground but <15% of area

5. In semi-desert, vegetation can be very sparse (up to 70% of the area bare)
6. Land between 300 and 600 metres asl with an annual rainfall of 300-500 mm.
7. A good density of invertebrates, especially beetles

Detail of these key issues:

1. Nesting plovers of the world choose open views with flat ground or gentle slopes; it is presumed that this helps the early detection of approaching predators and allows the incubating bird to leave the nest without being seen.
2. The short grass provides both a similar function to 1) above but it also enables invertebrates to be seen and be available for food.
3. An increase in the diversity of low plants, including broad-leaved herbs, tends to increase the diversity and presumed abundance of invertebrates; so enhancing feeding opportunities.
4. Some bare ground is required for two main reasons. Firstly, the nest is a shallow scrape typically on bare ground within a vegetated or part-vegetated area; this provides the camouflage for the eggs and material with which the female can cover the eggs when leaving the nest. Secondly, invertebrates crossing bare ground are very easy to see and catch. However, density and breeding success can be lower if bare ground exceeds 15% of site area in pasture areas.
5. In Prosperous Bay Plain semi-desert territories were representative of the area as a whole but vegetation was typically very short, sparse and of a *Suaeda/Atriplex/Eragrostis* assemblage. However, in this habitat, Creeper *Carpobrotus edulis* is frequently utilised. McCulloch (2006) only identified a single correlate between semi-desert habitat features and Wirebird territories; this was that Wirebird territories were only characterised by more Ice plant *Mesembryanthemum crystallinum*. Surprisingly, but importantly, none of the other vegetation and physical features were significantly different.
6. Recent observations have indicated that in semi-desert areas continuous carpets of Creeper have been forcing nesting on and chicks to use tracks and become vulnerable to human activity and also that extensive growths of Tungi *Opuntia* sp give cover to predators.
7. The combination of height and rainfall ensure that the ground is not too dry to prevent suitable vegetation growth and invertebrate numbers or that it is not too wet with excessive vegetation growth covering all ground with too high vegetation. In St Helena, most of the land suitable for nesting using other criteria listed above, lies at this height and in this rainfall band.

8. In one year (1989) the density of Wirebirds nesting on pastureland was significantly correlated with invertebrate density and in 1998-1999 it was also similarly significantly correlated in semi-desert areas. However, generally, it has not been possible to find a significant relationship between invertebrate abundance and Wirebird nesting densities. This may be due to the wide range of factors involved in both measurements, rather than no relationship existing. It is probable that there are high enough densities of invertebrates present but a lower availability of them is critical in some sites where few Wirebirds are present.

2.4.2 Movements

Rather sedentary but juveniles often flock and move around the island to a greater extent than adults. Colour ringed individuals have ranged from Deadwood Plain to Man and Horse, across the whole of the island. From the counts, there are indications that there are regular movements away from some, especially semi-desert sites, during the winter/wetter season.

2.4.3 Diet

Wirebirds eat invertebrates, principally ground living species. Beetles have been shown to be particularly important for both adults and chicks but a very wide range of taxa from lumbricid worms to Orthoptera (crickets) have been observed to be taken.

2.5 Biology

The breeding biology of the Wirebird is not well known although studies have been made in six seasons by Burns 2011 (*in litt*), McCulloch (1991, 1992, 2006) and McCulloch & Norris (2001, 2002). The main breeding season has been considered to be October to February but it is known that many have bred in some areas outside this period. Detailed studies (Burns 2011, *in litt*) have provided the first estimate of the full annual production of young to the population.

2.5.1 Nests & Eggs

The normal clutch is two eggs which are laid on successive days; sometimes a single egg only is laid. These are incubated for about 28 days and the young fledge after about a further 35 days. The young, as with all Charadriidae, are nidifugous (leave the nest soon after hatching) and feed themselves, although alongside and having the protection of the parents. Wirebirds are strongly territorial and the territories are vigorously defended. Chicks straying into adjacent territories are often vigorously chased and even attacked by territory occupants. Territories vary in size but are generally 0.5-1 ha. Wirebird densities may be as much as three times larger in semi-desert compared with favoured pasture areas.

It is unlikely that Wirebirds could use tilled land as it tends to be too muddy, too disturbed or too heavily covered although it is reported that they used arable field early in the 20th century after crops had been removed. Very few birds have been observed on it recently and there are no recent breeding records on such habitat. Similarly, intensively used and cut grassland (on Longwood Golf Course and Francis

Plain) may provide a significant feeding area but birds are not normally able to nest on such areas

Detailed estimates of survival of nests and chicks have been made in 1999/2000 and 2000/01 (McCulloch and Norris 2001, 2002) and in 2009 and 2010 (Burns *in litt*). The two series of studies have produced rather different results though this may partly be due to the earlier studies concentrating on dry pasture whilst the latter study looked at birds in dry and wet pastures and in semi-desert habitats, all of the habitats used by Wirebirds. Of 68 nests studied in 1999/2000 and 2000/01, 42 (61%) hatched successfully. Causes of nest loss were trampling 1, desertion 1 and predation 24. However, the results in 2009/10 revealed a very much lower nest survival with just 22% of nests hatching at least one chick. It is not clear if the results from the wider range of habitats are responsible for the lower success or whether there has been an increase in predation pressure.

Burns (*in litt*) used nest cameras to identify the cause of egg loss. The results showed that of 19 losses, cats were the main predator taking 12 (63%) of eggs, followed by rats (Tree rat *Rattus rattus* and Brown rat *R. norvegicus*) taking 3 (16%) sets of eggs with Common Mynas, *Acridotheres tristis* taking 2 nests (10%). Other potential predators (dogs and mice) are not normally significant predators of eggs of small plovers. In 2000/01, nest survival on pasture was correlated with high beetle numbers, presumably this enabled high levels of adult attendance. The nest survival of 22% is very low and well below survival recorded elsewhere for similar small plovers.

2.5.2 Chicks

Detailed estimates of chick survival were made in 1999/2000 and 2000/01 on pastures, then chick survival was estimated at just 23%. However, in 2009/10, chick survival was much higher at 36%. The causes of chick mortality are not known. But Common Mynas occasionally have been seen harassing and killing very small chicks, however, they are not likely to be a predator of large young. There are no other potential avian predators and it is assumed that mammals (feral cats, dogs - and possibly rats) are most likely to be involved. In 2000/01, there is evidence that chick survival on pasture was related to beetle abundance. The chick survival is well within the normal range of plover chick success elsewhere.

2.5.3 Juveniles

Burns (*in litt*) found that juvenile survival to breeding was c50%. This level is within the expected range found in plovers elsewhere in the world. One large chick in 2011 was known to have been killed by a cat.

2.5.4 Adults

Adult survival is high; Burns (*in litt*) estimated it to be 83%. This indicates that the very rapid decrease between 2001 and 2005/06 was not as a result of an increase in adult mortality. The most likely predators are mammals of which the most likely is cats. Dogs have been seen to chase adults unsuccessfully. No direct observations of predation of adults exists, though location of at least one corpse would implicate

feral cat as a predator. In the very limited number of scats examined, no traces of Wirebird remains were found.

3. Legal and institutional context

3.1 Protection Status

The Wirebird has had full legal protection in St Helena since 1996, under the Endangered, Endemic and Indigenous Species Protection Ordinance. Within the LDCP (2007) Deadwood Plain has National Protected Area status. The LDCP requires that any development which impacts on a Wirebird site requires an environmental screening. The LDCP is currently being revised in the light of the impending decisions on Access and required infrastructure and development to accompany it.

The UK Government has ratified the Convention of Biological Diversity on behalf of St Helena and has signed up to a commitment to halt the loss of biodiversity by 2010.

3.2 Relevant Policies or Ordinances

The main policies and ordinances affecting the Wirebird are:

St Helena Sustainable Development Plan 2007/8-2009/10 – the Sustainable Development Plan sets out the policy approach and development strategy which contributes towards the Vision for St Helena, “a prosperous, peaceful and democratic society for all achieved through sustainable economic, environmental and social development leading to a healthy and eventually financially independent St Helena”. Ensuring the protection of the natural, built and cultural environment is a key issue which will be guided by the Strategy for Action to Implement St Helena’s Commitments under its Environmental Charter. The SDP is also under current review. See Environment Charter below.

Agriculture – the mission statement of the A&NRD is to “foster self sufficiency in those vegetable, meat, animal and forest products that can be grown economically. Encourage and support the export of agriculture and forestry products, work within a framework of conservation and improvement of the soils and animal and plant endemic heritage and accomplish the mission through the small holder sector”. ANRD develops policies which achieve this and has a Conservation Section which is responsible for the conservation of the Wirebird.

Tourism – to promote tourism on St Helena. The St Helena 10 Year Tourism Strategy 2005-2015 (2006) refers its vision “we are aiming for a high value customer responsive sustainable and profitable industry which will maximise economic, social and environmental benefits for the people of St Helena. However recognising that the tourism industry could impact on the fragile environment on which it depends we desire a tourism industry that will consciously care for and actively conserve our natural resources and man-made heritage” and in its product it specifically says

“Our endemic species include the endangered Wirebird”. There is a currently (in 2011) a review of principles and practices of tourism.

Legal and Lands – The Land Development and Control Plan (2007) included in its Vision “The steadfast protection of its environment”. While in its Specific Objectives it included “Strongly protect and manage the Island’s natural and historic man-made heritage and encourage its restoration.” and “Protect agricultural land and natural resources from loss through development.”. In the detailed approach paragraph 14.5.3 is of particular relevance: “It is considered that the Natural Environment outside of NPAs and the MBR will be well protected by the policies set out in Chapters 4, 5, 15 and 18. Those chapters will also cover, for the most part, the best of the Wirebird habitat, but in view of the importance of this species to the Island and to tourism in particular a further policy (C.N. 2) is proposed which will require any development on a site of more than 2.5 acres (1 hectare) to include information as to the effect on Wirebird habitat and to propose measures to ameliorate any harm done to that habitat.”

Policy C.N.2 states “There is a presumption against any development which would damage or reduce the habitat of the Wirebird. Any application for development, including change of use involving land, where the Wirebirds exist, over 2.5 acres (1 hectare) should be accompanied by full information on the effect of that development on Wirebird habitat and for measures to be taken to ameliorate any damage to that habitat. The development proposal should be accompanied by specific proposals to ensure any damage to Wirebird sites are mitigated or compensated for and this will be subject to monitoring by the appropriate Agency to ensure the agreed work is carried out”

The draft Land Planning Development Control Ordinance (2007) makes provision for development that may require environmental impact assessment reports.

The National Parks Ordinance 2003 provides powers to permit the establishment of parks, nature reserves, sanctuaries and areas of historical interest, and generally for the conservation of the natural environment and ecology of St Helena.

National Trust

The St Helena National Trust was established by Ordinance in 2002 and has as one of its principal objects “to promote the permanent preservation for the benefit of St Helena of lands and buildings of beauty or historical interest and, in the case of lands, the preservation (so far as possible) of their natural aspect features, animal, plant and marine life”. The SHNT has employed a Wirebird Conservation Officer since 2006.

Environmental Charter

The Environmental Charter strategy for action (March 2003) sets out how St Helena will meet its commitments under the Environmental Charter signed in September 2001. Specific commitments relating to the Wirebird are made under commitments 2 (b & c) and 7 (a).

Environmental Health

The Environmental Health have has its main objective to protect the public from health, amenity and economic risk from pests of public health significance. Its general list of pests includes rats, mice, cockroaches and ants etc. It is anticipated that the whole of the pest management service will be reviewed within 2008.

4. Stakeholder Analysis

The people and groups whose activities will affect the implementation and outcome of the Wirebird Action Plan have been identified (Annex 2. Stakeholder analysis). They are people to be engaged with, so that their positive impact is utilised, or negative impact is minimised. The table in Annex 2 summarises their interest, activities, how their activities impact on the species (positive or negative), the intensity of the impact and proposed action(s) that have been identified. Most of the stakeholders identified will contribute positively to the project. There are a number of organisations that could assist in raising awareness about the Wirebird, both among Saints and overseas. While it was felt that few stakeholders would deleteriously affect the outcome of the plan, there will likely be opposition from development groups and other economic pressures.

The main stakeholders are:

ANRD – develop and implement policies for agriculture and forestry; ensure agricultural Crown Lands have effective lease and licensing systems that can be implemented; work with stakeholders and promote good pasture management for agriculture and Wirebirds; develop and manage incentive funding schemes for good pasture management; ensure the appropriate livestock breeding programmes are in place.

SHNT – provide the Action Plan co-ordinator post; input on all aspects of environmental conservation for the Wirebird; maintain a detailed monitoring programme for the Plan; work with ANRD and graziers to promote good pasture conditions for the Wirebird; promote the Wirebird and its value to a wide audience; gather and help to gather scientific data to help Wirebird conservation.

Syndicates/private graziers – undertake the grazing in a way that promotes good agricultural returns and Wirebird conservation; work with others and the public to ensure grazing land is suitable for the Wirebird.

Tourism Dept – to promote the value of the Wirebird in heritage tourism; to ensure that information is provided to tourists about the Wirebird; to ensure that tourism activities do not damage Wirebirds and their habitat.

Legal and Lands – to develop and oversee the planning system and to provide an effective system to prevent damage to Wirebird sites; to propose the designation of land as green heartland/NPAs; run the SHEIS GIS programme.

Environment Planning & Development – to oversee environmental input to the planning process through screening developments for their impact and ensuring any and all relevant environmental assessments, including EIAs are undertaken on development proposals. Oversee policy development on St Helena and promote changes to policies, Ordinances etc which impact on the Wirebird habitat.

Public Health – to develop and undertake control programmes on problem pest species to human health on St Helena.

Land Development Control Committee – approves applications for development.

Legislative Council – approves all legislation on St Helena including the designation of NPAs

Executive Council –Formulates, sets and approves policy and advises the Governor.

5. Threats, potential threats and limiting factors (problem analysis)

The overall problem to be addressed by this Action Plan is the continuing decline in the St. Helena Wirebird population. The threats are summarised as follows:

Known threats

1. changes in the vegetation due to increase of a wide range of non-native invasive plants ****
2. increase in vegetation height due to changing land-use patterns ****
3. reductions in grazing levels and changes in grazing management. ****
4. predation, probably principally by cats and to a lesser extent by rats and Common Mynas. *****
5. development of an airport on Prosperous Bay Plain and ancillary works/haul routes ****
6. Infrastructure developments including water, roads, energy policy ***
7. Tourism developments such as in the Broad Bottom area***

Possible threats

1. Increased use of agri-chemicals affecting invertebrate prey species, probably principally through worming treatments*
2. Built development * (potentially ** depending to the scale post airport)
3. Recreational activities, leading to increased disturbance *
4. Driving over semi-desert areas to collect stone, Tungi (prickly pear) fruits, fishing access, motocross and off roading, touring etc *
5. Collision or site avoidance risks with wind turbines *
6. Airport haul and subsequent airport traffic collisions/impacts *

6. Factors influencing success of action plan implementation

It is important to consider the risks and opportunities affecting the implementation of the plan. These are summarised in Annex 4. Factors affecting action plan implementation.

The St. Helena Wirebird is the national bird and a well-known emblem of St. Helena. It is viewed as a flagship species for the island with many organizations and local clubs incorporating the Wirebird into their logo. Saints take a great deal of pride in the uniqueness of the bird and recognise the opportunities protection of the species provides.

However, the following principle factors will need to be taken into account if the overall objective of the plan is to be achieved:

6.1 Importance of the Wirebird to St. Helena's economy

The economic value of the Wirebird has never been estimated. Many key decision makers are largely unaware of the important contribution the Wirebird and its habitat are making to the local economy. Many visitors to the island enjoy wirebird watching experiences, and many of the island's popular walks or drives enjoy commanding views or pass through the stunning agricultural and wilderness landscapes within which wirebirds live. The conservation of the Wirebird should act as a positive attraction to the island, boosting tourism and having a positive effect on business. If it becomes extinct, fewer tourists who are interested in nature and bird watching may visit the island.

It is likely that the benefits of the access project will only be realized if St Helena maintains a high quality environment to attract tourists. Tourists bring in money and jobs and improve the standard of living. With a higher standard of living more money can be put into environmental projects, protection and management, which in turn improves the quality of the environment which keeps tourists coming. Damaging the environment and the extinction of the wirebird, and other endemic species, could impact negatively on the economy and employment associated with tourism, guiding and conservation could subsequently decline.

6.2 Anticipated rise in tourism and associated developments

With the planned construction of an international airport, luxury hotel, chalets and golf course and related tourist amenities and development, pressures for land development are great. This will lead to a loss and/or degradation in Wirebird habitat, putting the wirebird status at even greater risk.

It is important that the new LPDC Ordinance includes EIA regulations and that the assessment incorporates the new issues identified as being of relevant to Wirebird numbers and distribution in achieving the avoidance, mitigation or compensation measures for this species.

6.3 Capacity to implement plan

The implementation of the plan and the sustaining of its benefits will require the identification and allocation of the necessary human and financial resources. Currently, there is heavy reliance on a small number of key individuals as there are few people on island with relevant training or experience. There are also many other urgent issues facing the island, including increasing capacity for energy and other services.

Significant actions under the SAP require commitment from stakeholders and time, and much can be achieved with little capital investment. Partnership and collaboration with stakeholders is paramount to ensure that money when spent is well spent, and contributing to the objectives of the SAP with the benefits sustained.

The support of SHG is needed in terms of lobbying and support of applications to the UK Government and other agencies and supporting SHG Departments meet their commitments under the SAP.

6.4 Privately owned Wirebird habitat areas

Given that the most significant areas for improved Wirebird habitat include grazing pastures, much work will need to be completed in partnership with ANRD and private landowners. Although not a problem to date, this may be a constraint in the future if landowners object to proposed management actions.

7. Action Programme

The objectives for the Action Programme derive from problem and objectives trees that were produced at the Action Planning workshop.

7.1 Long Term Vision

The long-term vision for the people of St. Helena is to find a way to happily coexist; allowing St. Helena to develop and the Wirebird to thrive.

7.2 Table describing the Goal, Aim and Objectives of the Action Plan: their justifications and indicators

Goal Longer Term (10 years)	Description and Justification	Indicators
St. Helena holds a stable population in the order of 400+ Wirebirds and its' status moves from Critically Endangered to Vulnerable	The Wirebird will probably always qualify as globally threatened ('Vulnerable') by virtue of small range size. Our goal therefore is for the Wirebird to have a stable,	IUCN lists St. Helena Wirebird as 'Vulnerable' BirdLife International Red List reports a stable population over a five-year period

	relatively large population within this range, which does not need continuous conservation intervention	No direct conservation intervention for individual pairs takes place over a five-year period
Aim Medium Term (5 years)	Description and Justification	Indicators
St. Helena Wirebird threat status is reduced from 'Critically Endangered' to (at least) 'Endangered'	A reasonable goal for the second five-year revision of the plan is to have maintained the halt in the decline in Wirebird numbers, to have a steady population at a higher level and so achieved a significant reduction in the risk of extinction in the wild	St. Helena Wirebird qualifies as 'Endangered' <i>We use 'qualifies as endangered', rather than 'listed as endangered as the indicator because a five-year time-period in which the species no longer qualifies as critical is required before IUCN will formally downlist a species. Therefore the Wirebird might 'qualify' for downlisting by the end of five years, but the formal downlisting would be delayed. BirdLife International's Red List review process will record this.</i>

Objectives	Description and Justification	Indicators
1. A suitable management structure is in place to implement the Species Action Plan for the Wirebird	<p>Successful implementation of the plan will require coordination. Currently, there is heavy reliance on a small number of key Saints with relevant skills, experience and interest.</p> <p>A person will be identified locally to be responsible for coordinating and taking the plan forward. A 'Wirebird Action Plan Group' will be set up to promote implementation</p>	<p>Local SAP Coordinator is appointed by end of Year 1 of the revised plan</p> <p>Plan is kept on target according to agreed time scale and indicators</p> <p>Action Plan Group is formed by end of Year 1, provided with quarterly communications and feedback/input requested</p>
2. Strengthen pasture management policies and improve practices to protect Wirebird habitat	<p>The majority of Wirebird live on pastureland in the island and there is evidence that changes to its nature have been fundamental in the reduction of Wirebirds in recent years. Good and appropriate pasture management is continued to be required for the Plan revision. See also 4 below.</p>	<p>Vegetation at key sites is maintained at a suitable height (<5cm) for Wirebird requirements</p> <p>Management program to reduce invasive species is produced by end of Year 1 for the key sites</p> <p>Key sites cleared of invasive species by Year 5</p>
3. To document and understand the trends in the number of Wirebirds	<p>There has been substantial variation in the number of Wirebirds counted over recent years and a clear trend needs to be identified</p>	<p>Census results and trends published annually, including data on proportion and number of fledged young birds in each count section</p> <p>Data are held on the national SHEIS database and updated monthly</p>
4. Undertake work to increase knowledge and review published information on the Wirebird to better assess factors affecting	<p>While there is information which relates numbers of Wirebirds to habitat features, it is only recent research, not yet published, which has</p>	<p>Complete and publish 3 scientific publications by end of Year 3 of the revision reporting on patterns of habitat use, estimates of survival and</p>

<p>decline/loss in Wirebird numbers</p>	<p>expanded knowledge on the species ecology. We know little about the predators of chicks and full grown birds, the impact of worming treatments on food supply, and effects of climate change and seasonal weather changes on Wirebird ecology</p>	<p>recruitment and how they vary between years, as well as the importance of potential predators in limiting reproductive output quantified</p>
<p>5. Continue to improve understanding of and reduce impacts from predators on survival and productivity of the Wirebird</p>	<p>Research has shown that the most vulnerable part of the life cycle and with the lowest survival is of nests; the principal predator is now known to be cats with some impact by rats and Mynas.</p> <p>In addition to (4) above regarding scientific research and further defining impact, we cannot afford to wait for full information to be available.</p>	<p>To seek to obtain funding to enable a project to be undertaken to evaluate the control of cats and rats and to develop an island-wide policy to deal with these predators by Year 1 of the revised plan. Demonstrate a decrease of nest, egg and chick loss by Year 5</p>
<p>6. Review and where appropriate modify Ordinances, Policies and Plans to ensure Wirebird conservation (<i>agriculture, land use, energy policy, etc.</i>)</p>	<p>St. Helena has a range of Ordinances and Plans which impact on the natural environment and therefore on the Wirebird. Many of these are designed to provide for the conservation of the species but they do not always achieve this objective. A review with proposed modifications of them would help ensure they meet this objective.</p>	<p>Review completed by Year 1 of the revised plan</p> <p>Recommendations are submitted to SHG for review and integrated into government policy by Year 5</p>
<p>7. Prevent or minimize negative impacts from human activities</p>	<p>Lifestyle changes such as increased tourism access for vehicles and walkers, quad bikes have meant that many Wirebird sites</p>	<p>Code of Conduct for countryside activities developed by Year 1 of the revised plan, with copies available to all residents</p>

	<p>are under pressure. Effort needs to be made to reduce harmful effects of these activities.</p>	<p>and tourists</p> <p>Number of negative impacts reported/year reduces</p> <p>Designated areas are identified for recreational activities by Year 2</p>
<p>8. Promote the Wirebird as an education and tourism resource</p>	<p>Despite the Wirebird being the national bird of St. Helena, its economic value to the island and its people has never been calculated. The Wirebird has brought many tourists to St. Helena and been a component in other heritage tourism. Reductions or extinction could mean fewer tourists may visit the island, and employment associated with tourism, guiding and conservation could decline (or fail to increase as expected).</p> <p>The habitats it uses, particularly the dry and wet grassland is of great importance in producing meat (cattle and sheep) for the island as well as maintaining landscape values and supporting heritage tourism.</p> <p>The Plan can help raise awareness amongst decision makers, the public and tourists of the significant contribution to the economy and thus the importance of protecting its habitat.</p>	<p>The Wirebird, its value and tourism potential promoted internationally</p> <p>The number of bird/natural history/heritage tours which visit St. Helena and include the Wirebird on their itinerary increase</p> <p>Five presentations per year given to government, tourism industry, the public and schoolchildren</p> <p>Five press releases and media interviews/year</p> <p>The Tourism Section is kept informed of Wirebird issues and these are incorporated into the developing marketing and tourist information strategies.</p> <p>Public observation areas are identified to control the impact of tourists on Wirebird habitats</p>

<p>9. Ensure all proposals related to the Access Project identify, assess, minimise and compensate for impacts on the Wirebird</p>	<p>A specific Mitigation Plan has been produced to compensate and mitigate for the impacts from the Access Project. It will be completed by September 2011. This is being produced in parallel with the revised Species Action Plan but overlaps in the actions required.</p>	<p>The Mitigation Plan is completed successfully but many aspects such as working with the LEMP of the constructor and the planning and infrastructure sections of SHG will need to continue through the period of this revised plan</p>
<p>10. Secure funding for implementing the Wirebird Action Plan</p>	<p>Although many aspects of the Plan do not require additional finances, they do require input from human resources. Some aspects though require substantial additional funding.</p>	<p>The SAP Co-ordinator, in conjunction with others in the Wirebird Group prepares and submits at least three proposals for funding by the end of Year 5</p> <p>Time is provided by relevant departments/partners to achieve objectives of the Action Plan</p>

8. Detailed breakdown of Activities under each Objective

Objective 1: A suitable management structure is in place to implement the Species Action Plan for the Wirebird

	Action	When	Cost	Responsibility
1.1	Secure funding and establish SAP Coordinator post	October 2011	low	SHNT
1.2	Local SAP Coordinator is appointed and contract signed	November 2011	nil	SHNT
1.3	SAP Group is initiated	November 2011	nil	SHNT, RSPB

Objective 2: Strengthen pasture management policies and improve practices to protect Wirebird habitat

	Action	When	Cost	Responsibility
2.1	Undertake regular contact with graziers and other relevant stakeholders to better understand current grazing practises and promote understanding of Wirebird habitat requirements and appropriate grazing regimes	2011-2016	time	SHNT, ANRD
2.2	Assemble information on Wirebird numbers and assess habitat and vegetation changes in order to develop a database for each Wirebird area	2011-2016	time	SHNT, ANRD
2.3	Prioritise, prepare and implement site specific action plans for each Wirebird site	2011-2016	<£1k	ANRD, SHNT, RSPB
2.4	Work with licence holders to ensure that licences fully reflect the needs of agriculture as well as the Wirebird	2011-2016	time	ANRD, SHNT

Objective 3: To document and understand the trends in the number of Wirebirds

	Action	When	Cost	Responsibility
3.1	Complete full annual census including the number of fledged young in each count area and publish results	2011-2016	time	SHNT,
3.2	Establish trends in populations based on census data and publish results	2011-2016	time	SHNT
3.3	Work in partnership with SHG to ensure census and trend data are incorporated into the national SHEIS database	2011-2016	time	SHNT, LLPD

Objective 4: Undertake work to increase knowledge and review published information on the Wirebird to better assess factors affecting decline/loss in Wirebird numbers

	Action	When	Cost	Responsibility
4.1	Assemble genetic information	achieved in first plan		
4.2	Implement colour ringing programme to determine movements around St. Helena	objective achieved but record c/r birds		SHNT
4.3	Gather information to evaluate potential mitigation measures relating climate change effects on the Wirebird and its habitat (eg. erosion control, grassland management and supplementary feed)	2011-2016	time	ANRD, SHNT
4.7	Gather research information on impacts of and best practices for worming to inform policy development	2011-12	time	ANRD, SHNT
4.8	Develop and implement a Code of Conduct for best practices with respect to worming measures if needed	2012	low	ANRD, SHNT

Objective 5: Improve understanding of and reduce the impact of predators on survival and productivity of the Wirebird

Sub-Objective 5.1: Gather information to assess the full extent of predators on the Wirebird

	Action	When	Cost	Responsibility
5.1.1	Identify gaps in knowledge of predators	2011-12	time	SHNT, RSPB, universities
5.1.2	Develop research program to gather scientific data (cameras, etc.) on possible predators,	2011-16	In PhD project	SHNT, RSPB, universities

Sub-Objective 5.2: Reduce the impact of predators on the Wirebird where we have evidence of a current problem

	Action	When	Cost	Responsibility
5.2.1	Collaborate with local government to share information on the impacts of predators on the Wirebird	2011-2012	time	SHNT, Public Health, SPCA, ANRD
5.2.2	Identify and implement realistic control programs for known priority predators/sites	2011-2016	£ possibly large	SHNT, Public Health (Pest), Police, ANRD
5.2.3	Develop public awareness campaign to support predator control programs	2011-2012	<£0.5k, but most time	SHNT, SPCA, ANRD, Police, Public Health
5.2.4	Work with Stakeholders to review licensing and enforcement of existing legislation regarding predators	2011-2013	time	SHNT, ANRD, Public Health, Police, SPCA

Objective 6: Review and where appropriate modify ordinances, policies and plans to ensure they help to conserve the Wirebird

	Action	When	Cost	Responsibility
6.1	Provide input to the review Land Development Control Plan and other policies, plans and ordinances as appropriate to identify potential issues of concern to Wirebird habitat	2011	time	SHNT, LLPD, RSPB
6.2	Review and maintain agricultural policies to ensure they positively contribute to Wirebird protection	2011-2012	time	ANRD, SHNT
6.3	Review National Parks Ordinance and collaborate in the development of supporting regulations to ensure appropriate and applicable to key Wirebird sites	2011-2012	time	ANRD, SHNT, Environmental Co-ordinator, SAP Co-ordinator
6.3	Establish key Wirebird sites as National Protected Areas (with protected area plans and management/funding process)	2011	£ possibly large	SAP Co-ordinator, SHNT, LLPD
6.4	Review Wirebird sites listed as National Protected Areas to ensure an appropriate management process is in place	2011	time	SAP Co-ordinator, SHNT
6.5	Complete a review of the process for undertaking Environmental Screening and Impact Assessments to ensure projects are assessed logically and in a transparent and timely manner prior to any decision being made	2011	time	Environmental Co-ordinator, SHNT, LLPD
6.6	Undertake a review of livestock policies to ensure they are appropriate to livestock farming on St Helena in a way that will assist the future sustainability of the Wirebird	2011	time	ANRD
6.7	Review other ordinances, policies and plans which could impact upon Wirebird populations	2011-2012	time	SHNT, SHG

Objective 7: Prevent or minimize the negative impact of human activities

	Action	When	Cost	Responsibility
7.1	Reduce the destruction of habitats/nests from both human/vehicular traffic by erecting appropriate signage in habitat areas	2011-2013	£2-4k	Tourism, SHNT
7.2	Define designated paths that are well documented and signed; provide stiles (where appropriate) for ramblers	2011-2014	£1-5k	Tourism, SHNT
7.3	Develop and print a code of conduct for all countryside users (walkers, 4x4, quad bike and others)	2011-2012	£2-4k	Tourism, LLPD, SHNT

Objective 8: Promote Wirebird as an education and tourism resource

	Action	When	Cost	Responsibility
8.1	Work with tourism authorities to ensure that the Wirebird is an integral component of St. Helena heritage promotion	2011-2012	time	SHNT, Tourism Dept.
8.2	Source funding to complete an assessment on the economic value of the Wirebird to St. Helena	2012-13	£3-5k	SHNT, Tourism
8.3	Inform public and stakeholders on the Wirebird Action Plan through a variety of media/means in order to promote stewardship of the species	2011-2016	time	SHNT, SAP Coordinator
8.4	Ensure that the Wirebird is utilized as a resource across the national curriculum	2011-2014	time	Education Dept., SHNT
8.5	Develop resources for local education to promote value of the Wirebird	2011-2016	Possibly £4-6k	SHNT, SHG
8.6	Promote economic and social benefits of Wirebird conservation	2011-2016	time	SHNT, SAP Coordinator

8.7	Set up viewing points for Wirebird	2011-2013	Possibly £3-5k	SHNT
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Objective 9: Ensure all proposals related to the Access Project identify, assess, minimise and compensate for impacts on the Wirebird

	Action	When	Cost	Responsibility
9.1	Work with stakeholders to ensure Mitigation Plan is implemented effectively and in the long term	2011-2016	tba	SHNT, RSPB, ANRD, SHG, DFID

Objective 10: Secure funding for implementing the Wirebird Action Plan

	Action (examples)	When	Cost	Responsibility
10.1	Explore options for working holidays	2011 onwards	time	SHNT, SHG
10.2	Contact DEFRA and JNCC etc to explore funding for bio-diversity	2011 onwards	time	RSPB
10.3	Contact DFID/OTEP to explore funding	2011 onwards	time	SHNT, RSPB
10.4	Lobby SHG to include Wirebird related issues in their budget planning	2011 onwards	time	SHNT
10.5	Explore the possibility of World Heritage Status	2011 onwards	time	SHNT
10.6	Set up a Wirebird Trust Fund to raise money world wide	2011 onwards	£0.5k	SHNT
10.7	Encourage SHG to support fund raising	2011 onwards	time	SHNT
10.8	Lobby for legislation to allow Gift-Aid and covenanting of donations	2011 onwards	£0.5k	SHNT, Tourism, SHG
10.9	Maintain the Adopt a Wirebird scheme	2011 onwards	time	SHNT

Annex 1. References

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Annex 3. Wirebird counts summary 1988/9 – 2011

Site	1988/9	2000/01	2005/06	SHNT 2006	2006/7	2008	2009	2010	2011
Cow Path/High Knoll	1	3	0	0	5	3	5	3	10
Donkey Plain	4	8	7	10	9	16	10	15	8
Cleugh's Plain	0	0	0	nc	1	0	1	2	5
Rosemary Plain	2	0	0	0	2	0	0	0	0
Francis Plain	3	2	4	5	7	7	8	5	7
Barren Hill	6	2	2	nc	2	4	3	3	3
The Dungeon	0	0	0	nc	0	0	0	0	0
Prospect Pastures	2	1	1	nc	2	0	2	3	2
Sane Valley	14	8	0	nc	0	0	0	3	0
Deadwood Plain	124	92	35	35	44	66	47	80	71
Bank's Ridge	7	1	2	nc	2	6	3	7	5
Longwood Farm	16	15	2	2	2	6	1	7	6
Longwood Golf Course	6	15	1	0	3	3	1	5	2
Bottom Woods	44	12	5	5	19	17	18	16	21
Longwood Erosion Zone	6	1	1	nc	0	9	16	12	9
Weather Station Ridge	4	4	2	3	6	1	5	5	4
Horse Point Plain	17	26	11	10	6	7	8	14	15
Prosperous Bay North	14	9	2	7	4	7	20	16	9
Fisher's Valley Pastures	2	2	2	nc	0	0	3	7	8
Prosperous Bay Plain	19	19	15	31	18	29	25	15	12
Upper Prosperous Bay	20	39	22	19	32	31	52	47	50
Woody Ridge	5	9	24	20	38	25	8	9	8
Stone Top Ridge	4	4	2	nc	10	10	7	8	7
Central Pastures	0	0	0	nc	0	0	0	0	0
Pouncey's	2	6	6	nc	7	2	0	6	8
Oaklands Pastures	5	1	0	nc	0	0	0	0	0
Broad Bottom (incl Woodlands)	35	27	21	19	31	43	16	25	20
Horse Pasture	7	2	1	3	4	10	8	5	6
Blue Hill/Head o' Wain	4	10	4	nc	5	7	6	12	7
Southern Pastures	16	22	10	nc	19	27	19	29	19
Man and Horse	36	30	26	29	44	37	30	38	28
Total	425	362	208		322	373	322	397	350

