



## Darwin Initiative Annual Report



Department  
for Environment  
Food & Rural Affairs

**Important note:** To be completed with reference to the Reporting Guidance Notes for Project Leaders:  
it is expected that this report will be about 10 pages in length, excluding annexes

**Submission Deadline: 30 April**

### Darwin Project Information

Project Reference	19-029
Project Title	Bugs on the brink- Laying the foundations for invertebrate conservation on St Helena
Host Country/ies	UK and St Helena
Contract Holder Institution	Buglife- The Invertebrate Conservation Trust
Partner institutions	St Helena National Trust, St Helena Government, Centre for Ecology and Hydrology (Edinburgh)
Darwin Grant Value	£199,478
Start/end dates of project	1 April 2012 – 31 January 2016
Reporting period (eg Apr 2013 – Mar 2014) and number (eg Annual Report 1, 2, 3)	April 2013- March 2014
Project Leader name	Alice Farr
Project website	<a href="http://www.nationaltrust.org.sh/shnt-conservation-programmes/natural-heritage/bugs-on-the-brink-our-invertebrates/">http://www.nationaltrust.org.sh/shnt-conservation-programmes/natural-heritage/bugs-on-the-brink-our-invertebrates/</a>
Report author(s) and date	Alice Farr

## 1. Project Rationale

The project aims to halt declines in endemic invertebrates and integrate their needs within practical and strategic conservation efforts on St Helena and improve capacity to conserve invertebrates in the long term, by providing resources and training.

St Helena is a UK Overseas Territory, situated at 15°S and 5°W in the South Atlantic Ocean, between Africa and South America, and this project was designed to encompass the invertebrate conservation on the whole island.



The endemic biodiversity of St Helena is severely threatened by the combined effects of habitat degradation and invasive alien species. Most of St Helena's endemic, terrestrial animals are invertebrates – some 300-400 species. They form the richest, globally endemic invertebrate fauna of any UK Overseas Territory.

Historically, conservation effort on St Helena has focused on the recovery of a small number of critically endangered species (Wirebird and higher plants) and the restoration of habitat fragments. Although invertebrates are a critical component of the island's ecosystem, St Helena lacked the resources, capacity, knowledge and tools to integrate invertebrate needs - at all levels of conservation effort. Most of the invertebrate survey work carried out prior to the start of this project has been undertaken by visiting specialists, with limited skills transfer to St Helena. There are few means of identifying invertebrates on St Helena, either in the form of manuals and keys or a specimen reference collection.

The project is aiming to address these issues and improve awareness about, and attitudes towards, invertebrates throughout St Helena society. Until now there has been limited appreciation of the special place invertebrates have in the island's biodiversity, or of the ecosystem roles (e.g. pollination, pest control, food for Wirebirds) that invertebrates play.

## **2. Project Partnerships**

This project is run in partnership with the St Helena National Trust (SHNT), St Helena Government (SHG) and the Centre for Ecology and Hydrology (CEH). The primary partnership is with SHNT and SHG who both host project staff members.

These partners have been involved in the project from the outset in helping to design the project. Relationships are managed through a variety of methods. The project framework is set out in a Memorandum of Understanding between Buglife and all project partners (available evidence file). This provides an agreed framework for delivery and manages expectations. In addition to this each partnership has an individual management framework through a contract between Buglife and the partner organisation. This includes financial information and anticipated work plan to ensure delivery of the project outputs. Examples of these documents are included in evidence file.

To facilitate collaboration on the project quarterly steering group meetings are held. The principle purpose of these is to update all project partners on the work progress, relating this to project outcomes. This also provides a forum for decision making and monitoring of the project. An example of steering group agenda and minutes is included in evidence file.

On St Helena three project officer posts are central to the delivery of the project and these are hosted by the partner organisations. The SHNT hosts the Education Officer and Invertebrate Coordinator. The Environmental and Natural Resources Directorate (ENRD) within the SHG is hosting the Government Based Invertebrate Officer. This is formally agreed through a contract with each partner detailing both the scope of the roles and financial arrangements. Contracts are included in evidence file.

The Steering Group is central to the project for expert advice, decision making and monitoring of progress. Members of this group are:

Shayla Ellick - Environment and Natural Resource Department, SHG

Rebecca Cairns Wicks - St Helena Ecology Expert

Roger Key – UK Invertebrate Specialist

David Pryce – Invertebrate Coordinator

Liza Fowler – Education Officer

Chris Hillman – Director, SHNT

Alan Gray – CEH

Alice Farr – Project Manager, Buglife

Vicky Kindemba - Conservation Delivery Manager, Buglife

These individuals have been selected as they are either delivering project outputs directly or have a high level of experience and are able to advise project officers. Through the steering group, partners are involved in decision making and kept fully up to date with the project. They are central to project decisions through both the steering group meeting, email and one to one discussions. For example the steering group recently fed back on the job description for the Government based invertebrate officer which enabled the document to be refined before being formally agreed with SHG, and so helping to ensure the right individual was hired for the role (output 1.1). Members of the steering group have been involved in the sign off of a proposal for the invertebrate guides (output 2.3). This has enabled the proposal to be developed with on island expertise from both local experts and whilst keeping partners up to date.

There are a number of Darwin Plus projects on St Helena and the steering group has proved to be invaluable in integrating these projects to complement each other and improving communication between the projects.

A particular challenge that the project has had to deal with is the construction of the new airport. This has resulted in the loss of several areas of wildlife rich habitat and made species more vulnerable to

extinction. To try to address this and limit impact, a good relationship has been fostered between the Invertebrate Coordinator and the airport development team. The Invertebrate Coordinator has been able to feed back to the steering group and also take advice from the experts in this forum. This has enabled a number of invertebrate surveys to be carried out, in advance of development, which would not otherwise have been carried out. Whilst only a small win in protecting endangered invertebrate species, it has resulted in steps to try and reduce the impact of the development on them (example survey report provided in evidence file).

### **3. Project Progress**

#### **3.1 Progress in carrying out project activities**

Overall the project is running within anticipated timescales however there have been three activities which have not progressed to the anticipated timescales. Whilst these are delayed it is not expected that this will affect overall achievement of these outputs.

##### **Output 1**

##### **Activity 1.1 - Incorporating invertebrate conservation as a core conservation activity within Nature Conservation Division (NCD).** (Timescale Q4 year 2 – Q3 year 4)

NCD has been restructured and is known as Environmental and Natural Resources Directorate (ENRD).

Central to this is the recruitment of a Government based Invertebrate Coordinator. The Government based Invertebrate Coordinator role has now been recruited (job description and advert included in evidence file). This role is based within the Environmental and Natural Resource Directorate (ENRD) of the St Helena Government (partnership contract provided in evidence file). This role provides staff time, within the St Helena Government, which focusses specifically on invertebrate conservation. This role is crucial in bridging the skills gap on island and integrating invertebrate conservation into ENRD. This recruitment was slightly delayed as there was a recent change in Director of the SHG department where the officer is to be based and it was not possible to secure confirmation of the post and job description until the new Director was in place. The role was due to start in the 2013/14 financial year but an individual will now start Q1 of year 3 and progress until the end of 2015.

Shayla Ellick (ENRD Species Conservation and Environmental Research Officer, with responsibility for invertebrates) is on the project Steering Group. She is able to have direct involvement in project decisions as well as providing a formal process for this project to feed into SHG work.

A key threat to invertebrate conservation on St Helena is invasive species. Consequently we are working with SHG to improve biosecurity on the island. The Invertebrate Coordinator is working with Basil Read, Halcrow (airport contractors) and ENRD staff to set up biosecurity monitoring – basic training has been provided (please see activity 2.1 for further details). These will then be surveyed monthly for an initial 3 month period to see how the system works. In addition to this the UK Invertebrate Consultant has analysed potential invasive species to create a reference document to work from (provided in evidence file).

The Invertebrate Coordinator and Education Officer attended a SHG biosecurity workshop and they were able to feed into the SHG vision for biosecurity on the island (invitation and agenda are included in evidence file).

##### **Activity 1.2 - Collating existing invertebrate data and integrating them with the St Helena Environmental Information System, producing mapping for Protected Areas Network** (timescale - year 2).

The project has collated an invertebrate species list, which provides a complete baseline invertebrate species for the island and will be used for the IUCN Red Listing. It has been drawn up in taxonomic hierarchy, with information on endemism and a rarity category (common, scarce, rare or extinct). The number of species recorded from the island now stands at 1329 with 449 endemics, 48 of which are potentially extinct (available in evidence file, output 1, St Helena Terrestrial Invertebrates). The list is

available on the project website and is currently being used by the government and others on island as a resource. <http://www.nationaltrust.org.sh>.

Species records with dates and locations have also been extracted from existing literature. A total of 9872 species records, 79% of these records have locational data assigned, have been extracted so far. (Species records list included in evidence file, output 1, St Helena all species records). It is anticipated that this information will be integrated into the SHG database once their newly recruited GIS Officer starts (imminent but the SHG staff changes have prevented the completion of this task).

The list will continue to evolve as new information comes to light. The list was used to define 285 invertebrate species that are proposed to be protected by law under the new Environmental Protection Ordinance. These species (and eggs/nests) will be protected from injury, disturbance, killing etc. The proposed list of species for protection was open for consultation in 2013 and is currently being progressed by St Helena Government. It also provides information on species distribution to inform protected area management (output 1.3, protected species list available in evidence file).

### **Activity 1.3 - Assessing conservation status of endemic invertebrates under IUCN criteria and placing threatened species on Endangered Species Ordinance** (timescale – Q4 year 2 – Q3 year 4).

The process of IUCN red listing has started. This is a two strand approach with Invertebrate Coordinator and Invertebrate Consultant working together to list a small set of species piloting the process and establishing the most effective way forward. (Evidence within Steering group meeting minutes in evidence file)

The intention is to set up an IUCN Invertebrate Specialist Group to drive forward and sustain red listing into the future once the project is complete. The most appropriate and sustainable model to achieve this is currently being scoped by Buglife. The original idea was to set up a South Atlantic Invertebrate Specialist Group to facilitate Red Listing and long term invertebrate conservation in this area. However initial feedback from Dr. Axel Hochkirch (Chair of the SSSC Invertebrate Conservation Sub-Committee (ICSC), which oversees the SSC Specialist Groups) has led to a rethink of the most effective specialist group to enhance the red listing work. We will be re-scoping the specialist group and submitting a revised proposal to the ICSC in the next few months. (Email chain showing latest work on this included in evidence file)

Protected species legislation is being progressed by the SHG. Species data from output 1 were the basis for the invertebrate protected species list. (Draft list included in evidence file)

## **Output 2**

### **Activity 2.1 - Training in invertebrate biodiversity conservation and habitat management for invertebrate coordinator and conservation staff** (timescale – Q4 year 1 – Q4 year 3).

Training on biosecurity measures has taken place and includes:

- A training session with Jill Key, the Biosecurity Officer from St Helena Government and Basil Read staff (contractors on the new airport working on behalf of the government) on biosecurity across their sites. It was agreed to set up a monitoring programme using sticky traps and small 'insect hotels' in breeze blocks that will be checked monthly to see what has colonised them.
- Two days of training were delivered to the three biosecurity staff at Scotland on the identification of specimens in their reference collection and on collections management and specimen handling.

A three day training course was delivered to twelve people at ENRD Scotland offices on 22-24 October 2013. The aim of the course was to give farmers and other pesticide sprayers an introduction to invertebrates and to encourage regular 'scouting' of crops in order that potential problems can be identified at an earlier stage and dealt with accordingly. Feedback from the 'Entomology for Pesticide Sprayers' course held at ANRD was 100% positive. This type of training is now to be implemented more widely to other government officers. (Course materials and photographs included in evidence file)

On 5th March 2014 a training day on basic invertebrate identification and invertebrate conservation management was given to the Peaks conservation team, David Higgins and Shayla Ellick (all SHG conservation employees). The training involved identifying common invertebrate species and then a practical session outside. The day was very successful and several rare or important species were found. Learning resources from this are included in evidence file.

This was followed by a half-day teambuilding event for the SHG Peaks Conservation Team at the Millennium Forest on the morning of the 7th March. Intensive searches were made under vegetation and rocks. (Course outline and feedback in evidence file)

Over the four courses 32 individuals (although some people attended more than one course) have been trained and 6.5 days of training have been held.

### **Activity 2.2 - Building invertebrate specimen reference collection** (timescale Q4 year 2 – Q4 year 4).

A collections cabinet to house the collection has been purchased. The Invertebrate Coordinator was able to arrange free shipping of the cabinet to St Helena and we are expecting delivery in the next few months. The collection is to be housed in the St Helena Museum (proof of purchase evidence file). To run alongside this we are looking at purchasing microscopes through match funding provided by St Helena National Trust that will enable detailed study of specimens. This is to be progressed in 2014/15.

### **Activity 2.3 - Producing introductory guides and keys for invertebrates** (timescale Q4 yr 2 – Q4 yr 4)

A proposal of an invertebrate guide has been drawn up which has prioritised which groups of species will be part of the guide. The intention is that each group will have a stand alone pdf guide detailing them and how to identify them, their likely habitat etc. These can then be freely available online for use by both people on St Helena and also other interested people (proposal available and draft chapter of guide in evidence file). This guide will provide a simple to understand basic summary of the invertebrates on St Helena and can be used by naturalists, SHG staff and interested laypeople. This resource is currently not freely available.

Supplementing this and for more detailed work the Invertebrate Coordinator is producing a number of identification keys. These are in draft format at the moment and are being tested but an example has been included Evidence file. This will enable SHG staff to practice invertebrate identification and for visiting experts to understand more about the special invertebrates on island. The keys can be used in conjunction with the specimen reference in the future.

The following test keys have been produced so far:

- Ants, bees and wasps - Hymenoptera (family level).
- Beetles - Coleoptera (family level).
- Flies - Diptera (family level).
- Plant bugs - Hemiptera: heteroptera (species level).
- Plant hoppers - Hemiptera: 'homoptera' (species level).
- Lacewings - Neuroptera (species level).
- Crane flies - Limoniidae (species level).

A key to help individuals identify insects to family level e.g. beetle, butterfly etc is planned. The keys will be tested with members of the steering group and key SHG staff during 2014 and then refined where necessary.

### **Activity 2.4 - Designing and creating website for invertebrate information** (timescale year 2).

A website with information about the project has been set up. This outlines the value of St Helena for invertebrates and what we are aiming to achieve. There are photos to demonstrate some of the species that live on the island. The baseline database of species is available to download here and further resource pages are planned. This will include the test identification keys and guides.

Website address: <http://www.nationaltrust.org.sh/shnt-conservation-programmes/natural-heritage/bugs-on-the-brink-our-invertebrates>.

### Output 3

#### **Activity 3.1 – Understanding and quantifying the role of invertebrates in the restoration of native ecosystems, based on a field study of regeneration in endemic trees.** (Timescale Q1 yr 2 – Q1 yr 4)

CEH activities on restoration work focuses on plant fitness and pollination. A two week trip to St Helena was carried out by Alan Gray during April/May 2013 and the main activities during this period were as follows: Invertebrate Site Reconnaissance, which included several visits with the Invertebrate Coordinator to establish suitable sampling sites included: Peak Dale hand searching deadwood; Millennium Forest pitfall trapping and hand searching; the Peaks pitfall trapping; the Airport site pitfall trapping and hand searching.

This trip has led to refinement of the field studies. Originally the plan for this outcome was to compare the Millennium Forest with the gumwood forest at Peak Dale and other smaller patches of gumwood. However, due to concerns over the unknown consequences of sampling in sensitive habitats such as Peak Dale, and problems with getting field equipment to the island, this outcome has had to be modified. The modified plan is to focus on the restoration project in the Millennium Forest, and compare this restored habitat with similar habitat across the Island that has not yet been restored. The sampling will concentrate on characterising the invertebrate pollinator communities of these areas to determine the difference between un-restored and the restored Millennium Forest.

These data will inform on how the restoration process has contributed to differences in the pollinator communities by restoration activities. Conservation actions can then be devised so as to enhance the pollinator communities in either the Millennium Forest or the un-restored areas or both. As such the data will be useful for subsequent proposals for restoration activities. (Full proposal included in evidence file).

#### **Activity 3.2 - Restoration ecology training: 5 conservation staff trained in methods for assessing plant fitness and regeneration & production of research protocols** (timescale year 2 and year 3).

Restoration training workshop covering the Introduction to Plant Population Fitness was held with 6 government officers attending the workshop. Training session included discussions on hybridisation in *Commidendrum*, techniques for measuring Plant Fitness and planning common garden experiments for *Plantago*. (Training resources evidence file)

Plant Fitness protocols have also been developed. This will be used to base training round with further, shorter guidance produced and tailored to the needs of the SHG staff on the training (protocols included evidence file). As part of the first training workshop a common garden experiment on *Plantago robusta* was set up on island. This experiment will be used for training in estimating plant fitness and gaining experience of the methodology involved. The intention is then to move onto using the techniques with *Pelargonium cotyledonis*. Assessment will be made of the morphological variation in 8 populations of *Plantago* and possibly 3 of *Pelargonium*.

#### **Activity 3.3 - Preparing new editions of Ecosystem Restoration Plans for target habitats** (timescale year 3)

This activity is due to start year 3 onwards. Part of feeding into this will include the development of short, easy to use guidance so that SHG staff can easily interpret the plant fitness reference guide and also have better understanding of holistic habitat restoration.

The Government-based Invertebrate officer will also be in place to work with CEH on this activity and help to integrate the restoration plans into the government conservation work.

**Activity 3.4 – (Q3 year 2 – Q4 year 4)** as a result of activity 1.1 being revised it has not been possible to disseminate the results of this study so far. This will commence once studies are underway.

## Output 4

### **Activity 4.1 - Providing all island schools with indoor and outdoor opportunities for invertebrate learning** (timescale Q1 year 2 – Q2 year 4)

Education delivery is very successful. Since April there have been 18 educational events with the Primary and Secondary Schools, providing activities for 237 children, and some events included parents as well. Activities have ranged from 'The colourful magic garden' for the 4-5 year olds, creating bugs and garden art showing different types of bugs from worms to bees and where they would live in a garden. For ages 9-10 'Habitats, micro-organisms, food webs/keys' understanding bugs and their life cycles, as well as what a food web is and how animals are dependent on each other and plants for food. For ages 11-13 'Insect surveys and traps' on what insects are, how to use survey equipment and how to use a simple key.

Two visits were made by the Education Officer and Invertebrate Coordinator to Prince Andrew School (12th/19th July 2013). On the first occasion different sampling techniques were demonstrated to the Enrichment group; they installed pitfall traps and had a go at sweep netting. On the second visit the contents of the pitfall traps and the Malaise trap that had also been set up were looked at and the procedures used to identify invertebrates to species level explained and demonstrated. (Educational record, sample of educational material and event photographs included evidence file)

Education work has been on hold since December due to Education Officer being off on maternity leave. It is expected to re-start from May 2014 onwards.

### **Activity 4.2 - Training teachers in use of education pack and loan box** (timescale Q2 year 2 – Q4 year 3)

This is a priority when the Education Officer returns from maternity leave in May 2014. It is intended that an audit of school equipment is taken out before the box is developed so that the best and most useful materials can be purchased.

### **Activity 4.3 - Awareness raising through the media and outreach events and disseminating project results** (Timescale Q4 year 1 – Q4 year 4).

**Outreach events:** A presentation was given on the project as well as a bug walk by the Invertebrate Coordinator, with support from the Education Officer, to 115 people at the opening of the Diana's Peak National Park in September. Invertebrate sampling techniques were demonstrated and discussions about the threats faced by insects on the island were held.

The island's first environmental conference took place at the Canister, Jamestown on 14<sup>th</sup> August. The Invertebrate Coordinator presented a talk on 'Beating the bottleneck – conserving St Helena's endemic weevils' which was well received. A talk on the project's education work was given at the St Helena museum in August to 29 people by the project's Education Officer. (Event presentations included Evidence file)

A guided walk over the peaks during the Festival of Walking on the 31st July was led by the Invertebrate Coordinator. Three people participated in the walk including Damien O'Bey from South Atlantic Media Services who then published an amusing full page article about the walk in the Sentinel. (Article evidence file)

On Saturday 8th February 2014 the Invertebrate Coordinator attended 'Leo's Planet Summer Meltdown'. On display was equipment used for surveying along with a microscope and some specimens to look at, including Mediterranean Black Widow spiders to show people.

**Media:** On St Helena there have been six newspaper articles about the project in local papers.

- Sentinel 9th May article produced after the island's first science fair at St Paul's Primary School.
- Independent 5th July and Sentinel 4th July, article from a press release after the rediscovery of a very rare leafhopper.
- Sentinel 11th July - follow-up article on the rediscovery following pre-recorded radio interview.
- Sentinel 8th August - article on guided walk led by Invertebrate Coordinator
- A press release about Halloween outreach event was printed in the Sentinel on 17th October

- Followed by an article in the Independent 18th October which talked about the project and the wildlife on island.

A radio interview took place on Thursday 2nd May. The Invertebrate Coordinator gave a half-hour live radio interview about the project to SAMS Radio 1's Drive Time show, this was repeated on the following Sunday morning. Selection of articles is included in evidence file.

In the UK a press release was issued in June 2013 and included in Buglife's Annual Review (evidence file, circulation circa 1,500). The project has featured in the Buglife e newsletter which is sent to 5,000 people. A summary of the project was included in the RSPB report titled 'The UK's Wildlife Overseas'. (Excerpt in evidence file, expected circulation unknown at present)

## 3.2 Progress towards project outputs

### **Output 1: Invertebrate conservation requirements quantified and incorporated within environmental management framework and legal protections.**

Underpinning the progress of this output is collection of invertebrate species data (output 1b). Prior to this project there was no island species list for invertebrates, with little information on population size or distribution and there was poor understanding of levels of threat. This was preventing invertebrates from being included in strategic planning, conservation legislation and practical restoration and management activities.

Over the last 12 months the Invertebrate Coordinator has worked to produce a definitive and up-to-date species list for the island. Species also have spatial data associated with them (79%). Historical data sets have been reviewed and extracted to produce a species list of 1329 with 449 endemics, 48 of which are potentially extinct (species list available in evidence file and this is accessible to all on the project website). This information has been used by SHG to create a list of protected invertebrate species (output 1e) and is to be integrated into the St Helena Environmental Information System imminently (output 1b). The St Helena Environmental Information System is a management and planning tool for the St Helena government. Incorporation of invertebrate species data will enable rare and endangered species to be taken into account when making decisions. This final stage of this work is waiting on the recruitment of a GIS officer by the SHG which is currently underway (protected species list evidence file).

A priority going forward is to assess a set of endemic and conservation species against the IUCN red listing criteria. Initial work on this has started, through piloting the process on a small subset of species and scoping the specialist group, and this is expected to carry on for the next 12 months. There is likely to be some changes with the IUCN specialist group due to feedback from the Chair of the SSSC Invertebrate Conservation Sub-Committee (ICSC), in that it may not have a specific focus on the South Atlantic (please see evidence file for more detail). In response to this we are re-scoping the terms of this group and carrying out additional partnership building with key IUCN specialists. This has included attending the ICSC meeting on the 10<sup>th</sup> and 11<sup>th</sup> April in Cambridge where the formation of a group was discussed and we have been asked to re-define and submit a proposal for the group.

The output indicators are still appropriate for this output and are progressing very well. It is anticipated that invertebrate conservation will continue to be included as a core activity in the SHG ENRD (output 1a) and the Government-based Invertebrate Officer has recently been recruited. (Job description and advert in evidence file)

There has been minimal change to the important assumptions made at the time of project design. We are confident that the one change, relating to the IUCN red listing, can be overcome and this aspect of the project delivered as expected.

Whilst not confirmed, we are in discussion with the Head of Environmental Management Division within the ENRD about future resource for invertebrate conservation. It is hoped that further staff time will be formally allocated to invertebrate conservation to continue work once the project is completed. It is also hoped that this would be on a permanent basis.

## **Output 2: A training programme delivered to increase local capacity and skills in invertebrate conservation.**

A key output of this project is to improve capacity on island to enable an increase in invertebrate conservation – on St Helena there were few individuals with the remit or expertise to ‘champion’ invertebrates and engage with invertebrate conservation issues. Most of the invertebrate survey work carried out to date has been undertaken by visiting specialists, with limited skills transfer to St Helena. There are few means of identifying invertebrates on St Helena, either in the form of manuals and keys or a specimen reference collection. These resources are needed to foster interest and allow expertise to develop on St Helena; otherwise the endemic invertebrates will remain ‘out of sight and out of mind’.

The Invertebrate Coordinator has led a programme of training (output 2a) over the last 12 months. This has resulted in a total of 32 individuals participating in the training. The training has covered a variety of areas that will enable SHG staff to protect invertebrates going forward. Training topics have included: Introduction to invertebrates, Invertebrate identifications, Specimen collection and handling, Entomology for pesticide sprayers, Invertebrate conservation management. A variety of training resources are included in evidence file.

The Invertebrate Coordinator has been working closely with the UK Invertebrate Consultant to ensure invertebrate conservation best practice techniques are carried out. Going forward the UK Invertebrate Consultant will be working with the Government-based Invertebrate Officer to ensure a continuation in invertebrate conservation best practice is maintained once the SHNT Invertebrate Coordinator role comes to an end in December 2014 (output 2b).

An invertebrate collections cabinet was purchased and this will be housed in the St Helena museum (output 2c, invoice included evidence file). This was delayed from year 1 until year 2 as there was uncertainty of the location of the collection, this has now been confirmed and it will be located in the St Helena Museum. The collection can be set up pending delivery of the cabinet. Once in place this resource will facilitate long term invertebrate conservation by providing a resource for islanders to practice invertebrate identification with the guides and keys produced by this project. This will include school children and SHG invertebrate conservation staff. The Invertebrate Coordinator has previous experience of working with a museum invertebrate collection and it is anticipated that the collection will be set up to high standards.

This will be boosted by the production of invertebrate identification guides (output 2d). Work for this has started with the production of a number of identification keys and plans for a guide are also in place (evidence file contains sample invertebrate keys and the work plan for the guide).

To ensure there is permanent invertebrate conservation information available a website has been set up. As well as containing information about the project the species database is available for download. This will be supplemented by the resources from output 2d once complete.

The output indicators are still appropriate and assumptions made still stand.

## **Output 3: Ecosystem restoration on St Helena informed by and incorporating invertebrate requirements**

CEH restoration work has been re-scoped after a visit to the island. This has led to revision of experimental work to understand the role of invertebrates in the restoration of native ecosystems (output 3.1) and this is outlined more fully in evidence file. Experiments will be progressed in September 2014 during Alan Gray’s next visit to St Helena and these will help to refine thinking for Ecosystem Restoration Plans (output 3.3) during year 3.

A restoration training workshop was held, covering the Introduction to Plant Population Fitness with 6 government officers attending the workshop. The training session included discussions on hybridisation in *Commidendrum*, techniques for measuring Plant Fitness and planning common garden experiments for *Plantago*. Plant Fitness protocols have also been developed and the protocols are included in evidence file. This document is intended as reference material and further short guidance will be produced, depending on the needs of SHG government conservation officers, and additional training held over the next 12 months.

#### **Output 4: A programme of education and awareness raising about invertebrates and their ecosystem services, to increase public support and engagement.**

This section of the project has progressed significantly over the last 12 months. It has been possible to harness the natural curiosity of children through both educational workshops in schools and engagement activities at public events. An education pack and loan box is due to be put together (output 4b) once the Education Officer has returned from maternity leave. First steps will be liaison with on island schools to assess the level of equipment currently available. The education pack will address gaps in equipment and provide training for teachers on how to use the resources. This will take place from May onwards.

On Island awareness raising has really taken off (output 4c). There have been six newspaper articles over the last 12 months (Included in evidence file) and four public events attended. These events have provided forums to talk about the project and the importance of St Helena for invertebrates with island communities. Part of the success of this is the enthusiastic nature of the SHNT Invertebrate Coordinator. The culture of nick names is a big part of island life. The Invertebrate Coordinator uses the persona of 'Bug-man' to fit in with this culture and it is helping to promote the work that is being done on island. Verbal feedback from a local ecological expert to the Project Manager has highlighted that the enthusiastic nature of the Invertebrate Coordinator has really helped to raise the profile of invertebrate conservation on island.

The Project Manager is scheduled to visit Helena in June 2014. A communications plans is being developed to ensure that on island and UK media possibility are utilised. A blog will be used to informally communicate activities and experiences to stakeholders and audiences both in the UK and St Helena.

### **3.3 Progress towards the project Purpose/Outcome**

The purpose of this project is *'To halt the loss of St Helena's endemic invertebrates, by mainstreaming their needs within practical and strategic conservation management, ensuring legal protection and fostering increased awareness and understanding across wider society'*.

**Project assumptions:** these still hold true and the indicators are adequate to measure success against.

**Project success:** The project is likely to meet its purpose by the end of the project. Whilst some species extinctions are inevitable, as many areas of habitat are still very fragile and species populations small, we have successfully raised the profile of invertebrates and their conservation on island. The need to consider invertebrate conservation has risen up the agenda and is consistently being considered in SHG decisions. We hope to cement the progress of this during the remainder of the project and now that the Government-based Invertebrate Officer has been recruited.

The recently established Environmental and Natural Resource Division (ENRD) within the St Helena Government (SHG) is advancing protected species legislation and drawing up management plans for the network of protected areas across St Helena. This is being done with increased skills and understanding of the needs of invertebrate conservation due to the work of this project. So far current departmental funding levels have been maintained and discussions with the head of this department have indicated that future invertebrate conservation capacity will be available. It is hoped that it will be possible to refine SHG conservation officer job descriptions within the ENRD to formally incorporate invertebrate conservation. This will contribute to the sustainability of the project when confirmed.

Underpinning all of the invertebrate conservation work on island is the species data that has been gathered by the Invertebrate Coordinator. This has provided robust data to influence conservation work on the island. It is highly unlikely this dataset would be in existence without the project.

The profile of invertebrate conservation has also risen considerably. An example that demonstrates this is the Invertebrate Coordinator being able to offer some invertebrate training for contractors working on the airport construction project. Whilst there have been conflicts between this project and invertebrate conservation, as it has resulted in the loss of large areas of exceptionally valuable habitat, the presence of the project on island and the increased capacity has led to additional surveys being carried out and some emergency mitigation measures put in place.

### 3.4 Goal/ Impact: achievement of positive impact on biodiversity and poverty alleviation

The original goal of this project, within the application form, is *'Effective contribution in support of the implementation of the objectives of the Convention on Biological Diversity (CBD), the Convention on Trade in Endangered Species (CITES), and the Convention on the Conservation of Migratory Species (CMS), as well as related targets set by countries rich in biodiversity but constrained in resources'*.

The project is making a number of contributions to this goal as it has kick started invertebrate conservation on St Helena, establishing a baseline position to work from and improve standards of conservation. Preventing extinctions of the many endemics on St Helena, collection of data and other project outputs directly contributes to the objectives of the CBD (please see below for more detail).

Lack of capacity, skill and understanding on St Helena was a significant barrier to the delivery of invertebrate conservation. There has been a large but temporary increase in capacity with the recruitment of three staff members across SHNT and SHG. To make this more sustainable, training on island staff has been carried out and long term resources are being developed. The project is aiming for an increase in skill and capacity by working with and training SHG conservation staff so they are able to carry on invertebrate conservation once the project has finished. It will also help networks and relationships to be formed with invertebrate experts across the world for future support.

## 4. Project support to the Conventions (CBD, CMS and/or CITES)

The overall aim of the project is to directly prevent extinction of St Helena's endemic invertebrates and other rare invertebrates by protecting them from the threats of habitat degradation and loss. Each project output is designed to meet the purposes of articles 7, 8, 12 and 13. More detail is provided on this below and each output is linked to the appropriate CBD article. Please refer to questions 3.1 and 3.2 for progress of project outputs and associated evidence.

### **CBD Article 7 (Identification and Monitoring) Project indicator 1a, 1b, 1c, 1d, 1e, 3a, 3c**

This project is establishing a baseline for invertebrate conservation on St Helena (CBD 7a, project output 1). This includes monitoring and sampling the invertebrate biodiversity on island and identifying those species that require urgent attention (CBD 7a, project output 1). Information is being gathered so it is possible to understand the threats to these species to prevent extinctions of endemic species and inform future conservation work on the island. This information is being used to underpin the development of protected areas of habitat and protected species on St Helena (CBD 7a and project output 1).

Research being carried out by CEH is looking at the role of invertebrates within habitats on St Helena and once complete, is to be used to develop habitat restoration plans. It will help to develop a holistic approach to habitat conservation ensuring that all aspects of biological diversity are taken into account when making decisions (CBD 7 a, b, c and d, project output 3).

### **CBD Article 8 (In situ Conservation) Project indicator 1e, 2a, 2b, 2c, 2d, 2e, 3b, 4a, 4b**

St Helena has recently established a system of protected areas. A key aim of this project is to influence the management of these areas and restoration of fragile habitats as it will directly benefit invertebrate conservation and prevent further species extinctions (CBD 8 a, b, f, h and k). The species list created as part of project output 1 has been used as a basis for the development of protected species lists on St Helena (project output 1). This meets CBD article 8k.

The collection of species data has provided a definitive species list of the island and geographical information on where the species are located (project output 1). This can help to inform species specific management in the protected areas (CBD 8 a, b and f). Prior to this it was not known where the most threatened invertebrate species were so it was difficult to target management work. Work by CEH (output 3) will provide scientifically rigorous evidence on how invertebrates are contributing to St

Helena ecosystems and identify whether further special measures are required to conserve biological diversity (CBD 8f).

The UK Invertebrate Consultant has developed a resource summarising the invasive invertebrate species on St Helena. The biosecurity staff of SHG will be able to use this as a reference resource going forward. This will help the SHG to meet requirements of CBD Article 8h.

#### **CBD Article 12 (Research and Training) Project indicator 2a, 2c, 2d, 2e, 3b, 4a, 4b and 4c**

A central part to this project is the development of resources and the training of SHG conservation staff which meets CBD article 12 a. During 2013-14 a number of training courses have been run on invertebrate identification, conservation and biosecurity. To complement this, invertebrate guides and identifications keys are being produced that can be used by SHG staff and for educational purposes once the project has finished (project output 2 and CBD article 12 a).

CEH is training SHG conservation staff in techniques to assess plant fitness. A reference manual has been produced to do this and further guidance is planned this year. Part of the CEH work is to understand the role of invertebrates in the restoration of native ecosystems and research is being carried out.

#### **CBD Article 13 (Public Education and Awareness) Project indicator 4a, 4b, 4c**

To help ensure future conservation efforts are improved a programme of work is being undertaken with the schools on St Helena (output 4). A number of educational events have been run and an education toolbox is planned so that teachers can continue to run invertebrate educational sessions once the project has finished. Teachers will be trained in how to do this.

A permanent invertebrate collection is to be set up in 2014 which will provide a continuous resource for educational purposes. It will be free to access.

On island media work has also been successful. There have been six articles this year in local newspapers and one radio interview.

#### **Aichi Targets**

##### **Strategic Goal A: Address the underlying causes of biodiversity loss by mainstreaming biodiversity across government and society. (target 1)**

The underlying cause of biodiversity loss on St Helena is a lack of resources, skill and knowledge. This project is addressing this by increasing the resources on island to carry out invertebrate conservation work (output 1, 2, 3 and 4). A total of three full time members of staff are working on island to develop baseline datasets, integrate invertebrate conservation into the SHG work programmes and raise the profile of invertebrates in communities living on St Helena (output 1 and 4).

The Invertebrate Coordinator and UK Invertebrate Consultant have been working to understand knowledge gaps and provide training and resources for SHG conservation workers (output 2). This has included training on invertebrate identification and the development of resources for this to continue once the project has ceased, as well as information resources on the invasive invertebrate species on St Helena and the level of knowledge around these species (output 2). Over the next 12 months more resources will be developed and tested to ensure that the needs of islanders are met and that invertebrate conservation is focussed appropriately.

##### **Strategic Goal B: Reduce the direct pressures on biodiversity and promote sustainable use (targets 5, 7 and 9)**

A significant threat to biodiversity on St Helena is invasive species. The UK Invertebrate Consultant has provided an information resource to map the level of knowledge and possible ways to address the impacts of invasive invertebrates on St Helena. The Invertebrate Coordinator has run training on biosecurity for SHG staff and has also fed into the biosecurity strategy being developed by SHG (output 2). Species and habitat data gathered by the project is being fed into habitat restoration plans on island

to help refine and focus these plans (output 1 and 3). It has also been the basis for protected species legislation (output 1).

**Strategic Goal C: To improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity (target 12)**

With over 400 endemic invertebrate species on St Helena it is one of the most biodiverse places in the world. However lack of knowledge was causing many of the species to be on the brink of extinction. Work to establish a baseline species data set has been carried out and is underpinning future protective work, including IUCN red listing and protected species ordinance (output 1). The species data collected on island is assisting SHG in carrying out habitat restoration and management, reducing the pressure on vulnerable invertebrate species. Once IUCN red listing is complete there will be a comparable assessment of species threatened to further enable conservation work to be prioritised and focussed. The research being carried out by CEH will provide information on what role this diverse set of invertebrates has on island ecosystems (output 3). The long term goal is that both populations of rare and endangered invertebrates as well as their habitats become more resilient.

**Strategic Goal E: Enhance implementation through participatory planning, knowledge management and capacity building (target 19)**

Capacity to carry out invertebrate conservation on island has been significantly improved through this project. There has been an immediate benefit of increasing the number of people on island able to carry out invertebrate conservation, kick starting this on island. To ensure this effect is continued into the future training, and resources are being developed to upskill SHG employees and local communities (output 2).

There has been no interaction with host country focal points in the last 12 months.

**5. Project support to poverty alleviation**

n/a

**6. Monitoring, evaluation and lessons**

The monitoring and evaluation plan has not changed over the reporting period. Evaluation is carried out against 4 sets of measurable indicators (please see logical framework) for the project outputs. These have been translated into annual milestones, which feed into the means of verification for the project purpose. Progress against these indicators is reported quarterly to the steering group. The steering group can feed back on progress and are involved in decision making both during the meeting and when input is required.

**7. Actions taken in response to previous reviews (if applicable)**

The project has several initial set backs due to staff changes with partner organisations on island. Consequently were unable to clearly demonstrate how the project has progressed towards its purpose and outcomes. Through the half year report and this annual report we have included more evidence that should demonstrate the progress that has been made and the conservation benefits of this project.

**8. Other comments on progress not covered elsewhere**

The project has been enhanced over the last year. Output 3 has been refined, in particular the experimental work to better understand the role of invertebrates in the restoration of native ecosystems (output 3.1). Full details are provided in the evidence file.

A priority for this year is to produce invertebrate guides and identification keys. The need and audience for this has been assessed and a proposal produced to ensure that these resources are produced to time and budget. This is included in evidence file.

The project is designed to be sustainable through increasing skills on St Helena, in particular with conservation staff on island. It is hoped that within the ENRD conservation staff role descriptions will be altered to ensure that invertebrate conservation is fully recognised and can be carried on once the project comes to an end. Provision of resources on island such as invertebrate identification keys, guides and specimen collection will enable individuals to continue to learn about invertebrate conservation post 2015. It will also provide permanent resources that will be freely accessible to all.

Further refinement of the project exit strategy will take place over the next 12 months to ensure that sustainability is guaranteed. The newly appointed Government-based Invertebrate Coordinator will be working within the team that will continue invertebrate conservation once the project has ceased. Over the next 12 months it is intended that the Coordinator will assess any additional resources required and remaining skills gaps so that this project can try to fill them.

The construction of the airport on St Helena has provided many challenges and affected the morale of the on island team. This is discussed more fully in question 2.

The project does not face any particular risks.

## 9. Sustainability

Considerable effort has been made on island to promote the project. Please see question 3.2 and Annex 1 for further detail on this.

The project has been designed to be sustainable it is intended to review ongoing activities to ensure they will continue to benefit invertebrate conservation once the project has finished. Securing commitment from SHG that ENRD conservation staff will have a specific remit for invertebrate conservation is a key aim over the next 12 months. This will ensure that capacity is increased long term and there will be the opportunity to offer additional training to these staff members. It is intended to set up a specialist group to assist with the IUCN red listing which will provide a network of experts across the world to help guide conservation work in the future.

## 10. Darwin Identity

A Darwin Initiative acknowledgement and logo appears on all materials produced by the project: website, workshop manuals and proceedings, training guides and keys, school education packs, flyers advertising outreach events and on the museum display associated with the invertebrate reference collection. The DI is recognised as a distinct project rather than part of a larger programme of work on the island and is working in parallel with other Darwin Plus projects on the island.

## 11. Project Expenditure

**Table 1 project expenditure during the reporting period (1 April 2013 – 31 March 2014)**

Project spend since last annual report	2013/14 Grant (£)	2013/14 Total actual Darwin Costs (£)	Variance %	Comments (please explain significant variances)
Staff costs (see below)			0%	As anticipated
Consultancy costs			85.5%	UK Invertebrate Consultant required less than anticipated. Please refer to Evidence file with details of expenditure changes and change

				request for permission to do this
Overhead Costs			0%	As anticipated
Travel and subsistence			13.26%	Please refer to Evidence file with details of expenditure changes and change request for permission to do this
Operating Costs			10%	Budget allocated for conference attendance but this was not required and has been surrendered (Change request Evidence file). Freight for collections cabinet reduced and funds were put towards cabinet as it was more expensive than originally thought.
Capital items (see below)			229%	Collections cabinet was more expensive than originally thought. Funds were directed from website design (in 'others') to cover the costs. No permission required as less than 10% of total budget.
Others (see below)			75%	See above
<b>TOTAL</b>				

**12. OPTIONAL: Outstanding achievements of your project during the reporting period (300-400 words maximum). This section may be used for publicity purposes**

I agree for the Darwin Secretariat to publish the content of this section (please leave this line in to indicate your agreement to use any material you provide here)

Famous for being Napoleon Bonaparte's final place of exile, St Helena is also known as the 'Galapagos of the South Atlantic', due to its unique wildlife. Its wildlife has developed in extreme isolation and now St Helena hosts a staggering number of species, over 400, that are not found anywhere else in the world – it actually has more endemic species than the UK and all its other Overseas Territories put together. Unfortunately, many of St Helena's unique invertebrates are on the brink of extinction, literally hanging on in fragments of native habitat. Some of its most iconic species, like the Giant earwig (*Labidura herculeana*), are feared lost within living memory.

However thanks to the Darwin Initiative there are glimmers of hope. Buglife, the St Helena National Trust, Centre for Ecology and Hydrology and the St Helena Government are working in partnership to conserve what is left of the unique and threatened wildlife of the island. Major successes so far include the first definitive list of invertebrates making it possible to map rare and endangered invertebrates of St Helena, prevent further species extinctions and provide a basis for protected species legislation. Over the last 12 months the project has worked with over 200 local school children and communities to raise the profile of bugs, as well as training key local conservation staff in invertebrate conservation basics.

We hope that by improving information on rare and endangered bugs and teaching people about the vital role played by invertebrates we can bring many of these species 'back from the brink'.

## Annex 1: Report of progress and achievements against Logical Framework for Financial Year 2013-2014

Project summary	Measurable Indicators	Progress and Achievements April 2013 - March 2014	Actions required/planned for next period
<p><b>Goal:</b> To draw on expertise relevant to biodiversity from within the United Kingdom to work with local partners in countries rich in biodiversity but constrained in resources to achieve</p> <ul style="list-style-type: none"> <li>⇒ The conservation of biological diversity,</li> <li>⇒ The sustainable use of its components, and</li> <li>⇒ The fair and equitable sharing of the benefits arising out of the utilisation of genetic resources</li> </ul>			
<p><b>Purpose</b></p> <p>To halt the loss of St Helena's endemic invertebrates, by mainstreaming their needs within practical and strategic conservation management, ensuring legal protection and fostering increased awareness and understanding across wider society.</p>	<p>Invertebrate conservation capacity increased on St Helena.</p> <p>Target invertebrate habitats being appropriately managed and restored. Improved protection for endangered invertebrate species.</p> <p>Public engaged in invertebrate conservation through education and awareness programme.</p>	<p>Yes, this has increased significantly. Invertebrate Coordinator is embedded into island life, further government based staff member to start beginning of May 2014. 38 individuals have now been trained on 5 separate courses.</p> <p>The Invertebrate Coordinator has been feeding into habitat management plans for protected areas. Protected species legislation is being progressed by St Helena Government and training has been held for SHG staff carrying out conservation work.</p> <p>Education Officer in post although now on maternity leave. Over summer 2013 a variety of educational and public events we held. These have engaged 237 children. Educational resources have also been developed ready to roll out during 2014/15.</p>	<p>Invertebrate guides and IUCN red listing are priorities over the next 8-12 months.</p> <p>Training of Government based invertebrate officer by UK Invertebrate Consultant.</p> <p>CEH research and further protocol guidance to help guide management and also as a basis for training on island staff.</p> <p>Increased influencing of habitat management plans to benefit invertebrates using data and resources that are being developed by this project.</p> <p>Training teachers in use of education pack and loan box.</p>
<p><b>Output 1</b></p> <p><b>Invertebrate conservation requirements quantified and incorporated within environmental management framework and legal</b></p>	<p>a) Invertebrate conservation included as a core activity within Nature Conservation Division</p> <p>b) Invertebrate species data collated and integrated with the St Helena Environmental Information System</p>	<p>A success this year was establishing a baseline invertebrate data set. Not only has this facilitated further survey across the island historical data has been collated. During surveys location data was taken which is enabling species management techniques to be refined.</p> <p>All indicators are still appropriate for this output.</p>	

<p><b>protections.</b></p>	<p>(SHEIS), by year 1.</p> <p>c) New Protected Areas Network provides protection to endangered invertebrates, by year 3.</p> <p>d) List of endemic invertebrates assessed for status using IUCN criteria, by year 3.</p> <p>e) Invertebrates protected under endangered species legislation.</p>	
<p>Activity 1.1 - Incorporating invertebrate conservation as a core conservation activity within Nature Conservation Division (NCD).</p>		<p>NCD has been restructured and is the Environmental and Natural Resource Directorate (ENRD).</p> <p>New role to be based within ENRD has been recruited and is due to start 1<sup>st</sup> May 2014. This is the Government-based Invertebrate Officer. This is the mechanism to enable invertebrate conservation to become a core activity over the next 12 months.</p> <p>Shayla Ellick (ENRD Species Conservation and Environmental Research Officer, with responsibility for invertebrates) is part of steering group and is vital link back to ENRD.</p> <p>Government staff have also been trained.</p>
<p>Activity 1.2 - Collating existing invertebrate data and integrating them with the St Helena Environmental Information System, producing mapping for Protected Areas Network.</p>		<p>Species list compiled with geographically referenced data. Integration with SHG database is imminent but currently waiting on SHG. Once GIS staff is in place within the SHG integration of data can take place and location of species can be mapped. It is intended that once this has been carried out the Government-based Invertebrate Officer will be able to work closely with other ENRD staff to ensure this data is embedded in decision making processes.</p>
<p>Activity 1.3 - Assessing conservation status of endemic invertebrates under IUCN criteria and placing threatened species on Endangered Species Ordinance.</p>		<p>This has been started and is a priority for year 3. Invertebrate Coordinator and UK Invertebrate Specialist are piloting the red listing on selected species and this will be rolled out across other species in 2014-15.</p> <p>The scope of the Specialist group is currently been reviewed and the exact parameters of the group established. Once this has been completed the group will be set up.</p>
<p><b>Output 2.</b></p> <p><b>A training programme delivered to increase local capacity and skills in invertebrate conservation.</b></p>	<p>a) 6 conservation staff trained in invertebrate biodiversity conservation and habitat management techniques, years 1-3.</p> <p>b) Local Invertebrate coordinator trained in conservation best-practice by year 2.</p> <p>c) Invertebrate reference collection supporting training in identification, established in year 1.</p> <p>d) Introductory invertebrate guides and</p>	<p>32 participants in four training courses over the last 12 months.</p> <p>Local invertebrate coordinator in post and trained.</p> <p>This is in progress but not to be achieved by year 1 due to problems with specimen storage and a place to have the collection. However should be in place by the end of this year.</p> <p>This has been started and a delivery plan for the guide has been drawn up available in evidence file.</p>

	<p>keys produced to facilitate outdoor learning, by year 3.</p> <p>e) Online invertebrate website providing technical information and images, by year 3.</p>	<p>Information website in place and further resources are planned.</p> <p>All indicators are appropriate for this output.</p>
Activity 2.1 - Training in invertebrate biodiversity conservation and habitat management for invertebrate coordinator and conservation staff.		Four training events have taken place over the last 12 months with a total of 32 participants over the four courses. The majority of these participants were SHG conservation staff.
Activity 2.2 - Building invertebrate specimen reference collection.		Cabinet for collection purchased and this can be populated over the next 12 months with reference collection. The Invertebrate Coordinator is leading on this and has previous museum experience. This will be invaluable in setting up the collection correctly. Once complete the collection will be publicised.
Activity 2.3 - Producing introductory guides and keys for invertebrates.		It is intended to produce a guide of the invertebrates on St Helena in pdf form so it is free and available to all. This will be supplemented with identification keys for more technical use. A proposal for this has been drawn up and a priority for this year is completing this activity.
Activity 2.4 - Designing and creating website for invertebrate information.		<p>A website with information about the project has been set up.</p> <p>Website address: <a href="http://www.nationaltrust.org.sh/shnt-conservation-programmes/natural-heritage/bugs-on-the-brink-our-invertebrates/">http://www.nationaltrust.org.sh/shnt-conservation-programmes/natural-heritage/bugs-on-the-brink-our-invertebrates/</a>.</p> <p>There is also a Buglife website detailing the project: <a href="http://www.buglife.org.uk/campaigns-and-our-work/conserving-unique-invertebrates-st-helena">http://www.buglife.org.uk/campaigns-and-our-work/conserving-unique-invertebrates-st-helena</a></p> <p>These will be updated as necessary over the life of the project.</p>
<p><b>Output 3.</b></p> <p><b>Ecosystem restoration on St Helena informed by and incorporating invertebrate requirements.</b></p>	<p>a) A study to understand and quantify the role of invertebrates in the successful restoration of native ecosystems, years 1-3.</p> <p>b) 5 conservation staff trained in methods for assessing plant fitness and regeneration by year 1.</p> <p>c) Invertebrate conservation best practice included in all Ecosystem Restoration Plans by year 2, and informing NCD and SHNT work programmes.</p>	<p>Initial scoping study has been carried out and a refined research proposal for this output has been included in evidence file.</p> <p>Training has been carried out with SHG staff and is due to continue during the next visit to St Helena (September 2014). Handbook on plant fitness has been produced and further guidance is planned for this year. Once training is complete and guidance materials are available SHG will more easily be able to incorporate invertebrate best practice into restoration plans and also ongoing work plans.</p> <p>All indicators are appropriate for this output.</p>
Activity 3.1 - Understanding and quantifying the role of invertebrates in the restoration of native ecosystems, based on a field study of regeneration in endemic trees.		Work towards this activity started as anticipated in 2013/14 however during reconnaissance visit it became apparent that the original experimental plan would not be actionable. As a result this has been revised. A visit by Alan Gray (CEH) is due in September 2014 and studies will be continued. Please see evidence file for full study proposal.
Activity 3.2 - Restoration ecology training: 5 conservation staff trained in methods for assessing plant fitness and regeneration & production of research protocols.		Initial training has been held with 6 SHG staff attending the workshop. Further training is planned for this year when CEH staff member is on St Helena.

		A plant fitness reference manual has been produced and short guidance will be produced from this over the next 12 months.
Activity 3.3 - Preparing new editions of Ecosystem Restoration Plans for target habitats.		Due to start year 3 onwards and it is intended that shorter, easy to use guidance will be produced so that SHG staff can easily interpret the plant fitness reference guide.
Activity 3.4 - Disseminating and publishing study outputs.		This was due to start Q3 2013-14 but has been delayed due to revision of activity 3.1.
<b>Output 4.</b> <b>A programme of education and awareness raising about invertebrates and their ecosystem services, to increase public support and engagement.</b>	<ul style="list-style-type: none"> <li>a) All island schools providing indoor and outdoor opportunities for learning about invertebrates, years 1-3.</li> <li>b) 12 teachers trained in use of education pack and loan box, year 2.</li> <li>c) More than 75% of islanders exposed to invertebrate conservation issues and positive attitudes to invertebrates instilled.</li> </ul>	<p>Primary schools have been the focus of work but this will be expanded over the next 12 months. Educational events and schools work has engaged 237 children across the island and is proving successful.</p> <p>Maternity leave has prevented the development for the education pack and loan box but this is a priority once the Education Officer returns from maternity leave.</p> <p>It is estimated that 50% of islanders are aware of the project at this point in the project. Over the next 12 months it is intended to evaluate and measure this figure to ensure we are reaching target audiences.</p> <p>All indicators are appropriate for this output.</p>
Activity 4.1 - Providing all island schools with indoor and outdoor opportunities for invertebrate learning.		On island there are three primary and two secondary schools. Work so far has focussed on the primary schools and has been very successful. The education Officer has been on maternity leave from December 2013 to May 2014 so activities have been on hold. Once she is back it is intended to work more with secondary schools.
Activity 4.2 - Training teachers in use of education pack and loan box.		<p>The Education Officer has continued to work on the environmental education pack and is currently looking at ways to work collaboratively with the Community Forest Project and also scope how this education work could be included in the school curriculum.</p> <p>This is to commence May 2014 onwards due to project staff being on maternity leave.</p>
Activity 4.3 - Awareness raising through the media and outreach events and disseminating project results.		<p>There has been a range of media and awareness raising during the project. In summary four outreach events have been attended. Six on island newspaper stories have been printed and the invertebrate Coordinator took part in an hour long radio interview.</p> <p>In the UK a press release was circulated in June 2014 to announce the start of the project. There has been a feature within an Overseas Territory RSPB report and also the Buglife newsletter and annual review.</p>

## Annex 2 Project's full current logframe

Project summary	Measurable Indicators	Means of verification	Important Assumptions
<p><b>Goal:</b> Effective contribution in support of the implementation of the objectives of the Convention on Biological Diversity (CBD), the Convention on Trade in Endangered Species (CITES), and the Convention on the Conservation of Migratory Species (CMS), as well as related targets set by countries rich in biodiversity but constrained in resources.</p>			
<p><b>Sub-Goal:</b> To improve the conservation status of St Helena's endemic invertebrates, protecting them from the threats of habitat degradation and loss.</p>	<p>Threatened invertebrate species on Prosperous Bay Plain, Millennium Forest, Peak Dale and High Peak with maintained presence.  Prosperous Bay Plain, Millennium Forest, Peak Dale and High Peak being appropriately managed and restored.</p>	<p>Nature Conservation Division (NCD) annual monitoring report; IUCN status  NCD habitat assessments.</p>	
<p><b>Purpose</b> To halt the loss of St Helena's endemic invertebrates, by mainstreaming their needs within practical and strategic conservation management, ensuring legal protection and fostering increased awareness and understanding across wider society.</p>	<p>Invertebrate conservation capacity increased on St Helena  Target invertebrate habitats being appropriately managed and restored.  Improved protection for endangered invertebrate species.  Public engaged in invertebrate conservation through education and awareness programme</p>	<p>New invertebrate coordinator in post; 6 conservation staff trained;  NCD and SHNT work plans include invertebrate activities; invertebrate conservation best practice included in all Ecosystem Restoration and Protected Area plans  Threatened species red-listed under IUCN criteria; list of threatened invertebrates included on Endangered Species Ordinance; Protected Areas management plans include invertebrate requirements.  Education officer in post; outreach and classroom sessions.</p>	<p>St Helena Government (SHG) enacts commitments to establish new Nature Conservation Division and network of Protected Areas.  SHG maintains current funding levels for conservation.</p>
<p><b>Output 1</b>  Invertebrate conservation requirements quantified and incorporated within environmental management framework and legal</p>	<p>1a) Invertebrate conservation included as a core activity within Nature Conservation Division  1b) Invertebrate species data collated and integrated with the St Helena Environmental Information System (SHEIS), by year 1.</p>	<p>NCD work plan includes invertebrate conservation activities; 6 conservation staff trained.  SHEIS database includes 60% of existing invertebrate data.  Invertebrate species mapping included as supporting information in the management</p>	<p>SHG maintains commitment to include invertebrate conservation in new Nature Conservation Division.  International museums</p>

<p>protections.</p>	<p>1c) New Protected Areas Network provides protection to endangered invertebrates, by year 3.</p> <p>1d) List of endemic invertebrates assessed for status using IUCN criteria, by year 3.</p> <p>1e) Invertebrates protected under endangered species legislation.</p>	<p>plans for all proposed Protected Areas.</p> <p>Specialist group set up; list of potential red list species online and submitted for expert review.</p> <p>List of threatened invertebrates included on Endangered Species Ordinance by year 3.</p>	<p>with St Helena material permit access to collections.</p> <p>IUCN specialist group supported by other Overseas Territories.</p>
<p><b>Output 2</b></p> <p>A training programme delivered to increase local capacity and skills in invertebrate conservation.</p> <p><b>Output 2 cont.</b></p>	<p>2a) 6 conservation staff trained in invertebrate biodiversity conservation and habitat management techniques, years 1-3.</p> <p>2b) Invertebrate co-ordinator trained in conservation best-practice by year 2.</p> <p>2c) Invertebrate reference collection supporting training in identification, established in year 1.</p> <p>2d) Introductory invertebrate guides and keys produced to facilitate outdoor learning, by year 3.</p> <p>2e) Online invertebrate website providing technical information and images, by year 3.</p>	<p>Report on training sessions and evaluation by invertebrate co-ordinator.</p> <p>Multi-level assessment by invertebrate specialist.</p> <p>Collection set up; identification skills assessment of NCD staff by co-ordinator. Fold-out guides produced and available on island.</p> <p>Website for invertebrate fauna online.</p>	<p>Existing levels of conservation staff retention continue within new NCD structure.</p>
<p><b>Output 3</b></p> <p>Ecosystem restoration on St Helena informed by and incorporating invertebrate requirements.</p>	<p>3a) A study to understand and quantify the role of invertebrates in the successful restoration of native ecosystems, years 1-3.</p> <p>3b) 5 conservation staff trained in methods for assessing plant fitness and regeneration by year 1.</p> <p>3c) Invertebrate conservation best practice included in all Ecosystem Restoration Plans by year 2, and informing NCD and SHNT work programmes.</p>	<p>Annual reports on endemic forest regeneration and roles of associated invertebrate assemblages, in 3 target habitats.</p> <p>Handbooks on research protocols; training evaluated by Centre for Ecology and Hydrology.</p> <p>Publication of analyses in peer-reviewed articles.</p> <p>New editions of Ecosystem Restoration Plans for target habitats; NCD and SHNT work programmes include invertebrate</p>	<p>External support can be accessed for invertebrate species identification.</p>

		conservation activities.	
<p><b>Output 4</b></p> <p>A programme of education and awareness raising about invertebrates and their ecosystem services, to increase public support and engagement.</p>	<p>4a) All island schools providing indoor and outdoor opportunities for learning about invertebrates, years 1-3.</p> <p>4b) 12 teachers trained in use of education pack and loan box, year 2.</p> <p>4c) More than 75% of islanders exposed to invertebrate conservation issues and positive attitudes to invertebrates instilled.</p>	<p>New modules in environmental education pack; quarterly 'bug clubs'; annual outdoor events.</p> <p>Training session evaluation.</p> <p>Monthly local media coverage; tri-annual public outreach events.</p> <p>Project information disseminated internationally through printed, broadcast and web-based media.</p>	<p>Curriculum retains biodiversity/natural sciences strand.</p>

## Annex 3 Standard Measures

**Table 1 Project Standard Output Measures**

Numbers in blue are planned outputs.

Code No.	Description	Year 1 Total	Year 2 Total	Year 3 Total	Year 4 Total	Total to date	Number planned for reporting period	Total planned during the project
Established codes								
5	Number of people to receive at least one year of training (which does not fall into categories 1-4 above)	0	1	1	0	1	1	2
6A	Number of people to receive other forms of education/training (which does not fall into categories 1-5 above)		8	8	9	38	8	25
6B	Number of training weeks to be provided	8	2			10	2	24
7	Number of (i.e. different types - not volume - of material produced) training materials to be produced for use by host country		2	2	1	2	2	5
8	Number of weeks to be spent by UK project staff on project work in the host country	8		4		8	0	6
9	Number of species/habitat management plans (or action plans) to be produced for Governments, public authorities, or other implementing agencies in the host country		2	2	2	2		4
10	Number of individual field guides/manuals to be produced to assist work related to species identification, classification and recording		2			4	2	2
11A	Number of papers to be published in peer reviewed journals			1	1	0	0	2
11B	Number of papers to be submitted to peer reviewed journals (additionally to published)				2	0	0	2
12B	Number of computer based databases to be <b>enhanced</b> and handed over to host country		1			1	1	1
13A	Number of species reference collections to be <b>established</b> and handed over to host country(ies)			1		0	0	1

14B	Number of conferences/seminars/workshops <b>attended</b> at which findings from Darwin project work will be presented/disseminated.		1	1	2	1	1	4
15A	Number of national press releases in host country(ies)	2	2	2	3	2	2	9
15C	Number of national press releases in UK		1	1	1	1	1	3
16A	Number of newsletters to be produced		2	2	2		2	6
16B	Estimated circulation of each newsletter in the host country(ies)					20	0	20
16C	Estimated circulation of each newsletter in the UK		1,500			1 newsletter		30
17A	Number of dissemination networks to be <b>established</b>			1			0	1
17B	Number of dissemination networks to be <b>enhanced/extended</b>			1			0	1
18B	Number of national TV programmes/features in UK				1	0	0	1
19A	Number of national radio interviews/features in host county(ies)	1	1	2	1	1	2	6
19B	Number of national radio interviews/features in UK				1	0	0	1
20	Estimated value (£'s) of physical assets to be handed over to host country(ies)					£22,608		£22,608
21	Number of permanent educational/training/research facilities or <b>organisations</b> to be established and then continued after Darwin funding has ceased			1		0	0	1
22	Number of permanent field plots to be established during the project and continued after Darwin funding has ceased			6	6		0	12
23	Value of resources raised from other sources (ie in addition to Darwin funding) for project work					£89,338	0	£89,338

**Table 2 Publications**

Type (eg journals, manual, CDs)	Detail (title, author, year)	Publishers (name, city)	Available from (eg contact address, website)	Cost £
Website	David Pryce – Invertebrate Coordinator	n/a	<a href="http://www.nationaltrust.org.uk/shnt-conservation-programmes/natural-heritage/bugs-on-the-brink-our-invertebrates/">http://www.nationaltrust.org.uk/shnt-conservation-programmes/natural-heritage/bugs-on-the-brink-our-invertebrates/</a>	0

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**Annex 4 Onwards – supplementary material (optional but encouraged as evidence of project achievement)**

Supplementary evidence is greater than 10MB so files are being posted on a CD. Within these files a sample of project outputs and resources has been included. They referenced to the project output they relate to.

**Checklist for submission**

	Check
<b>Is the report less than 10MB?</b> If so, please email to <a href="mailto:Darwin-Projects@ltsi.co.uk">Darwin-Projects@ltsi.co.uk</a> putting the project number in the Subject line.	No
<b>Is your report more than 10MB?</b> If so, please discuss with <a href="mailto:Darwin-Projects@ltsi.co.uk">Darwin-Projects@ltsi.co.uk</a> about the best way to deliver the report, putting the project number in the Subject line.	Yes, agreed to send CD with supplementary documents
<b>Have you included means of verification?</b> You need not submit every project document, but the main outputs and a selection of the others would strengthen the report.	Yes
<b>Do you have hard copies of material you want to submit with the report?</b> If so, please make this clear in the covering email and ensure all material is marked with the project number.	No
Have you involved your partners in preparation of the report and named the main contributors	Yes
Have you completed the Project Expenditure table fully?	Yes
Do not include claim forms or other communications with this report.	