



Department  
for Environment  
Food & Rural Affairs



Foreign &  
Commonwealth  
Office



Department  
for International  
Development



## **Darwin Plus: Overseas Territories Environment and Climate Fund Annual Report**

**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<sup>th</sup> April 2018**

### **Darwin Plus Project Information**

Project reference	DPLUS059
Project title	Establishment of the national framework for invasive plant management
Territory(ies)	St. Helena, South Atlantic Ocean
Contract holder institution	Environment and Natural Resources Directorate, St Helena Government
Partner institutions	St Helena National Trust
Grant value	£114,025
Start/end date of project	April 2017
Reporting period (e.g., Apr 2016-Mar 2017) and number (e.g., AR 1,2)	April 2017 to March 2018
Project leader name	Derek Henry & Darren Duncan
Project website/blog/Twitter	N/A
Report author(s) and date	Ludi Kern & Darren Duncan 30 April 2018

### **1. Project overview**

The project addresses the St Helena Island Government priorities of invasive species management, adaptation to climate change, and building local capacity.

Invasive plant species are one of the biggest challenges for the management of National Conservation Areas (NCAs) and the conservation of endemic species in St Helena. They affect all sectors and an overall lack of coordination of effort between sectors results in rapid reinvasion from untreated neighbouring areas, with further expenditure of limited resources; SHG and SHNT together currently spend around £ a year on frequently inefficient weed management activities. Climate change will exacerbate the problem, as new invasive plant species establish, existing species change range, and new species initiate population explosions. The small scale of the island indicates that an innovative landscape scale management approach should form the basis of an invasive plant management strategy.

The project aims to build local capacity among all stakeholders, fill knowledge gaps through adaptive management trials, and engage the local community in order to develop and implement this strategy. A national coordination framework with a local position will be established, and long term monitoring programme initiated. Lessons learned will be shared regionally, as many of the priority species are problems in other South Atlantic UKOTS.



Fig 1: Location of St Helena Island.

## 2. Project stakeholders/partners

The following stakeholders, departments and organisations have been involved in the project so far;

- ANRD Forestry sector: Consultations and site visits were done to identify key problem invasive plant species and priority areas. The aim was to better understand the specific challenges Forestry sector faces regarding invasive plants and gather information about past work, issues and lesson they've learnt that can be applied elsewhere.
- ANRD Agriculture sector: Consultations and site visits were done to identify key problem invasive plant species and priority areas. Agriculture sector assisted with setting up meetings with farmers to discuss key issues and find suitable field trial locations (see Annex 3C).
- Environmental Management Division (EMD), Waste Management: Safe removal, transport and disposal of green waste are crucial for effective invasive plant management. To better understand the current methods of green waste management, we conducted site visits to the landfill and discussed past, current and potential future challenges. The manager from Waste Management will be involved in developing best practice guidelines for green waste management.
- Environmental and Natural Resources Directorate (ENRD) Roads Sector: We conducted site visits where we were shown what the challenges are when controlling invasive plants along roads and which methods are currently being used. Managers from roads sector will be involved in developing best practice guidelines for green waste management.
- Environmental Management Division (EMD): Site visits to conservation areas (Diana's Peak, Peak Dale). Terrestrial Conservation Officer took us on site visits where the key problem areas and species were pointed out. The two of our staff members (Weed Busters) assisted in removing invasive plants (Flax and pheasant tailed fern) in Diana's Peak during March 2018 (see Annex 3C and section 3.4).
- ANRD Biosecurity: Collaborative working relationship exists between Biosecurity and Darwin Plus-059. The project assists in identification of potential new introductions. Once a species has been identified as a risk, we develop appropriate control measures. Occurrence of any potential new incursions is shared. We will also participate in the introductory team meeting focussing on 'Improving biosecurity in the SAUKOTs through Pest Risk Assessments' on May 3<sup>rd</sup> 2018.
- ENRD Landscape and Ecological Mitigation Programme (LEMP): Site visits and consultation were done with LEMP regarding key issues, species and priority areas. We assisted LEMP with the removal of non-native species at the airport and runway. Joined the team to aid in identification, appropriate removal and disposal of plant material. When selecting locations to test control trials on fountain grass (one of their high risk species) we consulted LEMP as to where the best/highest impact area would be to conduct trials.
- SNCG BEST Project: Attended and contributed to the SNCG BEST 'Restoration of Gumwoods at Peak dale' workshop aimed at developing a management plan for the area. Peak dale houses the largest natural stand of critically endangered Gumwoods

(*Commidendrum robustum*) on island and their associated native invertebrate populations. The site is under threat from encroaching invasive flora such as Wild mango, rodents (rats and mice) which ring bark branches and invertebrate pests mainly the jacaranda bug that caused much wide spread damage in 1993 leading to introduction of the White spotted ladybird (See Annex 3E).

- Farmer's Association: Project information session was held at one of the monthly farmer's association meeting.
- Farmers: Farmers were contacted and consulted on key issues and past experience as well as selecting areas where control trials can be conducted without affecting their work. Deadwood Plain is one of the areas chosen to test control methods on bull grass. Local knowledge plays a crucial role in monitoring invasive plants, where they occur and how they have spread over time.
- Darwin Plus-052: We attended workshops by Katie Medcalf from Environment Systems and John Scullion from Aberystwyth University as part of DPLUS052 (Mapping St Helena). Topics included Remote Sensing, Habitat mapping and utilising maps for habitat monitoring. These maps and methods can be very useful tools for monitoring and surveying invasive plants and spread over time.

### 3. Project Progress

Whilst progress on the project has been significantly slower than planned and delays in staff recruitment have really affected the project plans and timescales, progress has been made in achieving the targets.

One change request has been submitted and awaiting consideration. Once we know if the extension of the project has been granted, we can adapt our timescales that will to achieve the outcomes of the project.

#### 3.1 Progress in carrying out project Activities

**Activity 1.1: Recruit invasive plant management officers.** Recruiting invasive plant officers proved to be challenging. The position for the local Invasive Plant Officer was advertised in the appropriate media on St Helena and sufficient time was allocated for applications. Limited number of applications was received and only two candidates were shortlisted for the interviews. The position for IPO was offered to Cynthia Llas who left the island shortly after being appointed. It was decided that re-advertising the position on Island would most likely yield the same results and could lead to additional delays. To avoid further delays, the original requirements for the IPO position were revised to lower the qualification, essential skills and experience needed. Also, we decided that instead of hiring a full time IPO and WB, we entered into an agreement with the partner organisation (St Helena National Trust) to provide the required services for the revised Invasive Plant Support Officer (IPSO) and two Weed Busters.

**Activity 1.2: Recruit a Weed Busters team.** Completed March 2018. See Activity 1.1. An agreement was entered with the partner organisation (St Helena National Trust) to provide the required services for the revised Invasive Plant Support Officer (IPSO) and two Weed Busters.

**Activity 1.3: Establish multi-sector steering group for national invasive plant management oversight.** Steering group not established. We aim to establish this steering group in May 2018.

**Activity 1.4: Hold a stakeholder workshop to develop the strategic invasive plant management framework.** Once first draft of the framework has been completed, a workshop with all relevant stakeholders will be held.

**Activity 1.5: Review existing invasive plant related legislation.** This is an on-going process and planned for the second year of the project.

**Activity 1.6: Undertake a global review of all aspects of invasive plant management for significant species.** A global review of the priority species is in progress. We continually check for any new research and/findings on these significant species. Reviewing these key species is an important part of the risk assessment process. Based on the data available, current occurrence in areas climatically similar to St Helena, distribution on the island and the

introduction history (usually obtained from local knowledge or Plants of St Helena book by Phill Lambdon), we can assess the risk a species poses and whether it should become a priority species or that it does not pose an immediate threat.

**Activity 1.7:** Identify major pathways of spread of nationally significant invasive plant species and appropriate management actions for associated pathways. Pathway Analysis for St Helena was completed in October 2017 by Dr. Jill Key (Overseas Territories Project Manager APHA), with contributions from (ANRD) Darren Duncan invasive Plants Specialist (Ludi Kern), Biosecurity Officer (Julie Balchin). See Annex 3A.

**Activity 1.8:** Develop simple and practical survey protocols to monitor priority invasive plant species. General survey protocols have been developed for monitoring occurrence; abundance and distribution of targeted species (see Annex 3C). In addition to these field survey protocols, we will develop long-term monitoring methods using remote sensing and habitat mapping.

**Activity 1.9:** Develop national Invasive Plant Management Strategy, based on the results of Activities 1.4 to 1.8.

This activity is on-going.

**Activity 2.1:** Design and implement a public awareness and education programme.

Awareness activities thus far include:

- Awareness material in the form of posters have been displayed as part of the Biosecurity awareness week, at the yearly Career's fair held at Prince Andrew School and at the Farmer's Day exhibition under ANRD.
- Introduction and overview of the project at one of the monthly Farmer's association meetings.
- Project overview and objectives presentation and St Helena Nature Conservation Group Annual General Meeting.
- Talk about invasive plants and the project at Prince Andrew School as part of the Career's fair.
- Project progress update to the Chamber of Commerce
- One article published in two newspapers introducing the project.
- Three radio segments focussed on invasive plants, what they are and why we should control the spread.

A Weeds Awareness Week is planned for June 2018 where we will have activities, discussions, workshops and volunteer opportunities.

**Activity 2.2:** Deliver invasive plant workshops on identification and area wide management for conservationists, land managers, farmers and forestry workers, and the general public. A workshop is schedule for May 2018 aimed at discussing the suggested Best Practice Guidelines for the safe removal, transport and disposal of green waste. Stakeholders invited to contribute include the Roads sector, Waste Management, Forestry and Agriculture.

During the Weeds Awareness Week we will host several invasive plant workshops. These workshops will be looking at what to plant instead of invasive plants ('Plant me instead'), utilisation of weeds (i.e. making rodent traps out of bamboo), and how the public can help fight weeds.

**Activity 2.3:** Deliver training courses on safe use of pesticides. This output can currently not be achieved as there is no one qualified on the island to hold safe use of pesticide courses. This will require a person to come to the island or someone be sent off island for training to become a trainer. Depending on whether ENRD can fund a trainer in year 2 and demand for training, this indicator is not valid anymore.

**Activity 2.4:** Run invasive plant awareness week.

Weeds Awareness Week schedule for June 2018. Planning in progress and workshop will be held to get input and suggestions from stakeholders, educators and public on a suitable date and any other suggestions for activities or materials.

**Activity 3.1:** Carry out trial area-wide annual whiteweed (*Austro eupatorium inulifolium*) control campaign, coordinated across all relevant sectors. Potential sites for control trials are being investigated.

**Activity 3.2:** Design and carry out trials for the cost-effective management of wild mango (*Schinus terebinthifolius*). No trials have been done on *Schinus* however; we have been corresponding with Dr. S.G. Compton from the University of Leeds and visiting Professor to the Department of Zoology and Entomology at Rhodes University, South Africa on potential biocontrol options for *Schinus terebinthifolius*. Dr. Compton visited Bermuda to discuss possible biocontrol use of seed predators for *Schinus* and another invasive species. As a result of his visit to Bermuda, the conservation/parks people there are putting a proposal to government to sanction the principle of using biocontrol. Once that passes, he will be invited to provide formal applications for the two seed eating wasps he is working on. He has suggested that it would be useful if the research work on the *Schinus* biocontrol agent could somehow run in parallel for the two OTs. The agents offer the prospect of slowing down rates of spread that can contribute to limiting spread of *Schinus* on St Helena. Additionally he is supervising a master's student in South Africa working on the wasp (*Megastigmus*) that eats *Schinus* (and *Rhus*) seeds. To examine the potential of this biocontrol agent requires collection of *T. Schinus* fruits and some island based field work (see Annex 3D).

**Activity 3.3:** Carry out targeted removal of African fountain grass (*Pennisetum setaceum*) in the upper Sandy Bay area. Weather conditions restricted access to Upper Sandy bay area during the time schedule in the work plan. An additional isolated satellite population was identified in area where endemics occur for trials. First round of removal has been completed and follow up monitoring and removal is schedule in six weeks (see Annex 3C).

**Activity 3.4:** Design and carry out trials for the cost-effective management of pheasant tail fern (*Nephrolepis cordifolia*). Control trials in Plantation forest was conducted on 8 February 2018. Methods tested included manual digging and turning over the plant material as well as removing bulbs from the soil. Follow up monitoring was done on 14 March 2018. Pheasant tailed fern occurrence was surveyed in Diana's Peak conservation area and targeted manual removal by pulling out the plants, putting the material in bags and taken to the landfill site for disposal. The two trials areas were selected to represent at least two different land use types. Results from the two trials will be shared with relevant stakeholders and future control options will be discussed as part of the development of Best Practice Guidelines for the control of pheasant tailed fern.

**Activity 3.5:** Design and carry out trials for the cost-effective management of creeping fuchsia (*Fuchsia coccinea*). Trials are planned to start in May after stakeholder input and suggestions. A site visit has been schedule to High Peak and Peak Dale with partner organisation National Trust, Rebecca Cairns-Wicks, IPS and IPSO. Based on the outcome of the site visits and consultation, we will develop a suitable control trial.

**Activity 4.1:** Review and refine the Weed Control Manual for managing nationally significant invasive plants. Review and refinement of the Weed Control manual is progress. Based on results and data from control trials, final refinements will be completed and sent to relevant stakeholders for their input.

**Activity 4.2 and 4.3:** Establish and implement best practice guidelines for minimising invasive plant spread including: First draft is currently being developed. A workshop focussing on green waste is scheduled for the first week in May 2018.

**Activity 4.4:** Share lessons learned across other SA UKOTs and the wider invasive plant management community. Correspondence with conservationists on Ascension Island regarding key invasive species and their challenges faced. An informal meeting with RSPB representatives where we gave an overview of the project and discussed potential information and experience sharing between different UKOTs.

Activities 5.1 to 5.4 are on-going and planned for this year.

### **3.2 Progress towards project Outputs**

Output 1. Dedicated invasive plant management team operational, and steering group appointed and operational, by June 2017.

A Steering group will be formed for next period as a small management function now in place (see section 3.1 and Activity 1.1).

Output 2. Community, industry, Government and land managers engaged in invasive plant management.

As part of Weeds Awareness Week several workshops will be held. Topics include: Safe removal, storage, transport and disposal of green waste resulting from invasive plant removal, 'Plant me instead', utilising invasive plants and 'How can you help'. One article has been published in newspapers and 3 radio segments on invasive plants done. Weeds Awareness Week will be held in June 2018. There has been on-going consultation and coordination between sectors and SHNT in developing invasive plant management plans.

Output 3: Strengthened local capacity to manage priority invasive plants.

Due to the previously mentioned delays in staff recruitment, resulted in delays in trials testing different control methods for the selected priority species. Additional high priority species were identified (bull grass) and work conducted in areas where it is a serious problem to aid in restoring pasture land and help farmers effectively manage their pasture land. Control trials have been initiated on 3 of the five priority species (*Pennisetum setaceum*, *Nephrolepis cordifolia*, *Fuchsia coccinea*) and additional trials. Trials are on-going. Assisted with Diana's Peak invasive plant removal (flax and pheasant tailed fern). Priority areas to target for trials on Fuchsia have been identified. Site visit scheduled for 4 May 2018 (see Annex 3C).

Output 4: Improved knowledge for invasive plant management strategies and tactics.

Once we have tangible results from trials and workshops, the information will be available on the Invasive plant webpage on the SHG website. Best practice guidelines will be distributed as well as information leaflets on key topics and priority species.

Output 5: Nationally significant invasive plant species under innovative and cost-effective management.

Planned for this year.

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

Outcome: Island capacity to manage invasive plants at the landscape level improved, enabling restoration of endemic habitats to safeguard the endemic wildlife of St Helena, and to support food security.

All major invasive plant stakeholders actively involved in planning for, monitoring and reviewing national invasive plant management initiatives by January 2019. Continual engagement with all relevant stakeholders to identify priority species, priority areas for work, share past experience and highlight key issues.

Continue building collaborative working relationships through information sharing, workshops, reviewing project implementation progress and participation in the management decision process.

Standardized monitoring survey methods are being developed. Collaborative information sharing is in place with ENRD-led Darwin Plus project "Mapping St Helena's Biodiversity and Natural Environment" to utilise vegetation maps and remote sensing to monitor invasive plant occurrence, abundance and distribution.

Continue to improve and update monitoring tools maps with data and results. Utilise maps to identify which species have increased, where to identify key species and areas to target as well as make future predictions based on spread to aid management decisions

Two major affecting factors have been the delay in the commencement of the project due to Invasive Plant Specialist (IPS) only arriving on-Island at end of June and difficulties in recruiting a local qualified Invasive Plant Officer (IPO).

### **3.4 Project support to environmental and/or climate outcomes in the UKOTs**

At present, there has not been significant physical data output for the project to contribute to strategic long-term outcomes, however;

The global threat posed by invasive species is continual and growing threat. Islands like St Helena and other UKOTs are particularly vulnerable to the devastating impacts. Any work, data and progress towards management of invasive plant species is vital not only to St Helena, but anywhere in the world. Sharing the knowledge between UKOTs is crucial and can contribute to the management of invasive plants.

The project will contribute substantially to global, regional and national strategic objectives. Outputs will:

- Support Convention on Biological Diversity Aichi target Strategic Goal B targets 5, 7, 9 and 10, Strategic Goal C targets 11 and 12, Strategic Goal D target 14, and Strategic Goal E target 19.
- Build on the South Atlantic Invasive Species Regional Invasive Alien Species Strategy 2010.
- Contribute to the St Helena Island 10 Year Plan 2017 – 2027 national goal “Altogether Greener”
- Support the St Helena Government Sustainable Management Plan 2014-2017 strategic, objective 8.1
- Support the National Environmental Management Plan 2012-2022, objective D
- Support the St Helena Invertebrate Conservation Strategy 2016 to 2021, Goal 2
- Support the National Pesticide Policy
- Support the St Helena Environment Charters 2001, Commitment 2
- Implement the Weed Management Action Plan endorsed in August 2016

### **3.5 Monitoring of assumptions**

Government support for invasive plant management remains strong and impacts community support for the project:

Support from all sectors and stakeholders are essential to the success of the project.

Cooperation remains good within stakeholder sectors:

Despite delays in staff recruiting, our partner organisation (St Helena National Trust) and other stakeholders have continued to assist with local knowledge, arranging meetings and sharing lessons learnt.

Suitable staff available for recruitment at the start of the project:

This has probably been the biggest challenge we've faced with this project.

Appropriate stakeholder representation on Project Steering Group:

Selecting appropriate Steering Group representation has been carefully considered and we are confident that the group will cover all relevant sectors and stakeholders.

Early engagement with key sector stakeholders demonstrates linkage with WAP and achieves buy-in for project:

From the start of the project, sector stakeholders have played a crucial part in the process of developing management plans.

Early design plan established for chemical invasive plant trials inform required herbicides and quantities so that stocks are on Island prior to trials beginning:

The majority of herbicide selected for chemical trials are available on island and the herbicide not available was purchased and arrived in time for trials.

#### Invasive plant management teams on the island work cooperatively together:

Cooperation between the invasive plant management teams has been very positive and will continue to greatly benefit the project and achieving its outcomes.

#### **4. Monitoring and evaluation**

The responsibility for M&E lies with ANRD, and specifically in the post of Invasive Plant Specialist. Once the steering group has been established we will report on a monthly basis on the progress, challenges and planning. The steering group will have both technical and financial oversight of the project activities, and will be able to react and respond to the results of project activities, as well as to any other developments on the island, and feed it back into planning for each phase of the project. Iterative learning and adaptive management will be achieved through close working of the project team with other invasive plant managers on the island and a policy of open communication. Now that the Invasive Plant Team has been established, a detailed work plan will be developed, and milestones checked against progress.

All project products and materials will be placed on-line on the invasive plant webpage where they are available for external verification as well as for sharing lessons learned as widely as possible. Sector and area-specific techniques for management developed under output 3 will be incorporated in the workshop schedules, as well as summarised in a series of practical best practice guidelines. This will include not only lessons learned in what works best, but also what is less effective, so that both positive and negative impacts are reported and taking into account in designing the area-wide invasive plant control trial in output 5 (also see section 3.1).

Invasive plant distribution surveys designed and initiated in year 1 will increasingly yield data which will inform and guide the progress of the project. The simple surveying protocols developed to monitor and evaluate the efficacy of invasive plant management programme, also allow early identification of new emerging invasive species. The survey database will provide objective data which can be used to underpin environmental management decision making. This activity links to the ENRD-led Darwin Plus project "Mapping St Helena's Biodiversity and Natural Environment" 2016 - 2018 by filling in gaps at a finer scale than possible using satellite imagery, and by establishing a programme of routine surveying of key species which will contribute to updating the "living map" post-project under the direction of the Weed Officer.

#### **5. Lessons learnt**

One of the biggest lessons learnt is to have flexibility built into the project, particularly in relation to timescales. The delays in staff recruitment had a snowball effect influencing the many of the project outputs. The amendments to the Weeds Officer job profile impacted on the management team's ability to achieve the project outcomes on time. Without staff, we could not conduct the field trials and as a result we do not yet have the necessary data to develop a sound management plan.

Based on the outcome of the change request submitted, we will adapt our strategy to ensure the project still delivers its outcomes. Without the extension of the project by the proposed nine months, these crucial outcomes may not be achievable. If the request is unsuccessful we face the risk of compromising the integrity and outcomes of the project. The success of the project is vital for the effective management of invasive plants that has already had severe impacts on the island and will continue to if not confronted and managed.

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

Not applicable - no previous annual report.

#### **7. Other comments on progress not covered elsewhere**

#### **8. Sustainability and legacy**

The project will build institutional capacity, fill knowledge gaps, identify priorities, run adaptive management trials, develop protocols and procedures, strengthen partnerships and promote community engagement to initiate invasive plant management at a landscape level. Post-

project, the aim is to have a Weed Officer position within ANRD, and the Weed Busters will continue on the SHNT as the first island Conservation Rangers. This will substantially increase the capacity of the SHNT to manage protected areas on St Helena.

Local expertise among all stakeholders and the wider community will be raised through project activities. All key sectors are closely involved in the project, with strong support from elected councillors. The innovative landscape scale approach to invasive plant management ensures that all sectors benefit, not just those involved in conservation. This strengthens buy-in to the project outcome and the likelihood that practices established under the project will continue post-project.

The main invasive plant management teams among stakeholders as well as the general public will have improved technical capacity to manage existing problem species as well as respond to new outbreaks.

## **9. Darwin identity**

Previous Darwin projects have raised awareness on this small island and so governmental staff, stakeholders, councillors and local population is familiar with its remit

Unfortunately, at this moment this project doesn't currently have much that we can update the island with exciting news about its development as most of the work to date has been data collection trials and planning.

Internal documentation and presentations carry the Darwin logo and logos of partner organisations. When opportunities have arisen, we have promoted the project, including, local newspaper article, radio segments, local presentations (see section 3.1) and two presentations given in South Africa referencing the Darwin Project and its aims for St Helena Island (see Annex 3 B).

## 10. Project Expenditure

**Table 1: Project expenditure during the reporting period (1 April 2017 – 31 March 2018)**

Project spend (indicative) in this financial year	2017/18	2017/18	Variance	Comments
	D+ Grant (£)	Total actual D+ Costs (£)	%	(please explain significant variances)
Staff costs				
Consultancy costs				
Overhead Costs				
Travel and subsistence				
Operating Costs				
Capital items				
Others (Please specify)				
<b>TOTAL</b>				

Changes have been requested. Underspend to be transferred to project extension.

## Annex 1: Report of progress and achievements against Logical Framework for Financial Year 2016-2017 – if appropriate

Project summary	Measurable Indicators	Progress and Achievements April 2017 - March 2018	Actions required/planned for next period
<b>Impact:</b> Invasive plant species are cost-effectively managed across the island with reduced threats to endemic flora and fauna, and other sectors.			
<b>Outcome:</b> <b>Island capacity to manage invasive plants at the landscape level improved, enabling restoration of endemic habitats to safeguard the endemic wildlife of St Helena, and to support food security.</b>	0.1 All major invasive plant stakeholders actively involved in planning for, monitoring and reviewing national invasive plant management initiatives by January 2019	0.1 Consultations and site visits with all relevant stakeholders to identify priority species, priority areas for work , share past experience and highlight key issues have taken place.	Continue building collaborative working relationships through information sharing, workshops, reviewing project implementation progress and participation in the management decision process.
	0.2 Monitoring programme database developed by February 2019.	0.2 Standardized monitoring survey methods are being developed. Collaborative information sharing with ENRD and Darwin Plus 052 (Mapping St Helena’s Biodiversity and Natural Environment) to utilise vegetation maps and remote sensing to monitor invasive plant occurrence, abundance and distribution.	Continue to improve and update monitoring tools maps with data and results. Utilise maps to identify which species have increased, where to identify key species and areas to target as well as make future predictions based on spread to aid management decisions.
	0.3 New staff capacity in place to implement the invasive plant management strategy by June 2018	0.3 Two major affecting factors have been the delay in the commencement of the project due to Invasive Plant Specialist (IPS) only arriving on-Island at end of June and difficulties in recruiting a local qualified Invasive Plant Officer (IPO).	
	0.4 Experienced Conservation rangers in place with the SHNT by February 2019	0.4 Two SHNT weed busters have been working on the project from March 2018.	Continue to build Invasive Plant Project team's capacity and abilities.
	0.5 At least 5 problem invasive plant species being tackled through area-wide initiatives by December 2018.	0.5 Control trials have been initiated on 3 of the five priority species and additional trials on a problem species bull grass ( <i>Juncus capillaceus</i> ) have been done.	Continue current trials follow up and monitoring. Start trials on remaining key species.

<b>Outputs:</b>	1.1. Dedicated invasive plant management team operational, and steering group appointed and operational, by June 2017	1.1 Full invasive plant management team from February 2018. A Steering group to be formed for next period as a small management function now in place.
1. Strategic leadership for invasive plant management is evident at the national level	1.2. Medium-long term national Invasive Plant Management Strategy implemented by April 2018	1.2 Due to delays in staff recruitment this is still on-going. Indicators still valid.
	1.3 National strategic invasive plant management function fully operational under SHG's ENRD structure by March 2019	1.3 On-going. Indicators still valid.
<b>Activity 1.1:</b> Recruit invasive plant management officers		Unable to recruit a suitably qualified candidate, however after reducing the responsibilities and changing the Invasive Plant Officer role to Invasive Plant Support Officer, an arrangement is now in place with SHNT contract in the form of a scaled down function to more of a supervisory function. Completed January 2018.
<b>Activity 1.2:</b> Recruit a Weed Busters team		Completed March 2018
<b>Activity 1.3:</b> Establish multi-sector steering group for national invasive plant management oversight		Steering group not established. Aiming to establish in May 2018.
<b>Activity 1.4:</b> Hold a stakeholder workshop to develop the strategic invasive plant management framework		Once first draft of the framework has been developed, a workshop with all relevant stakeholders will be held.
<b>Activity 1.5:</b> Review existing invasive plant related legislation		On-going
<b>Activity 1.6:</b> Undertake a global review of all aspects of invasive plant management for significant species		Review of key species has been completed. However this is an on-going process and additional species posing potential risk will also be assessed.
<b>Activity 1.7:</b> Identify major pathways of spread of nationally significant invasive plant species and appropriate management actions for associated pathways		Pathway Analysis for St Helena was completed in October 2017 by Dr. Jill Key (Overseas Territories Project Manager APHA), with contributions from (ANRD) Darren Duncan invasive Plants Specialist (Ludi Kern), Biosecurity Officer (Julie Balchin). See Annex 3 A.
<b>Activity 1.8:</b> Develop simple and practical survey protocols to monitor priority invasive plant species.		General survey forms have been developed and used in field work. See Annex 3C

<b>Activity 1.9:</b> Develop national Invasive Plant Management Strategy, based on the results of Activities 1.4 to 1.8.		On-going but not expected to be completed until year 3 when further information through recurrent work programmes and the project is known.
2. Community, industry, Government and land managers engaged in invasive plant management	2.1. At least 50 people participate in training workshops over the 2 years.	2.1. As part of Weeds Awareness Week several workshops will be held. Topics include: Safe removal, storage, transport and disposal of green waste resulting from invasive plant removal, 'Plant me instead', utilising invasive plants and 'How can you help'. Indicators still valid.
	2.2. Increase in 10% of people holding a certificate in the safe use of pesticides over the baseline as at 2016	2.2. This output can currently not be achieved as there is no one qualified on the island to hold safe use of pesticide courses. This will require a person to come to the island or someone be sent off island for training to become a trainer. Depending on whether ENRD can fund a trainer in year 2 and demand for training, this funding this indicator is not valid anymore.
	2.3 Newspaper article on invasive plant management at least 4 times a year	2.3. 1 Article published in newspapers and 3 radio segments on invasive plants. Indicators still valid. See Annex 3B
	2.4 At least one invasive plant awareness week run by the end of December 2018	2.4. Weeds Awareness Week will be held in June 2018. Indicators still valid.
<b>Activity 2.1:</b> Design and implement a public awareness and education programme.		Attended and presented at Careers Fair day. Contributed to awareness material for Biosecurity awareness week, create displays for farmers day, presented an introduction and overview of the project for St Helena Nature Conservation Group and Farmers association. Project update presented for Chamber of Commerce meeting.
<b>Activity 2.2:</b> Deliver invasive plant workshops on identification and area wide management for conservationists, land managers, farmers and forestry workers, and the general public.		Workshops for roads and waste management arranged for early May 2018. As part of Weeds Awareness Week several workshops will be held. Topics include: 'Safe removal, storage, transport and disposal of green waste', 'Plant me instead', 'utilising invasive plants' and 'How can you help'.
<b>Activity 2.3:</b> Deliver training courses on safe use of pesticides.		Indicator requires off island training or visit to achieve and so dependent on ENRD recurrent funding to bring trainer to Island.
<b>Activity 2.4:</b> Run invasive plant awareness week.		Weeds Awareness Week schedule for June 2018. Date to be confirmed. Planning in progress and workshop will be held to get input and suggestions from stakeholders, educators and public.
3. Strengthened local capacity to manage priority invasive plants	3.1. Cost effective methods for five problem invasive plants developed for	3.1. Control trials have been initiated on 3 of the five priority species ( <i>Pennisetum setaceum</i> , <i>Nephrolepis cordifolia</i> , <i>Fuchsia coccinea</i> ) and

	environment, agriculture, forestry, roads and landowners by November 2018.	additional trials on a problem species bull grass ( <i>Juncus capillaceus</i> ) and bamboo have been done. Trials are on-going. Priority areas to target for trials on Fuchsia have been identified. Site visit scheduled for 4 May 2018.
<b>Activity 3.1:</b> Carry out trial area-wide annual whiteweed ( <i>Austroeupatorium inulifolium</i> ) control campaign, coordinated across all relevant sectors.		Potential sites for testing control options have been examined.
<b>Activity 3.2:</b> Design and carry out trials for the cost-effective management of wild mango ( <i>Schinus terebinthifolius</i> ).		<p>Correspondence with Dr. S.G. Compton. University of Leeds. Visiting Professor, Department of Zoology and Entomology, Rhodes University, South Africa on potential biocontrol options for <i>Schinus terebinthifolius</i>. Dr. Compton visited Bermuda to discuss possible biocontrol use of seed predators for Schinus and another invasive species. As a result of his visit to Bermuda, the conservation/parks people there are putting a proposal to government to sanction the principle of using biocontrol. Once that passes, he will be invited to provide formal applications for the two seed eating wasps he is working on.</p> <p>He suggested that it would be great if work on the Schinus biocontrol agent could somehow run in parallel for the two OTs. The agents offer the prospect of slowing down rates of spread that can contribute to limiting spread of Schinus on St Helena.</p> <p>Additionally he is supervising a master's student in South Africa working on the wasp (<i>Megastigmus</i>) that eats Schinus (and <i>Rhus</i>) seeds. To examine the potential of this biocontrol agent requires collection of <i>T. Schinus</i> fruits and some island based field work.</p>
<b>Activity 3.3:</b> Carry out targeted removal of African fountain grass ( <i>Pennisetum setaceum</i> ) in the upper Sandy Bay area.		Weather conditions restricted access to Upper Sandy bay area. An additional isolated satellite population was identified in area where endemics occur for trials.
<b>Activity 3.4:</b> Design and carry out trials for the cost-effective management of pheasant tail fern ( <i>Nephrolepis cordifolia</i> ).		<p>Control trials in Plantation forest was conducted on 8 February 2018. Methods tested included manual digging out and turning over the plant material as well as removing bulbs from the soil. Follow up monitoring was done on 14 March 2018.</p> <p>Pheasant tailed occurrence was surveyed in Diana's Peak conservation area and targeted manual removal by pulling out the plans, putting the material in bags and taken to the landfill site for disposal.</p>

<b>Activity 3.5:</b> Design and carry out trials for the cost-effective management of creeping fuchsia ( <i>Fuchsia coccinea</i> ).		Planned to start in May after stakeholder input and suggestions. Site visit to High Peak and Peak Dale with partner organisation National Trust, Rebecca Cairns-Wicks, IPS and IPSO. Priority sites have been identified for trials.
4. Improved knowledge for invasive plant management strategies and tactics.	4.1 Invasive plant webpage in place with practical information by October 2017; all technical outputs of the project placed on the website within 1 month of finalisation	Web page data and design in progress. Technical outputs on-going due to delays in staff recruitment. Indicators still valid
	4.2 At least 20 best-practice guidelines/procedures/standards/codes of practice for invasive plant management (10 in year 1 and 10 in year 2)	On-going. Indicators still valid
	4.3 Best practice guidelines for disposal of green waste by October 2018	In progress. First draft ready for input from stakeholders. Indicators still valid.
<b>Activity 4.1:</b> Review and refine the Weed Control Manual for managing nationally significant invasive plants		Review and refinement of the Weed Control manual is progress. Based on results and data from control trials, final refinements will be completed and sent to relevant stakeholders for their input.
<b>Activity 4.2:</b> Establish and implement best practice guidelines for minimising invasive plant spread including:		First draft is currently being developed. A workshop with relevant stakeholders is scheduled for the first week in May 2018. These guidelines will provide an overview of all methods and relevant to urban, agriculture, industry and focus on high risk species.
A model code of best practice		
Sector/industry-specific guidelines		
<b>Activity 4.3:</b> Develop and implement best practice guidelines for the safe disposal and processing of invasive plants, contaminated material and green waste, through addressing requirements for:		
<b>Activity 4.4:</b> Share lessons learned across other SA UKOTs and the wider invasive plant management community.		Correspondence with conservationists on Ascension regarding key invasive species and their challenges faced. Met with RSPB representatives and gave an overview of the project and discussed potential information and experience sharing between different UKOTs.

5. Nationally significant invasive plant species under innovative and cost-effective management.	5.1 Relevant SHG Divisions, SHNT and key private sectors include Invasive Plant Management Strategy actions in their annual work/operational plans from 2018/2019 financial year onwards.	Indicators still valid.
	5.2 Report of initial area-wide trial of invasive plant management,	Indicators still valid.
	5.3 At least 5 priority invasive plant species being routinely mapped as part of the monitoring programme by February 2019.	Indicators still valid.
<b>Activity 5.1:</b> Design and cost restoration initiatives in appropriate areas where major invasive plant management intervention recommended		On-going
<b>Activity 5.2:</b> Mainstream invasive plant management actions into annual work plans.		On-going
<b>Activity 5.3:</b> Coordinate landowners to carry to a trial of area-wide control of priority invasive plant species, using methods developed in Output 4 where appropriate.		On-going
<b>Activity 5.4:</b> Long-term monitoring programme established for priority invasive plant species across key sectors, based on protocols developed in Activity 1.8.		On-going

**Annex 2: Project's full current logframe as presented in the application form (unless changes have been agreed) - – if appropriate**

*N.B. if your application's logframe is presented in a different format in your application, please transpose into the below template. Please feel free to contact [Darwin-Projects@ltsi.co.uk](mailto:Darwin-Projects@ltsi.co.uk) if you have any questions regarding this.*

Project summary	Measurable Indicators	Means of verification	Important Assumptions
<b>Impact:</b> Invasive plant species are cost-effectively managed across the island with reduced threats to endemic flora and fauna, and other sectors.			
<p><b>Outcome:</b> Island capacity to manage invasive plants at the landscape level improved, enabling restoration of endemic habitats to safeguard the endemic wildlife of St Helena, and to support food security.</p>	<p>0.1 All major invasive plant stakeholders actively involved in planning for, monitoring and reviewing national invasive plant management initiatives by January 2019</p> <p>0. 2 Monitoring programme database developed by February 2019.</p> <p>0.3 New staff capacity in place to implement the invasive plant management strategy by June 2018</p> <p>0.4 Experienced Conservation rangers in place with the SHNT by February 2019</p> <p>0.5 At least 5 problem invasive plant species being tackled through area-wide initiatives by December 2018.</p>	<p>0.1 SHG Natural Resources, Housing and Properties Planning, Waste Management, Biosecurity Annual Operational Plans via SHG website/ SHNT annual operational plans via SHNT website/ Graziers pasture management plans each year via ANRD page on the SHG website/ Landowners Operational Plans each year via ANRD.</p> <p>0.2 Invasive plant monitoring database</p> <p>0.3 ANRD recurrent budget and annual work plan</p> <p>0.4 SHNT Annual work plan</p> <p>0.5 Publications and other documents on the invasive plant webpage</p>	<p>Government support for invasive plant management remains strong and impacts community support for the project.</p> <p>Cooperation remains good within stakeholder sectors.</p> <p>Cost-effective methods are successfully developed for the management of problem species.</p>
<p><b>Outputs:</b> 1. Strategic leadership for invasive plant management is evident at the national level</p>	<p>1.1. Dedicated invasive plant management team operational, and steering group appointed and operational, by June 2017</p> <p>1.2. Medium-long term national Invasive Plant Management Strategy implemented by April 2018</p> <p>1.3 National strategic invasive plant management function fully operational under SHG's ENRD structure by March 2019</p>	<p>1.1. Steering group meeting minutes</p> <p>1.2. Publications and other documents on the invasive plant webpage</p> <p>1.3. SHG Organogram via Government website</p>	<p>Suitable staff available for recruitment at the start of the project.</p> <p>Appropriate stakeholder representation on Project Steering Group.</p>
<p>2. Community, industry, Government and land managers engaged in invasive plant management</p>	<p>2.1. At least 50 people participate in training workshops over the 2 years.</p> <p>2.2. Increase in 10% of people holding a</p>	<p>2.1 Training course attendance certificates</p> <p>2.2 ANRD list of certified sprayers</p>	<p>Early engagement with key sector stakeholders demonstrates linkage with WAP and achieves buy-in for project.</p>

	<p>certificate in the safe use of pesticides over the baseline as at 2016</p> <p>2.3 Newspaper article on invasive plant management at least 4 times a year</p> <p>2.4 At least one invasive plant awareness week run by the end of December 2018</p>	<p>2.3 On-line editions of the Independent and Sentinel newspapers</p> <p>2.4 Publications and other documents on the invasive plant webpage</p>	<p>Interest in training workshops is high.</p>
<p><b>3.</b> Strengthened local capacity to manage priority invasive plants</p>	<p>3.1 Cost effective methods for five problem invasive plants developed for environment, agriculture, forestry, roads and landowners by November 2018.</p>	<p>3.1 Report on trials on the invasive plant page on the SHG website</p>	<p>Early design plan established for chemical invasive plant trials inform required herbicides and quantities so that stocks are on Island prior to trials beginning.</p> <p>Invasive plant management teams on the island work cooperatively together.</p>
<p><b>4.</b> Improved knowledge for invasive plant management strategies and tactics.</p>	<p>4.1 Invasive plant webpage in place with practical information by October 2017; all technical outputs of the project placed on the website within 1 month of finalisation</p> <p>4.2 At least 20 best-practice guidelines/procedures/standards/codes of practice for invasive plant management (10 in year 1 and 10 in year 2)</p> <p>4.3 Best practice guidelines for disposal of green waste by October 2018</p>	<p>4.1 Publications and other documents on the invasive plant webpage</p> <p>4.2 Publications and other documents on the invasive plant webpage</p> <p>4.3 Publications and other documents on the invasive plant webpage</p>	<p>Clear early messages disseminated on how project actions and results will be integrated into Government, industry and community activities during and post - project to demonstrate project benefits and legacy.</p> <p>Successful control methods developed by end of project for problem invasive plants.</p>
<p><b>5.</b> Nationally significant invasive plant species under innovative and cost-effective management.</p>	<p>5.1 Relevant SHG Divisions, SHNT and key private sectors include Invasive Plant Management Strategy actions in their annual work/operational plans from 2018/2019 financial year onwards.</p> <p>5.2 Report of initial area-wide trial of invasive plant management,</p> <p>5.3 At least 5 priority invasive plant species being routinely mapped as</p>	<p>5.1 SHG Natural Resources, Housing and Properties Planning, Waste Management, Biosecurity Annual Operational Plans via SHG website/ SHNT annual operational plans via SHNT website/ Graziers pasture management plans each year via ANRD page on the SHG website/ Landowners Operational Plans each year via ANRD.</p>	<p>Government support for invasive plant management remains strong and impacts community support for the project.</p> <p>Cooperation is good within stakeholder sectors.</p>

	part of the monitoring programme by February 2019.	5.2 Publications and other documents on the invasive plant webpage 5.3 Invasive plant monitoring database	
<p><b>Activities</b> (each activity is numbered according to the output that it will contribute towards, for example 1.1, 1.2 and 1.3 are contributing to Output 1)</p> <p><b>Activity 1.1:</b> Recruit invasive plant management officers</p> <p><b>Activity 1.2:</b> Recruit a Weed Busters team</p> <p><b>Activity 1.3:</b> Establish multi-sector steering group for national invasive plant management oversight</p> <p><b>Activity 1.4:</b> Hold a stakeholder workshop to develop the strategic invasive plant management framework</p> <p><b>Activity 1.5:</b> Review existing invasive plant related legislation</p> <p><b>Activity 1.6:</b> Undertake a global review of all aspects of invasive plant management for significant species</p> <p><b>Activity 1.7:</b> Identify major pathways of spread of nationally significant invasive plant species and appropriate management actions for associated pathways</p> <p><b>Activity 1.8:</b> Develop simple and practical survey protocols to monitor priority invasive plant species.</p> <p><b>Activity 1.9:</b> Develop national Invasive Plant Management Strategy, based on the results of Activities 1.4 to 1.8.</p> <p><b>Activity 2.1:</b> Design and implement a public awareness and education programme.</p> <p><b>Activity 2.2:</b> Deliver invasive plant workshops on identification and area wide management for conservationists, land managers, farmers and forestry workers, and the general public.</p> <p><b>Activity 2.3:</b> Deliver training courses on safe use of pesticides.</p> <p><b>Activity 2.4:</b> Run invasive plant awareness week.</p> <p><b>Activity 3.1:</b> Carry out trial area-wide annual whiteweed (<i>Austroepatorium inulifolium</i>) control campaign, coordinated across all relevant sectors.</p> <p><b>Activity 3.2:</b> Design and carry out trials for the cost-effective management of wild mango (<i>Schinus terebinthifolius</i>).</p> <p><b>Activity 3.3:</b> Carry out targeted removal of African fountain grass (<i>Pennisetum setaceum</i>) in the upper Sandy Bay area.</p> <p><b>Activity 3.4:</b> Design and carry out trials for the cost-effective management of pheasant tail fern (<i>Nephrolepis cordifolia</i>).</p> <p><b>Activity 3.5:</b> Design and carry out trials for the cost-effective management of creeping fuchsia (<i>Fuchsia coccinea</i>).</p> <p><b>Activity 4.1:</b> Review and refine the Weed Control Manual for managing nationally significant invasive plants</p> <p><b>Activity 4.2:</b> Establish and implement best practice guidelines for minimising invasive plant spread including:</p> <ul style="list-style-type: none"> <li>▪ A model code of best practice</li> <li>▪ Sector/industry-specific guidelines</li> </ul> <p><b>Activity 4.3:</b> Develop and implement best practice guidelines for the safe disposal and processing of invasive plants, contaminated material and green waste, through addressing requirements for:</p> <ul style="list-style-type: none"> <li>▪ Urban areas</li> <li>▪ Agricultural areas</li> <li>▪ Industry</li> <li>▪ High-risk invasive plant species</li> </ul> <p><b>Activity 4.4:</b> Share lessons learned across other SA UKOTs and the wider invasive plant management community.</p> <p><b>Activity 5.1:</b> Design and cost restoration initiatives in appropriate areas where major invasive plant management intervention recommended</p> <p><b>Activity 5.2:</b> Mainstream invasive plant management actions into annual work plans.</p> <p><b>Activity 5.3:</b> Coordinate landowners to carry to a trial of area-wide control of priority invasive plant species, using methods developed in Output 4 where appropriate.</p> <p><b>Activity 5.4:</b> Long-term monitoring programme established for priority invasive plant species across key sectors, based on protocols developed in Activity 1.8.</p>			

**Annex 3 Onwards – supplementary material (optional but encouraged as evidence of project achievement)**

**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.	√
<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.	
<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.	√
<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.	
Have you involved your partners in preparation of the report and named the main contributors	√
Have you completed the Project Expenditure table fully?	√
Do not include claim forms or other communications with this report.	