



Department
for Environment
Food & Rural Affairs



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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: 30th April 2017

Darwin Plus Project Information

Project reference	DPLUS029
Project title	Securing St Helena's rare cloud forest trees and associated invertebrates
Territory(ies)	St Helena
Contract holder institution	St Helena Government (SHG) Environmental Management Division (EMD)
Partner institutions	St Helena National Trust (SHNT); Buglife; Royal Botanic Gardens, Kew (RBG Kew), Royal Society for the Protection of Birds (RSPB)
Grant value	£98,380
Start/end date of project	01 February 2015 to 31 March 2017
Reporting period (e.g., Apr 2016-Mar 2017) and number (e.g., AR 1,2)	April 2016 to March 2017
Project leader name	Lourens Malan
Project website/blog/Twitter	N/A
Report author(s) and date	Lourens Malan 30 April 2017

1. Project overview

Secure the survival of four endangered keystone endemic tree species and their associated invertebrate fauna in the Peaks National Park.

Clonal material will be secured from the remaining trees and placed in ex-situ collections. These collections are a 'backup' and from this, living field gene banks will be established. Habitat data, critical for informing management interventions will be collected. Long term conservation of these trees and their associated fauna & flora is of high importance for the survival of approximately a third of the UKOT's endemic biodiversity.

The four 'keystone' species within the moist forest ecosystem; Critically Endangered he-cabbage, false gumwood, endangered dogwood and whitewood are in decline. Most of the easily accessible remnant trees have died out. The remaining individuals hold unique assemblages of endemic fauna & flora, but are spatially separated. Where trees have natural groupings, based on proximity and topography management units have been drawn up (see Figure 1 below), showing an average distribution of one tree for every 105m². Project data have indicated insignificant natural regeneration and an ageing population with large gaps in the succession of generations. Valuable genetic diversity is being lost with each tree, as and when they succumb to pressures from invasive plant encroachment, pest & disease attack.

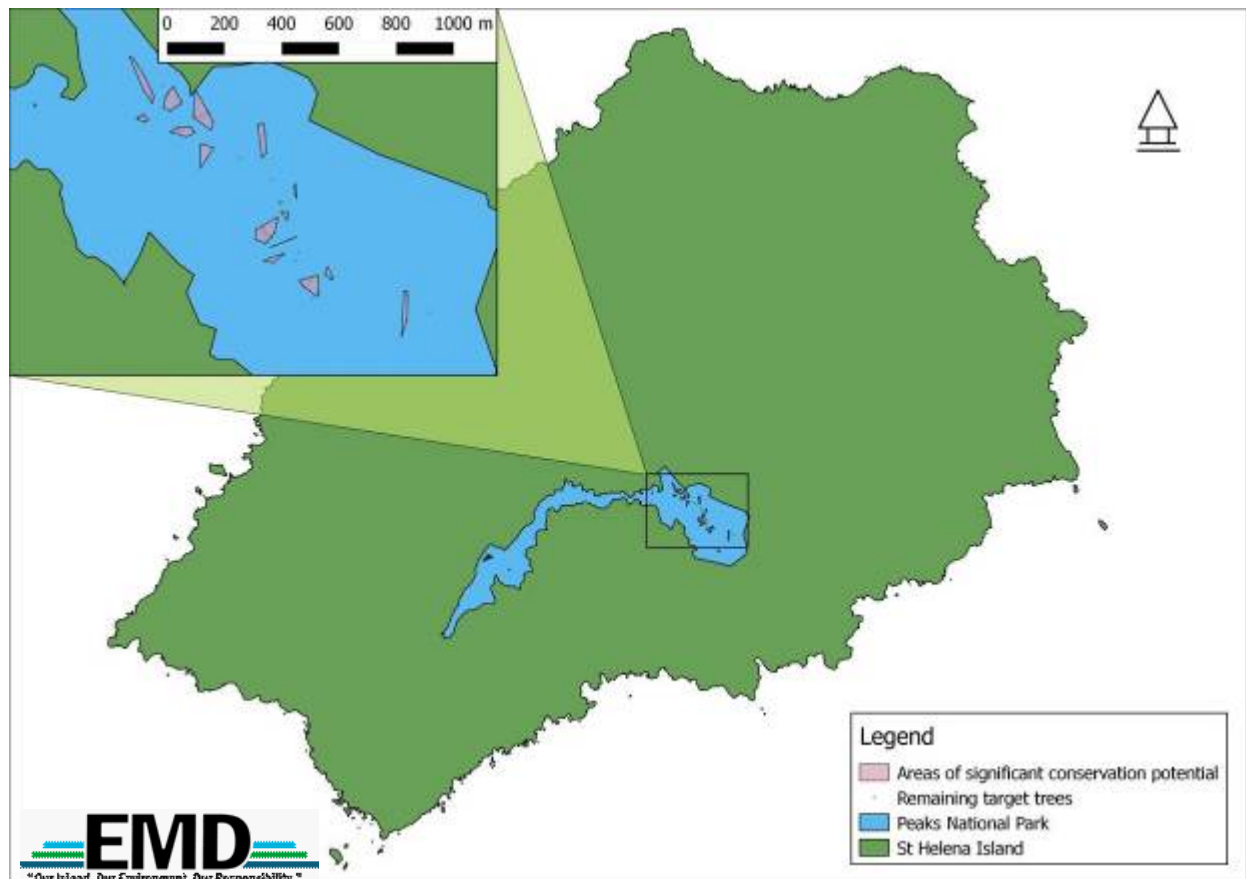


Figure 1 Peaks National Park showing areas of significant conservation and restoration potential in pink though these are worryingly fragmented

An original project hypothesis was that invertebrate diversity could be inferred from the availability of niches in a habitat (R.Key pers. comm. 2015). Project site surveys have shown that wild remnants hold a rich yet rare set of invertebrate habitat niches. These are not found in restoration plots planted over the last 20 years. Results from an additional detailed invertebrate survey (through collaboration from DPLUS 040; brief summary of the survey in have validated the original hypothesis.

The four tree species together with associated fauna & flora, 284 of which are endemic invertebrate species, will be safeguarded and the invaluable water catchment service and soil generation of the Cloud Forest improved.

The project is a high priority for St Helena and delivers the tools for: **National Goal 3 of St Helena Sustainable Development Plan**, *‘Effective management of the environment’*; **Principle 2 of SHG Land Development Control Plan**, *‘Conserve and manage the natural ... heritage of the Island to benefit tourism and the Island community.’*; **SHG Environment Charter**, *‘ensure the protection and restoration of key habitats, species and landscape features through...appropriate management structures and mechanisms.’* and, *‘encourage teaching...to promote the value of (the natural) environment,’* and **commit to**, *‘attempt the control and eradication of invasive species’* through development of the practical methodology that will inform the Peaks National Park action plan.

The project is directly contributing to articles 8, 9, 10, 13 and 15 of the **Convention on Biological Diversity** & the **Global Strategy for Plant Conservation** Objective 1 (targets 2 & 3); Objective 2 (targets 4,5,7,8 & 10); Objective 5 (targets 15 &16).

2. Project stakeholders/partners

The project has the full support of project partners:

See

The project has driven collaborative support between the four related Darwin Projects on island:

- **DPLUS052** – mapping St Helena’s biodiversity and natural environment

We continue to support one another. The Cloud forest project has helped the Mapping project with habitat classification and provided information to aid in their fieldwork. In return the Mapping project have given technical support with GIS issues (see examples of emails as proof of support given)

- **DPLUS025** – conservation of the spiky yellow woodlouse (SYW) and black cabbage tree woodland

The Cloud forest project team has been a key role-player to help the SYW project officer find her feet (outlined in). The SYW habitat falls wholly inside the study area of the Cloud forest project and as such the two projects have agreed and signed a data exchange agreement () to define the roles of each project.

- **DPLUS040** – securing the future for St Helena’s endemic invertebrates

The Invertebrate project and Cloud forest project have both greatly benefitted from collaborative support (already discussed in the Project Overview above. Also see). With collaborative fieldwork the Invertebrate project got access to samples that otherwise would be lacking from their reference collection, in return we received assistance with invertebrate identification and significance.

Further stakeholder engagement with private landowner which will take hold of one field gene bank at Mnt. Pleasant (see Section 3.1 below under Activity 3.2.2.) with showing photo and email evidence.

3. Project Progress

Progress is reported against a format which was not part of the Cloud Forest application. Darwin recommended (See) that we translate project details into the given Logframe template given as .

The following items were not required at the application stage and for our project to fit within the given Annex 2 we had to create a few fields and would like to raise a number of issues for your attention and consideration upon review:

- 1- We had no agreed **Impact Statement**. In we discussed this and are happy to follow Darwin recommendation of creating a higher level impact statement which encompasses the stated impacts in section 22 c of the application R20.
- 2- Originally we had a **Project Outcome** and **Expected Outcomes** as they relate to each Output. For Annex 2 we have distilled it into an **Outcome Statement** and state the logical measurable **indicators**; means of **verification** and **assumptions** made, but not agreed or stated before now.
- 3- Our 4 agreed outputs originally had single **Indicators of Success**. In addition to this we list the indicators we have been using to measure progress under our activities.
- 4- **Assumptions** have not been listed for Outcomes and we do so here.

3.1 Progress in carrying out project Activities

Activity 1.1 Survey to identify location of remaining isolated trees

Completed. See previous annual report 2016

Activity 1.2 Assess community composition of each site

Sites assessments completed bar one. See activity 4.1 below as the results from activity 1.2 informs the completion of activity 4.1

Activity 1.3 Collect representative sample for invertebrate identification

Detailed invertebrate assessments have been undertaken in ten selected representative sites to verify assumed quality and abundance of invertebrate habitat niches as documented under Activity 4.1. See for a summary email from the entomologist regards the invertebrate survey.

Activity 2.1 Collection, recording and banking of seed

Seed has been collected from 100% of all false gumwoods and from 24 out of the 30 remaining he cabbage sites (see Annex 16). 80 genetically diverse seedlings have been raised from whitewood seed collected from the rooted cuttings ex-situ in the nursery and are now destined as additional stock for field gene banks (also referred to as Seedorchards) . Germination trials of False Gumwood have been undertaken showing near 20% germination from a single isolated ex-situ plant (supposedly self incompatible as a species) showing great promise for this rare tree species. See Annex 16

Activity 2.2 Secure clonal material for propagation

Cutting materials have been collected from each tree and are in various stages of development (see).

Activity 3.1.1 Propagation facility set up

Propagation facility (Peaks Nursery) is running smoothly with the project's propagation methods being adopted by the recurrent staff at the Peaks Nursery incorporated into general practices. See Annex 16

Activity 3.1.2 Expand propagation facilities

Expansion and efficiency improvements have been undertaken throughout. Notably a recent increase of 75% of usable nursery bench space inside the greenhouse and addition of tables, improving standing out and hardening off areas. Temporary rain covers have been employed to enable root developments outdoors without over watering of young plants from excessive rainfall. See as above and

Activity 3.2.1 Clonal material propagated

Clones from 31 whitewood sites out of a total 33 have rooted and duplicates are secured post cutting stage (see). After many difficulties with dogwood we now have improved our methods with successful production of rooted materials large enough for planting out. See Annex 16 & .

Activity 3.2.2 Make duplicate sets

Ongoing till end December (see requested change accepted) and linked to Activity 3.3. Clearance of areas for planting is dictated by the quantity/age/quality/size of the available plants. Three are under the management of the Peaks team; One under the Species team (EMD) and another on private land of Dr. Rebecca Cairns-Wicks, known as Mnt. Pleasant (see Section 2 above and 3.3 below &

Activity 3.3 Sites prepared for planting

5 sites have been identified. The primary site (in) no.1 at peaks nursery is the priority and should hold a full set of clones by the end of the project. Duplicates will be distributed to the secondary sites: no.2 peaks secondary1 near mount Actaeon; no.3 peaks secondary2 near Cuckholds point known as School Patch; no.4 George Benjamins' arboretum under management of Terrestrial Conservation Species Team; no.5 Mnt. Pleasant the midway point between the peaks and high peak and logical first step for future corridor creation (see for location of plantings)

Activity 3.4 Seed-orchards planted up and labelled

Plants have been planted out at sites 1, 2, 4 & 5 (see). Additional duplicates have been distributed at Mnt Vessey and High Peak and supplemental planting at the primary site no1 (refer to Activity 3.3 above). Preparatory work at site no.3 have been undertaken (See Annex 16)

Activity 3.5 Establishment rates assessed

Germination rates and seedling successes have been documented (See Annex 16). Cutting establishment have been improved upon by continual refinement of methods and will be outlined in the Propagation Manual () by the end of the project. Since more field plantings have been undertaken in the various seed orchards, so far we have recorded a 100% success rate, though it is too early to claim full establishment. Nursery records () are kept to keep track of numbers and point out areas where extra work or attention is required.

Activity 4.1 Field data collated and analysed

Completed and a Tree Survey and Site Survey reports are being written up and will be completed by the end of the project (see)

Activity 4.2 Produce protocols

A Clearance Protocol and Propagation Protocol are being written up from the project results and will be completed by the end of the project (see).

Activity 4.3 Present completed protocols to NCA management team

The protocols are being compiled with input from the management team. The Propagation methods are being developed and taught to the dedicated nursery staff member as reported in AR2016. Further elaboration on this in the next Section 3.2 under Output 4.

3.2 Progress towards project Outputs

Output 1.All old trees accessed and habitat assessment made including suite of invertebrates present

Baseline condition: Last tree counts were made around 1996 but locations never recorded. Invertebrate species lists exist but no detail habitat information exists. No detailed habitat information available for the wild trees.

What changed: All wild trees have been geo referenced. An assessment has been made of tree health and habitat details recorded, including invertebrate habitat niche presence and quality. Details are held in EMD relational database and the Tree and Habitat datasets are linked to spatial layers using QGIS software making progress measurable. The day to day use of the data to inform Peaks management and forward planning for the project staff is possible. Ecological restoration considerations can now be based on better informed, up to date facts.

Progress towards completion summary: One dogwood site left to visit. This will be completed by the end of the project

Output 2. Genetic material of rare Peaks trees collected, recorded and banked

Baseline condition: Small number of the easily accessible trees currently used in restoration work, weakening genetic robustness of plantings.

What changed: seed from 100% of false gumwood and 80% of the cabbage trees have been collected and stored in the EMD seed bank. Dogwood and whitewood cuttings have been collected routinely when visiting wild trees. Nursery records are kept to keep track of numbers

(see & See Annex 16). Early results from seed harvested from flowering cuttings have shown greater phenotypic differences than previously seen in nursery stock (See Annex 16).

Progress towards completion summary: a few difficult to root individuals have repeatedly failed. Nursery protocols have been adapted and recent breakthroughs have been made which make completion possible by end of project. All the cabbage sites will be visited during the coming season to increase the stored stock in the seed bank and add the germplasm from the 20% still lacking. Completion by end of project is plausible.

Output 3. Clonal material propagated and planted in 'seed-orchards'

Baseline condition: No seed-orchards for these species

What changed: Seed have been collected from rooted cuttings (see Section 3.1 Activity 2.1). Five sites have been identified (see Section 3.1 Activity 3.3). Planting at four sites have been undertaken.

Progress towards completion summary: the peaks primary site will be planted fully by end of project and will serve as source population to complete the other sites as and when necessary.

Output 4. Practical methodology developed to inform Peaks National Park action plan

Baseline condition: No action plan

What changed: Peaks management have been a major consideration throughout the project activities. The Peaks team have been developed during the project to enable direct involvement with the nursery practices (AR2016). Development is in progress to enable further exposure with the project through a dedicated 2 man team () to concentrate on areas identified as high conservation and restoration importance (see Figure1, Section 1). Clearance protocols will be used to instil ecological restoration best practices learned through clearance activities during the project work on remote sites. Project staff will oversee this work. Propagation and Clearance protocols will inform and contribute to an action/work plan

Progress towards completion summary: output 4 will be completed by the end of project.

3.3 Progress towards the project Outcome

Outcome Statement: The remaining habitat fragments of St Helena's cloud forest which holds critically endangered trees identified and the genetic diversity of the wild trees secured ex-situ.

Baseline condition: just over 5 % of sites fall within actively management habitat units. Disproportional sampling over the last 20 years have brought about an imbalance with most trees absent from ex-situ collections and a handful of trees comprising the bulk of all collections.

What changed: All trees visited were sampled and will be represented in the ex-situ plantings. Ex-situ collections thus far hold the following percentages of the total available diversity: false gumwood 100%; he-cabbage 80%; whitewood 93%; dogwood approximately 65%. (see Section 3.1 Activity 2.1)

The peaks nursery have now capacity for producing higher quantities than before and based on percentages above is likely to be of greater genetic quality.

With a focused 2man team (see Section 3.2 Output 4 above) working with support of this project, following the protocols it is hoped to provide a working example which the rest of the peaks management team can borrow elements which could improve their own efforts.

The Project Manager from the end of April also takes up the position of Conservation Officer and head up the Peaks Management with continued oversight of the project. Thus an element of continuity is ensured which should secure a longer lasting legacy for the project.

Progress towards completion summary: Considering the stated changes above, we feel confident in likely completion.

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

- - The Peaks team is already working on habitat restoration but lacks access to the wild remnants and the resources required to acquire those trees and set up the much needed seed-orchards. They also lack the detailed knowledge of the exact localities of said remnants and no way to prioritise or target ecological restoration. Post project the peaks team can make informed management decisions and continue with resilient genetic diverse seed stock
- - The project has contributed to better water catchment on the Peaks and the field gene banks as a legacy will support further restoration of this invaluable resource .
- - The project will deliver a discrete element that is not possible within the constraints of recurrent budgets. The outputs of the project will allow more efficient management requiring fewer resources to run day to day restoration and nursery activities.

Efficiency improvements in the layout (measured 75% increase in usable bench space) and introduction of new growing modules have increased production capacity.

Changes in propagation practices have improved capacity further and resultant plants are of higher quality which translates in increased survival rates post planting. Lessons learned are shared with other nurseries on island. Propagation protocols will be made available to other OT's where appropriate.

Monitoring of assumptions

The identified risks have been overcome by retaining key government personnel through secondment. By employing a temporary replacement to manage the day to day running of the section, freed up the terrestrial conservation officer to focus solely on the project for a two year period.

Nursery practices were continually adapted and adjustments made to gain the best possible results within the constraints of limited resources. The project deliberately went the 'low-tech' route to ensure a working model is devised during the project term which is more likely to be continued in the longer term without the need to change methods and or equipment or for the need of additional expense.

Apart from slow development of some of the plants putting back other outputs, or potentially preventing a percentage of intended outcomes, all other assumptions were accurate. To accommodate the slow development of some plants, an extension was granted to the end of the year to continue with nursery work and further development of the field gene banks (se). Thus the mentioned risks are mitigated and will be overcome.

4. Monitoring and evaluation

See section 3.

5. Lessons learnt

Critical habitat clearance work to remove invasive species which are threatening the health of the target trees is arguably the most difficult part of the project. Yet, it is likely the most direct way of improving the status of the health of the trees and their immediate surrounding habitats. Careful consideration of how the lessons learned regards clearance work can be shared effectively has resulted in the production of the Clearance Protocol (). The resultant benefits from subtle changes in invasive control methods are best demonstrated through practice. With the 2 man team (see) under the guidance of the Terrestrial Conservation Officer with support

from the project, a working example will be set from which the Peaks team can learn, borrow, and make their own which brings about a culture change. This approach has proven success in the nursery where the project has demonstrated changes with working examples (see Annex 16). These changes are now accepted and adopted as common practice in the nursery.

We would recommend other projects in similar small island situations where there is cultural resistance to change to follow the above strategy which allow gentle change to occur.

Due to repeated difficulties from most all projects on St Helena to start on time and keep to schedule, we recommend future projects to be designed with this in mind. Uncertainties and challenges with regards access, communications and shipping are major considerations.

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

All comments from the 2016 review have asked to be addressed in the final report. Due to a project extension, we take the liberty of addressing these in this report:

- Better explain the involvement of the Peaks management team ()
- Logframe created with clear links between indicators and activities ()
- Highlight where activities are linked ()
- Make baselines clearer ()
- Sharing lessons learned (explained throughout plus more training planned in next 2 quarters)
- Comment on links to UKOT agreements ()

7. Other comments on progress not covered elsewhere

Of note is our exit strategy that has been enhanced through benefits as explained in **Section 3.3**

8. Sustainability and legacy

Project will allow EMD Peaks Team to focus their work better. Genetic diversity from all the rare cloud forest tree species will be consolidated in the field gene banks, allowing better access, ensuring inclusion of the genetic variability in restoration plantings and more effective management thanks to the project data and spatial representation of habitat fragments. See **Section 3.3** where continuity in thinking is achieved through handover from the Project Manager to the Terrestrial Conservation officer in the form of a Secondment from the Peaks management team to the Project.

Ongoing restoration activities will be more successful thanks to having a better genetic pool to work with. Increased restoration success together with reduction in effort to acquire seed stock will reduce the time spent on collecting activities.

Greater establishment successes are foreseen. Greater numbers of seedlings will allow higher planting densities following clearance of invasive plants improving restoration rates which is shown to reduce invasive species maintenance costs.

Data enables the production of informed protocols (Annex) which will inform good management practice for the rare fragments.

Accessing areas of the Peaks National park not often visited, benefits in addition to the planned outputs have had very positive impacts likely to significantly contribute to the projects overall impact:

1. Recording a number of sites holding critically endangered spiky yellow woodlice, the project allowed renewed focus for the SYW project DPLUS025 (). Through this further interest has been generated from project partners with a resultant financial contribution from the RSPB to further habitat restoration for the benefit of SYW. It will generate considerable benefit through allowing us continued focus in an area for which recurrent funds cannot cater.
2. Documenting rare plant populations previously overlooked improve our overall picture of the peaks
3. Discovery of another population of critically endangered large bellflower doubled the known population in number. Through additional project work on the species we have now a successful method for collecting pre-dehiscent seed capsules; ex-situ collection of clonal material from all populations in existence at the Peaks nursery; much needed propagation & cultural methods included in project Propagation Protocol ()
4. Documenting invasive plant populations previously overlooked enables improved targeting of ecological restoration

9. Darwin identity

Darwin Initiative is well known on the island and most persons are familiar due to heavy presence in the schools over the last six years from various Darwin projects

The project does have a distinct identity but are definitely accepted as part of the larger programme of managing the Peaks NCA. See Annex 16

10. Project Expenditure

Table 1: Project expenditure during the reporting period (1 April 2016 – 31 March 2017)

Project spend (indicative) in this financial year	2016/17 D+ Grant (£)	2016/17 Total actual D+ Costs (£)	Variance %	Comments (please explain significant variances)
Staff costs				
Consultancy costs				
Overhead Costs				
Travel and subsistence				
Operating Costs				
Capital items				
Others (Please specify)				
TOTAL				
Consultancy cost budget have changed from last report as per Annex 8				

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 2016 - March 2017	Actions required/planned for next period
<p>Impact</p> <p>St Helena's Peaks National Park consisting of continuous cloud forest vegetation holding succession of generations with natural regeneration of all keystone tree species commonplace</p>		<p>Enabling better conservation actions for an area holding about a third of the total endemic diversity of the UKOT's through project outcomes</p>	
<p>Outcome</p> <p>The remaining habitat fragments of St Helena's cloud forest which holds critically endangered trees included in ecological restoration targeting and full complement of remaining genetic diversity of the wild trees are used in restoration plantings</p>	<p>Clearance of invasive plants and supplemental planting are undertaken in habitat fragments.</p> <p>Peaks nursery producing steady output of genetic diverse saplings</p>	<p>Remaining habitat fragments defined and suggested units of high conservation and restoration priority highlighted for action.</p> <p>Near full complement of genetic diversity represented in ex-situ collections. Field gene banks are being populated and will be valuable resource post project as a legacy</p>	<p>Work will be focussed to secure the field gene banks.</p> <p>Continued training of peaks management team to ensure sharing of lessons learned</p>
<p>Output 1. All wild trees accessed. Trees and habitat assessment made including suite of invertebrates present</p>	<p>Tree Locations geo-referenced, tree health and habitat assessments completed for each site</p> <p>1.1 Number of trees accessed and recorded</p> <p>1.2 GPS location waypoints recorded for each tree</p> <p>1.3. Number of sites visited and surveyed with entomologist</p>	<p>All trees accessed and recorded. Evidence provided section 3.2 and Annual Report 2016</p> <p>Tree locations recorded and data held on project spatial database and linked with spatial GIS</p> <p>10 sites visited as explained in section 3.1 (). Indicator 1.3 does not allow for reporting on the assessments made of the available invertebrate habitat niches</p>	
<p>Activity 1.1 Survey to identify location of remaining isolated trees</p>		<p>Completed</p>	
<p>Activity 1.2 Assess community composition of each site</p>		<p>Almost all surveys completed. One dogwood site remains to be done over the following six months</p>	

Activity 1.3 Collect representative sample for invertebrate identification		Invertebrate niche habitat availability and quality assessed during sites surveys. Invertebrate samples were taken at ten representative sites and results are used for assessing site prioritisation
Output 2. Genetic material of rare Peaks trees collected, recorded and banked	Genetic material from all trees sampled will be collected and banked. All trees sampled will be cloned 2.1 Number of seed collections made and recorded 2.2 Number of trees accessed with genetic material secured in the nursery	See section 3.2 for progress and evidence Collections of the cabbage will be added to over the next flowering season. Those trees that are not yet represented in the nursery will be revisited for re-collection over the next six months
Activity 2.1 Collection, recording and banking of seed		False gumwood completed; the cabbage 80% complete; Dogwood and whitewood seed are collected when available.
Activity 2.2 Secure clonal material for propagation		Two whitewood sites not yet secure. Approximately 65% of dogwood complete. Two whitewood and the dogwoods not yet in propagation will be added in the next six months
Output 3. Clonal material propagated and planted in 'seed-orchards'	At least three locations identified, prepared and planted; first seed collected from planted clones 3.1 Number of trees successful cloned 3.2 Number of orchard sites established	Linked to previous output. Five seed orchards in place. All preparation work done. Planting started at four. See Section 3.2 Output 3 for details
Activity 3.1.1 Propagation facility set up		Facility standing and in operation
Activity 3.1.2 Expand propagation facility		Improvements added as and when required, most recently another 5000lt water tank for rainwater capture as seen in
Activity 3.2.1 Clonal material propagated		All secured cuttings propagated. Some failures require re-collection
Activity 3.2.2 Make duplicate sets of clones		To be completed over the next nine months
Activity 3.3 Sites prepared for planting		All site preparations completed

Activity 3.4 Seed-orchards planted up and labelled	Plantings to continue over following nine months. Peaks primary no1 Nursery site will be completed with enough material available where extra duplicate material is needed
Activity 3.5 Establishment rates assessed	Establishment rates of cuttings and seedlings in the nursery being assessed in full. Results will be published in Propagation Protocol as seen in Annex 14
Output 4. Practical methodology developed to inform Peaks National Park action plan	<p>Adoption of methodologies by National Conservation Areas management team</p> <p>4.1 All members of Peaks management team trained in propagation techniques</p> <p>4.2 Number of management areas identified</p> <p>4.3 Number of staff engaged in maintenance of project sites using protocols developed</p> <p>Seven peaks management team members received training with specific attention given to one who is now tasked with the responsibility of taking charge of the nursery.</p> <p>Management areas to be included as part of the priority sites for the 2man team as described in Section 3.2 Output 4. This should encourage the rest of the staff to adopt best methods.</p> <p>The project will give input to the management of this process</p>
Activity 4.1 Field data collated and analysed	Database up to date and being used
Activity 4.2 Produce protocols	Protocols in draft
Activity 4.3 Present completed protocols to NCA management team	Management team actively contribute to protocols. Protocols will be housed on the EMD government servers and available for use where appropriate.

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

Progress is reported against a format which was not part of the Cloud Forest application. Darwin recommended (See) that we translate project details into the given Logframe template given as .he following items were not required at the application stage and for our project to fit within the given Annex 2 we had to create a few fields and would like to raise a number of issues for your attention and consideration upon review:

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- 3- Our 4 agreed outputs originally had single **Indicators of Success**. In addition to this we list the indicators we have been using to measure progress under our activities.
- 4- **Assumptions** have not been listed for Outcomes and we do so here.

Project summary	Measurable Indicators	Means of verification	Important Assumptions
<p>Impact: St Helena’s Peaks National Park consisting of continuous cloud forest vegetation holding succession of generations with natural regeneration of all keystone tree species commonplace</p>			
<p>Outcome: The remaining habitat fragments of St Helena’s cloud forest which holds critically endangered trees included in ecological restoration targeting and full complement of remaining genetic diversity of the wild trees are used in restoration plantings</p>	<p>Clearance of invasive plants and supplemental planting are undertaken in habitat fragments. Peaks nursery producing steady output of genetic diverse saplings.</p>	<p>Peaks action plan and or work plans Nursery production records Photographs</p>	<p>Peaks nursery will get dedicated staff Record keeping are continued and up to date Fixed point photo records are kept to document change at selected fragments Project data support the case for including habitat fragments into work/action plans and this is taken on board by the Peaks Management</p>

			team
Output 1 All wild trees accessed. Trees and habitat assessment made including suite of invertebrates present	Tree Locations geo-referenced, tree health and habitat assessments completed for each site 1.1 Number of trees accessed and recorded 1.2 GPS location waypoints recorded for each tree 1.3. Number of sites visited and surveyed with entomologist	1.1 Relational database containing all tree and habitat assessment data 1.2 GIS database linked to database above containing geo-reference data for all recorded trees 1.3. Invertebrate survey data gathered in collaboration with DPLUS040	All areas can be visited during project time All trees are accessible Project able to engage suitably qualified entomologist
Output 2 Genetic material of rare Peaks trees collected, recorded and banked	Genetic material from all trees sampled will be collected and banked. All trees sampled will be cloned 2.1 Number of seed collections made and recorded 2.2 Number of trees accessed with genetic material secured in the nursery.	2.1 Collections added to St Helena's endemic seed bank recorded in the germplasm database 2.2 Nursery logbook records source, numbers and destination of all plant material entering and leaving the nursery	Clonal material (cuttings) can be propagated from the four key species. If this proves impractical seed collections will be taken instead
Output 3 Clonal material propagated and planted in 'seed-orchards'	At least three locations identified, prepared and planted; first seed collected from planted clones by March 2016 3.1 Number of trees successful cloned 3.2 Number of orchard sites established	3.1 Photographs of orchard sites 3.2 Nursery logbook showing destination of cloned plants 3.3 GIS maps of 'orchards' of propagated plants	Suitable sites will be available Ability to successfully produce material suitable for planting out Adverse weather will not impact negatively
Output 4 Practical methodology developed to inform Peaks National Park action plan	Adoption of methodologies by National Conservation Areas management team 4.1 All members of Peaks management	4.1 Peaks National Park action plan 4.2 Nursery propagation protocols 4.3 GIS mapping database 4.4 Invasive species protocols for Peaks	Management receptive to new methodology

	team trained in propagation techniques 4.2 Number of management areas identified 4.3 Number of staff engaged in maintenance of project sites using protocols developed	National Conservation Area	
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<p>Activities (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> <ul style="list-style-type: none"> 1.1 Survey to identify location of remaining isolated trees 1.2 Assess community composition of each site 1.3 Collect representative sample for invertebrate identification 2.1 Collection, recording and banking of seed 2.2 Secure clonal material for propagation 3.1.1 Propagation facility set up 3.1.2 Expand propagation facility 3.2.1 Clonal material propagated 3.2.2. Make duplicate sets of clones 3.3 Sites prepared for planting 3.4 Seed-orchards planted up and labelled 3.5 Establishment rates assessed 4.1 Field data collated and analysed 4.2 Produce protocols 4.3 Present completed protocols to NCA management team 			
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Annex 3: PrintScreen of DPLUS052 summarising most significant finds of invertebrate survey with a PrintScreen of a sample from the Data Set below

Checklist for submission

	Check
Is the report less than 10MB? If so, please email to Darwin-Projects@ltsi.co.uk putting the project number in the Subject line.	yes
Is your report more than 10MB? If so, please discuss with Darwin-Projects@ltsi.co.uk about the best way to deliver the report, putting the project number in the Subject line.	no
Have you included means of verification? You need not submit every project document, but the main outputs and a selection of the others would strengthen the report.	yes
Do you have hard copies of material you want to submit with the report? 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	no
Have you completed the Project Expenditure table fully?	yes
Do not include claim forms or other communications with this report.	