

Darwin Initiative Main Project Half Year Report (due 31 October 2015)

Project Ref No	DPLUS023
Project Title	Building capacity for habitat restoration in the Falkland Islands
Country(ies)	Falkland Islands
Lead Organisation	Falklands Conservation
Collaborator(s)	Falkland Islands Government, Stanley Growers, Royal Botanic Gardens Kew and Natural History Museum, London.
Project Leader	Dr. Andrew Stanworth
Report date and number (e.g., HYR3)	HYR2 19Oct2015
Project website/Twitter/Blog /Instagram etc	www.falklandsconservation.com/projects/habitat-restoration
Funder (DFID/Defra)	Darwin Initiative

1. Outline progress over the last 6 months (April – Sept) against the agreed baseline timetable for the project (if your project has started less than 6 months ago, please report on the period since start up to end September).

During the winter the Project Officer has been raising the profile of restoration work undertaken as part of this project both locally and internationally. Locally, in July 2015, the Project Officer gave a presentation and workshop at Farmers' Week, an event in Stanley attended by the majority of the Islands' farming community from East and West Falklands. During the week the Project Officer discussed with farmers approaches to restore vegetation on the Islands based on insights from the island-wide revegetation trial. The Project Officer also provided a lesson on plant and seeds to children from the 'camp' farming community. Recently, the new Head Agronomist at the Department of Agriculture has visited several of the revegetation trial sites with the Project Officer. The new agronomist will be involved with further development of the project (this addresses a key concern raised by a review of the annual report as to whether stakeholder engagement was likely to improve). Outside the Islands, the Project Officer has presented results from the revegetation trial at two international conferences National Native Seed Conference, USA, in May, and 6th World conference on Ecological Restoration, UK, in August. After these presentations, several international experts on restoration praised the approach and direction being undertaken as part of this Darwin Plus project.

In partnership with the "Terrestrial Ecosystems of the Falklands – A climate change risk assessment" (TEFRA) project, lead by Royal Botanic Garden Kew and University of Queens Belfast, the Project Officer hosted Rodney Burton, a Cambridge-based soil specialist, who provided training on soil profiling over a two-week course on the Islands. As part of the course, attendees visited several revegetation trial sites. Through the course, the Project Officer gained a greater understanding about challenges of restoring eroded soils on the Islands. For example, low germination and establishment of plants at one site at Saladero (a government research farm) could be explained by platy clay structures that need to be broken to allow root penetration for restoration. Such valuable insights were passed onto a wider farming community during the Farmers Week (above).

In Spring (September) all plots were surveyed for total plant canopy cover with successful treatments showing 65% on clay, 79% peat and 94% on sand (only one site on sand) (Output 1.2). Successful treatments included applying sheep dung and dags, and dung or dags with geotextiles. Notably, these treatments significantly differ from control plots and sowing seeds without treatments, which have <5% plant cover on clay and sand and <20% cover on peat. Precise species cover will be surveyed in January 2016 to provide necessary information to produce a leaflet guide for restoration (Output 1.5, 1.6). Key colonising species identified across the trial, including *Elymus magellanicus*, *Poa alopecurus* (Sand and Peat ecotypes), *Poa flabellata* and *Festuca magellanicus* will be targeted for more intense wild seed collection during the next growing season (Output 2.3). Timing of seed collection will be based on last season's phenological data collected from the Native Seed Hub at Stanley Growers and for the first time for many native species (Table 1).

Table 1. Phenological timings of native plant flowering, seeding and ripening times for 2014 – 2015 growing season. Black dots indicate when all the species seeds from the plots were harvested, apart from *Elymus magellanicus* with seed harvesting being staggered over two events. Please note these times may change following continued monitoring during the second season at the Native Seed Hub (Output 3.1).

Common name	Species	Key												
		Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	
Brickly burr	<i>Acaena magellanica</i>													
Dusky sedge	<i>Carex fuscua</i>													
Wavy hair grass	<i>Deschampsia flexuosa</i>													
Feujian couch grass	<i>Elymus magellanicus</i>													
Land Tussock	<i>Festuca contracta</i>													
Magellanic Fescue	<i>Festuca magellanica</i>													
Cinnamon grass	<i>Hierachloe redolens</i>													
Native rush	<i>Juncus scheuchzeroides</i>													
Buttonweed	<i>Leptinella scariosa</i>													
Native rush	<i>Luzula alopecurus</i>													
Blue grass (Peat ecotype)	<i>Poa alopecurus</i> PEAT													
Blue grass (Sand ecotype)	<i>Poa alopecurus</i> SAND													
Tussock	<i>Poa flabellata</i>													
Native fog	<i>Trisetum phleoides</i>													

Seeds collected from the Native Seed Hub have been cleaned and processed by sieving and use of a seed aspirator at Falklands Conservation (Outputs 4.1, 4.2). However, cleaning seeds is particularly time consuming and the extent of cleaning and processing seeds will need to be reassessed. For example, cleaning 1 gram of *Poa alopecurus* (Peat) can take about 67 minutes (combined data from Millennium Seed Bank Kew processing data and seed processing in the Falkland Islands) (Output 4.3). Due to time limitations we will be unable to generate necessary seed productivity data from the Native Seed Hub required for a cost analysis and development of a seed business plan within the scope of the project (Output 3.4, 3.5). Processing and cleaning seeds will be a key limiting factor for scaling-up use of native seeds for future restoration, and processing approaches will need to be modified. Furthermore, we have amended our 'risk table' in accordance with the annual review and agree that finding a suitable landowner to uptake seed production is both unlikely and of a high impact to the project. Nevertheless, by identifying good colonising species from the trial that also have qualitative productivity information from the Native Seed Hub (i.e. *Elymus magellanicus*), we plan to rear larger quantities of key species either at Stanley Growers and/or through a farmer willing to rear one or two species following on from this project (Output 4.4).

2a. Give details of any notable problems or unexpected developments/lessons learnt that the project has encountered over the last 6 months. Explain what impact these could have on the project and whether the changes will affect the budget and timetable of project activities.

Through this project the use of native seeds for restoration is progressing from a stage of proof of concept. However, due to the time limitation associated with cleaning and processing seeds from the Native Seed Hub we will be unable to generate the necessary seed productivity information that would inform a business plan. Furthermore, for larger-scale demonstration of re-vegetation, it would be necessary to determine market demand from farmers for native

seeds as part of viability analysis within a business plan (Output 3.4, 3.5). Therefore, instead of a business plan we will create a leaflet detailing methods collecting seeds and cultivating native plants to raise awareness of the use of native seeds for restoration (see change of request). Also, using information gained from the Native Seed Hub, restoration trial and a stakeholder forum we will produce a concept note for up-scaling production of key species that will be used in larger-scale re-vegetation trials (e.g. at a hectare scale).

Regrettably, there is a change of Project Officer with Dr. Stuart Smith leaving Falklands Conservation for alternative employment in October 2015. Nevertheless, we have employed a new Project Officer, Dr. Katherine Ross, who will complete the project benefiting from an extensive handover period as well as having seed collecting experience as a volunteer on the 2012-2013 Challenge Fund project (EIDCF014) and being familiar with many members of the farming community across the Islands having been involved in various projects in the Falklands for over 7 years. Although this change will not influence the budget or the timeline of the project, we wished to inform Darwin of this alteration. Additionally, since March 2015 Dr Rebecca Upson, our collaborator at Royal Botanical Gardens Kew, has been on maternity leave and has been unable to help guide the project in its penultimate quarter. Instead, Tom Heller at Kew has been helping organising an MSB staff member to conduct seed collecting and processing locally on Islands (Output 4.2). Dr Upson should be re-joining the project in January 2016 to provide input into stakeholder forum that will discuss alternative directions to develop the use of native seeds for revegetation on the Falkland Islands (Output 3.5).

2b. Have any of these issues been discussed with LTS International and if so, have changes been made to the original agreement?

Discussed with LTS: Yes/No

Formal change request submitted: Yes/No

Received confirmation of change acceptance Yes/No

3a. Do you currently expect to have any significant (e.g., more than £5,000) underspend in your budget for this year?

Yes No Estimated underspend: £

3b. If yes, then you need to consider your project budget needs carefully as it is unlikely that any requests to carry forward funds will be approved this year. Please remember that any funds agreed for this financial year are only available to the project in this financial year.

If you anticipate a significant underspend because of justifiable changes within the project and would like to talk to someone about the options available this year, please indicate below when you think you might be in a position to do this and what the reasons might be:

4. Are there any other issues you wish to raise relating to the project or to Darwin's management, monitoring, or financial procedures?

If you were asked to provide a response to this year's annual report review with your next half year report, please attach your response to this document.

Please note: Any planned modifications to your project schedule/workplan can be discussed in this report but **should also** be raised with LTS International through a Change Request.

Please send your **completed report by email** to Eilidh Young at Darwin-Projects@ltsi.co.uk. The report should be between 2-3 pages maximum. **Please state your project reference number in the header of your email message e.g., Subject: 20-035 Darwin Half Year Report**