

DPLR1\1022

Restoring peat soils and tussac grass habitat in the Falklands

The Falklands have the largest peat resource of all B.O.T and all island groups globally (IUCN-UK peatlandprogramme.org) Protecting and restoring this resource is of national importance. Tussac grass forms tussac peat soils which studies show can be large sources for carbon capture. With 75% of this habitat lost through overgrazing to date-the need to address restoration is a timely issue. The peat soils are drying and eroding-accelerating habitat loss and affecting biology across trophic levels.

If we can replant eroding peat soils with tussac grass on a large enough scale we can kick-start the microbiological process of the soil/root partnership and generate green engines for carbon drawdown and provide critical habitats for the Falkland's fauna and flora.

The project aims to conserve 230 hectares and restore 60 hectares of eroding peat soils on Dyke Island within 5-10 years.

The restoration aims are:

1. Protect existing tussac and other native grass communities and their peat soils
2. Restore all eroded peat soils and reduce further loss of habitat through creeping/wind-blown erosion
3. Restore biodiversity to the site by providing suitable habitat for fauna and flora
4. Reduce impact on the micro and macro algae communities offshore
5. Restore ecosystem services and create resilience and adaption to climate change events by improving the hydrological cycles associated with peat soils, carbon uptake and sequestration by both terrestrial and aquatic habitats.
6. Create nursery stocks to further restoration projects on the rest of Dyke Island in the medium term.
7. Facilitate plant stocks for other restoration projects in the Falklands long term.
8. Create employment opportunities whereby incomes generated are spent in the local economy. Pilot labour schemes for winter work as a subsidy to agricultural incomes within the Falklands.
9. Protect our natural environment for the future generations of Falklanders.

The actions to achieve restoration:

1. Harvest tussac grass tillers from existing mature stands.
2. Transport and plant the tillers in bare peat soils.
3. Monitor the plantations

The objectives for this planting session:

1. Pull and plant 5.45 hectares of bare ground or 24 000 tillers over 60 days*

*a planting day constitutes 8 hours of pulling /transporting and planting.

* Coverage should be approximately 4500 tillers per hectare.

* A good planter on good ground should plant 400-500 tillers per day

* Using these averages it is estimated that 1 planter can plant 1 ha of 4500 tillers over 11 days at a cost of £1687.50 per hectare (for labour)

2. Site and install the Tomst Data loggers to record soil and water levels long term.

Measuring the success of the plantations by:

1. Annual counts to determine percentage of success. 60-70% of tillers planted and growing in one year would be acceptable.
2. Followed by drone photographs year on year to show coverage
3. Measure the rate of bare ground being colonised through drone photography software
4. Botanical surveys of the sites to determine colonisation by other plant species
5. Coastal bird/mammal surveys to determine habitat usage
6. Measure and compare soil temperatures and moisture content as an indication of soil health.

Targets reached

23 344 tussac tillers were planted in 5.45 hectares in 2022

The planting was jointly funded by Falkland Islands Government Environmental Studies Budget-again funding a plantation in 2023-and the Antarctic Research Trust.

Resources Needed

All efforts are dependent on manual labour. The project is asking for the funds to cover these labour costs. The site is remote both in distance from services and ease of access. Accommodation and amenities are rudimentary and planters are very isolated. Winter planting conditions are physically demanding. Labour costs reflect these conditions and also act as incentives for recruitment.

PRIMARY APPLICANT DETAILS

Title	Mrs
Name	Giselle
Surname	Hazell
Organisation	INDIVIDUAL
Tel (Work)	[REDACTED]
Email (Work)	[REDACTED]
Address	[REDACTED]

DPLR1\1022

Restoring peat soils and tussac grass habitat in the Falklands

Section 1 - Project Title & Contact Details

Q1. Project Title

Restoring peat soils and tussac grass habitat in the Falklands

Q2. Please select whether you are applying as an organisation or as an individual (Guidance section 3 and Guidance Glossary)

Individual*

PRIMARY APPLICANT DETAILS

Title	Mrs
Name	Giselle
Surname	Hazell
Organisation	INDIVIDUAL
Tel (Work)	[REDACTED]
Email (Work)	[REDACTED]
Address	[REDACTED]

***If applying as an individual, you must open a separate project bank account used solely for your grant payment, if successful. This will be checked by the fund administrators. The maximum amount that can be requested during the first round of Darwin Plus Local applications is £20,000. Individual applicants will also be asked to provide: proof of identity, proof of solvency (e.g. bank statement), and a police check, if successful.**

Section 2 - Overseas Territory(ies)

Q3. Overseas Territory (Guidance section 1.3):

Which UK Overseas Territory(ies) will your project be working in? Please note that in case of a non-permanent resident population you need to demonstrate a clear, meaningful, long-term link to the territory.

Falkland Islands (FI)

*** if you have indicated a territory group with an asterisk, please give detail on which territories you are working on here:**

N/A

In addition to the UKOT(s) you have indicated, will your project directly benefit any other UK OT(s) or country(ies)?

No

Section 3 - Project Partners

Q4. Project partners (Guidance section 3.2)

In this section, please give details of all the partners involved (including the Lead Partner) and provide a summary of their roles.

**Project Leader name
(Guidance section 3.1):** Giselle Hazell

**Lead Partner name (if
applying as an
organisation; Guidance
section 3.1):** Giselle Hazell (applying as an individual)

**Lead Partner Website (if
applicable):** N/A

**Is the Lead Partner based
in a UKOT where the
project is working
(Guidance section 3.1)?** Yes

**List other partners
involved and where are
they based (Guidance
section 3.2):** Giselle Hazell
Falkland Islands

Project Manager-Giselle Hazell

(As a small individual project the project manager role assumes many sub-roles which include Administration Co-Ordinator, Fund Manager, Planting Co-Ordinator, Field Supervisor and Logframe Manager.

1. Administration Co-Ordinator

Responsibilities: Create the project framework. Apply for grants and funding. Advertise for local labour recruitment. Administer media outreach program. Conduct and manage risk assessments. Procurements of supplies, logistical co-ordination -travel-meals-accommodation for labour.

2. Fund Manager

Responsibilities: Create a financial spreadsheet and budget for the project and adjustments. Manage the budget. Create monthly statements and payment schedules. Comply with terms and conditions of grants

3. Planting Co-ordinator and Field supervisor

Assess eroded areas according to levels of priority for planting. Establish monitoring plots for the data recorders. Manage the tussac harvesting in established belts and tiller quality. Manage daily planting operations- ie sourcing labour, planting conditions, daily logs, labour health and safety.

4. Logframe Manager

Responsibilities: Monitor programme performance through inputs, activities, outputs, outcomes and impacts. Submit field reports and annual reports.


Summary of roles and responsibilities of each partner in the project:


I confirm that all listed partners are aware of this application and have indicated support:


Checked

Attach a Cover Letter for your application (Guidance section 4.2).

 [Cover Letter Darwin Plus](#)

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Section 4 - Project Summary & Description

Q5. Project Summary (Guidance section 3.8)

Please provide a brief summary of your project. This may be used in communication activities and/or published online, if your application is successful.

Restoring eroded peat soils and tussac grass habitats in the Falkland Islands by planting tussac tillers. Tussac grass forms "the single most important wildlife habitat in the Falklands". By re-planting overgrazed coastal stands, we can create pockets of biodiversity and ecosystem integrity. We can supply buffer zones for hydrological cycles to repair, for carbon cycles to kickstart soil microbiology. We can ensure responsible and remedial stewardship of offshore islands for the benefit of its native fauna and future Falkland Islanders.

Q6. Description (Guidance section 2.1)

Please provide a description of your project, including:

- the overall objective
- the current situation and the problem the project is trying to address
- what success will look like and how you will measure it

Please be as specific as possible when describing the project, using quantified data and evidence where available. You may wish to consider: what are the specific threats to the environment that the project will attempt to address, and what should we know about these threats? What does your successful project look like? And how will you demonstrate whether and how your project has been successful?

The Falklands have the largest peat resource of all B.O.T and all island groups globally (IUCN-UK peatlandprogramme.org) Protecting and restoring this resource is of national importance. Tussac grass forms tussac peat soils which studies show can be large sources for carbon capture. With 75% of this habitat lost through overgrazing to date-the need to address restoration is a timely issue. The peat soils are drying and eroding-accelerating habitat loss and affecting biology across trophic levels.

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(Optional) Please upload any additional and supporting materials or files (such as maps of project sites, etc) below. Maximum of 5 pages:

 [Art Report Abridged for Darwin Plus](#)

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Section 5 - Project Outcome(s)

Q7. Project Outcome(s) (Guidance section 1.2)

Successful Darwin Plus Local projects must demonstrate measurable outcomes in at least one of the themes of Darwin Plus, either by the end of the project or soon after through a credible plan.

Please tick which theme(s) of Darwin Plus your project underpins:

Checked	Biodiversity: improving and conserving biodiversity, and slowing or reversing biodiversity loss and degradation;
Checked	Climate change: responding to, mitigating and adapting to climate change and its effects on the natural environment and local communities;
Checked	Environmental quality: improving the condition and protection of the natural environment
Checked	Capability and capacity building: enhancing the capacity within OTs, including through community engagement and awareness, to support the environment in the short- and long-term.

Please justify your selection.

Biodiversity:

New plantations will provide habitat for many species of Falklands birds and invertebrates.

Climate Change:

Covering the eroded soils with living plants will have immediate carbon uptake and long term potential of carbon sequestration.

Environmental Quality: Planted soils will re-establish microbiomes in the rhizosphere- replenishing hydrological cycles. Less water run off =less erosion=less local drying=increasing water tables.

Capacity Building:

1. Commitment to the long term-complete remediation of bare soils
2. Create conversations and awareness for stakeholders(other land owners)
3. Create rural employment opportunities where knowledge and skills for remediation are acquired and interest in habitat restoration is fostered.

Section 6 - Project Timeline





Q8. Project timeline (Guidance section 2.2)

Please provide anticipated dates for the start and end of your planned project here. Please use the Darwin Plus Local Project Implementation Timetable Template (which can be downloaded below) to provide a list of the individual activities you have planned for this project, a brief description of what each activity entails, and the months in which the activities will be carried out. If the project involves only one activity (e.g. a purchase), please still provide project start and end dates (noting estimated times for procurement). Please note that your project will need to be completed by 31 March 2024.

Start date:	End date:	Duration (e.g. 3 months):
01 April 2023	31 March 2024	3 months

Please upload the completed Darwin Plus Local Project Implementation Timetable template with

your proposed project activities below.

-  [R1-DPlus-Local-Implementation-Timetable-Dyke](#)
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Section 7 - Costs

Q9. Costs (Guidance section 2.2 and please read the Finance Guidance)

Please provide a breakdown of costs to be funded through Darwin Plus Local (in GBP).

Are you seeking any matched funding for this project? (Please note that this is optional and there is no requirement to seek matched funding for Darwin Plus Local projects).

No

Budget line	Explanation	Cost in GBP
Staff costs:	60 days of tussac planting @ £150 per day 3 days of administration duties/monitoring and reporting@ £150 per day	████████
Overhead costs:	Heating, gas, solar etc will be provided by Dyke Island and shipping freight to receive on island.	██████
Travel & subsistence costs:	2x FIGAS return flights for planters with 21 kg baggage allowance @ £████ per flight = ██████ 2x FIGAS return flights for Drone pilots March surveys with 35 kg baggage allowance =£████ 8x Dyke-Fox Bay Airport Runs of 42miles @ █████p per mile for above collection =£2████ Estimated 700 mile daily return on quad @ █████p per mile = £██████	████████
Operating costs:	Food, accomodation, internet/telephone and laundry for planters will be provided by Dyke Island	██████
Capital equipment:	5 X Tomst TMS-4 Long Data Logger =£████ Freight total to Falklands from Europe(via UK) = £████ These data loggers will be sited in established tussac stands, bare ground and planted ground to measure the difference in soil temperature and moisture over the different vegetative coverings over time.	████████
Consultancy costs:	N/A	██████

Total:

██████████

This section provides more information on the budget to help evaluators understand how you will use the funds you are requesting. You do not need to list all costs, but please list and detail costs of more than £1,000 per item below, under the appropriate budget line.

Details of staff costs over £1,000 (if relevant)

60 Days of tussac planting /or 480 hours@██████████ per day = ██████████

The aim is to have a team of 3 planters planting for 20 days each receiving ██████████ per person per day. A day consists of 8 working hours.

3 Days of Administration duties etc @ ██████████ per day = ██████████

This will include monitoring of the plot sites. Writing up reports. Administrating payrolls.

Details of overhead costs over £1,000 (if relevant):

No Response

Details of travel and subsistence costs over £1,000 (if relevant):

Dyke Island has no airstrip and access is by small boat only. We are 42 miles one way trip by 4x4 to the government airstrip.

This cost is for travel to the island

2x FIGAS return flights for planters with 21 kg baggage allowance @ £██████████ per flight = ██████████

2x FIGAS return flights for drone pilots March surveys with 35 kg baggage allowance = ██████████

8x Dyke Island to Fox Bay Airport Runs of 42miles @ ██████████ per mile for above collection = ██████████

This cost is for daily travel

Estimated 700 miles (return) on quad @ ██████████ per mile = ██████████

Details of operating costs over £1,000 (if relevant):

No Response

Details of capital equipment costs over £1,000 (if relevant):

No Response

Details of consultancy costs over £1,000 (if relevant):

No Response

Details of other costs over £1,000 (if relevant)

No Response

If your project budget was prepared in another currency and converted to GBP, please provide the exchange rate, its source, and the date it was accessed:

Other currency:	Exchange rate:	Source of this exchange rate:	Date exchange rate accessed:
<i>No Response</i>	<i>No Response</i>	<i>No Response</i>	<i>No Response</i>

Darwin Plus Local has been created to build capacity and contribute to local economies in-territory.

What % of the total will be spent in the OTs?

If less than 80% of the total project spend is to be spent within the OT(s), please explain why.

No Response

Section 8 - Local and National Priorities

Q10. Local and national priorities

Please explain how this project aligns with local and national priorities? You may wish to consider the project in the context of national environmental laws, objectives, strategies, territory specific agreements, action plans or policies.

The Falklands are working towards a sustainable future in line with the United Nations Sustainable Development Goals.

1.UN Sustainable Development Goal 14 :Conserve and sustainably use the oceans, seas and marine resources.

This project provides breeding and resting habitat for marine seals and birds and reduces degradation of the inshore marine habitat due to terrestrial runoff.

2.UN Sustainable Development Goal 15 :Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and biodiversity loss.In 2016, the UN Convention on Biological Diversity was extended to the Falkland Islands. Subsequently the Falkland Islands Biodiversity Framework 2016 - 2030 a paper addressing the vision for the protection and enhancement of biodiversity in the Falkland Islands was implemented. Their targets are monitoring and maintaining our terrestrial natural habitats.Take urgent and significant action to reduce degradation of natural habitats, halt the loss of biodiversity.
This project aligns with these priorities by replanting keystone habitat.

3.The Kyoto Protocol and the UN Framework Convention on Climate Change was extended to the Falkland Islands, followed by the Doha Amendment.

Falkland's risks are:drying soils and loss of native plants.

This project can reverse these effects at a local level.

Will the project take place on Government owned land or water?

No

Section 9 - Project Risks

Q11. Project Risks

Please demonstrate your consideration of any risks involved in this project and how you intend to manage them. Depending on your project, you may wish to consider:

- Biosecurity risks – particularly for projects involving external equipment.
- Safeguarding risks – particularly for projects involving vulnerable groups such as children, older people or people with disabilities.

Risk	Mitigation
<p>Introduction of earwigs</p> <p>European Earwigs were introduced to the Falklands and have spread to most settlement's through bringing in materials and supplies from Stanley. They have no natural predators and are considered a horticultural pest. No data exists but they may impact local invertebrates.</p>	<p>Planters will check gear before arriving on the island if coming from an earwig source(likely)and immediately on arrival inside the house. All bags, gear etc will be deemed earwig free before travel to the planting site commences.</p> <p>Threat of Risk=Low</p>
<p>Risk of Exposure to Planters</p> <p>Planting occurs during winter in the Falklands.High winds and wet conditions can be a regular daily event. The planting sites are exposed and far from infrastructure to shelter in.</p> <p>Risk of threat-low</p>	<p>1.Conditions will be assessed using 12 hour forecasting for the planting period and checking the daily conditions. If deemed unsuitable -no planting will commence for that day</p> <p>2. Planters will have full waterproof gear as part of their daily equipment. They will carry extra gloves, beanies and a down jacket in their daypacks.</p> <p>3. The emergency barrel on station will have thermal aids</p> <p>4. Planters will be briefed on signs and symptoms of chilling and hyperthermia-asked to regularly self evaluate and perform buddy checks on breaks.</p> <p>5. Planters will be advised to "call it a day" if feeling extremely cold.</p>
<i>No Response</i>	<i>No Response</i>

Do you require more fields?

No

Section 10 - Terms & Conditions

Q12. Terms and conditions (Guidance section 3.10)

By applying for Darwin Plus Local you are adhering in full to the grant Terms and Conditions in full (available at: <https://dplus.darwininitiative.org.uk/apply> and as referenced in the Guidance at section 3.10). For information, the Terms and Conditions include requirements for all applicants to (amongst other requirements as per the full Terms and Conditions):

- Uphold a zero tolerance for inaction approach to tackling sexual exploitation, abuse, and harassment.
- Where appropriate, make all reasonable and adequate efforts to address gender inequality and other power imbalances.
- Notify all cases of fraud and theft (whether proven or suspected) relating to the project to the Grant Administrator as soon as they identified.

Please indicate you have read, and understood, and will adhere to the Terms and Conditions.

Checked

If your application is successful: If your project application is successful, the Fund Administrator (NIRAS) will ask you to provide some financial evidence for due diligence checks before you receive your project grant. (Please see section 3.3 of the Darwin Plus Local Finance Guidance). Please be ready to provide this evidence promptly.

Financial evidence for organisations: Year-end financial statements, the latest management accounts or audited accounts (if you have these).

Financial evidence for individuals: Proof of identity such as a passport, ID card or driving licence and solvency (such as bank statements) and a police check.

Section 11 - Certification

Certification

I certify that, to the best of my knowledge and belief, the statements made in this application are true and the information provided is correct.

Checked

I have the authority to submit an application on behalf of my organisation.

Checked

Name: Giselle Hazell

Position in the organisation: (if applicable) INDIVIDUAL

Signature (please upload e-signature)

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Date: 02 February 2023

Section 12 - Submission Checklist

Checklist for submission

	Check
I have read the Guidance documents, including the “Darwin Plus Local Guidance” and the “Darwin Plus Local Finance Guidance”.	Checked
If my proposed project takes place on public lands or water, I have uploaded a Letter of Support from Government.	Unchecked
I have uploaded a cover letter that details the information requested in the guidance (Guidance section 4.2 has information on what this cover letter should include).	Checked
I have read, and can meet, the current Terms and Conditions for this fund.	Checked
I have provided actual start and end dates for the project.	Checked
I have provided my summary budget based on UK government financial years i.e. 1 April – 31 March and in GBP in the application form.	Checked
I have uploaded my project implementation timetable using the specific template provided.	Checked
(If copying and pasting into Flexi-Grant) I have checked that all my responses have been successfully copied into the online application form.	Checked
The application has been signed by a suitably authorised individual (clear electronic or scanned signatures are acceptable).	Checked
I have checked the Darwin Plus website immediately prior to submission to ensure there are no late updates.	Checked
I have read and understood the Privacy Notice on the Darwin Plus website.	Checked

We would like to keep in touch!

Please check this box if you would be happy for the lead applicant (Flexi-Grant Account Holder) and project leader (if different) to be added to our mailing list. Through our mailing list we share updates on upcoming and current application rounds under Darwin Plus. We also provide occasional updates on other UK Government activities related to biodiversity conservation and share project news. You are free to unsubscribe at any time.

Checked

Data protection and use of personal data

Information supplied in the application form, including personal data, will be used by Defra as set out in the **Privacy Notice**, available from the [Forms and Guidance Portal](#).

This **Privacy Notice must be provided to all individuals** whose personal data is supplied in the application

form. Some information may be used when publicising Darwin Plus including project details (usually title, lead partner, project leader, location, and total grant value).

Project Title: Restoring eroded peat soils and tussac grass habitats in the Falklands

Darwin Plus Local

Provide a **Project Implementation Timetable** that shows the key milestones in project activities. Complete the following table as appropriate to describe the intended workplan for your project. Projects are based on UK Financial Years (**1 April – 31 March** - therefore starts April 2023).

Please add/remove columns to reflect the length of your project. For each activity (add/remove rows as appropriate) indicate the number of months it will last, and shade only the months in which an activity will be carried out. The workplan can span multiple pages if necessary.

Activity #	Description (max 25 words)	No. of months	UK Financial Year 2023/24											
			Calendar Year 2023									Calendar Year 2024		
			Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
1	Complete drone mapping of island with ESG	3 WKS												
2	Placement and testing of TMS dataloggers	1 WK												
3	Planting Tussac	50 days												
4	Plantation assessments and data logger downloads	1 WK												
5	Reports Submitted to Darwin Plus	1 WK												
6	Drone photos for annual ongoing comparisons (ESRG)	3 WKS												