

Darwin Plus: Overseas Territories Environment and Climate Fund Annual Report

To be completed with reference to the "Project Reporting Information Note"
(<https://dplus.darwininitiative.org.uk/resources/information-notes/>).

It is expected that this report will be a **maximum** of 20 pages in length, excluding annexes)

Submission Deadline: 30th April 2022

Darwin Plus Project Information

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| Project reference | DPLUS110 |
| Project title | Recognise, protect, restore: driving sound stewardship of Falklands peat wetlands |
| Territory(ies) | Falkland Islands |
| Lead partner | Falkland Conservation |
| Project partner(s) | Centre for Ecology and Hydrology (CEH), Falkland Islands Government (FIG), Ministry of Defence (MoD) - British Forces South Atlantic Islands (BFSAI) |
| Darwin Plus grant value | £265,889.00 |
| Start/end dates of project | 1 April 2019 - 31 March 2023 extended to October 2023 after change request approval |
| Reporting period (e.g. Apr 2021-Mar 2022) and number (e.g. Annual Report 1, 2) | Apr 2021-Mar 2022 Annual Report 1 |
| Project Leader name | Andrew Stanworth |
| Project website/blog/social media | falklandsconservation.com |
| Report author(s) and date | David Higgins, April 2022 |

1. Project summary

Covering over a quarter of the Falklands' land-area, peat-wetland is highly significant for carbon storage, ecosystem function, and the important habitats, fauna and flora it supports. Habitat and soil loss, are ongoing threats to our peat-wetland ecosystems, exacerbated by a lack of knowledge which prevents site-based protection and management for conservation.

Descriptions of nationally 'Vulnerable' peat-wetland ecosystems, development of assessment tools for land-managers, and multimedia outputs will inspire and drive protection and management of valuable sites for lasting conservation benefit.

The projects aims to gather baseline knowledge of the condition of the best of the Falklands threatened peat-wetland habitats and develop ecosystem knowledge of the species associations within and between the habitat types. Through this greater understanding of the relationships between the habitat types and peat condition including moisture, carbon, bulk density and pH can be deciphered. Once this knowledge has been gained the aim of the project is to inform improved management from government and private landowners to encourage land set-aside for nature and restoration effort.

On the way to this outcome the project will work with landowners, Falkland Islands Government and young people to pass on the knowledge gained and develop greater appreciation of the habitats, their importance and the services they provide. Through this collaborative work action plans and management plans will be developed to facilitate positive impacts at appropriate selected sites.

2. Project stakeholders/partners

Falkland Island Government (FIG) continue to be engaged with the project and have allowed access to all sites under their ownership. A change of FIG staff hasn't hindered the smooth relationship. Mike Jervois now sits on the steering group while Denise Blake is on maternity leave. Mike has offered assistance developing new invertebrate sampling methods for the next season of surveys bringing in his expertise developed in Australia and St Helena Island. He is also keen to work on developing action plans and management plans on behalf of FIG. The Department of Agriculture (DoA) continue to give access to the labs to process soil samples as and when required.

There have been two steering group meetings in the last year (**annex 3**) with good attendance from all project partners. The feedback, advice and general positivity from the members has been productive and formative for the project.

An informal group for people interested in peatland related matters (Peaty Pals) has been set up between Falklands Conservation (FC) and South Atlantic Environmental Research Institute (SAERI). This has met on four occasions with presentations covering peatland restoration, wetlands, history of Falkland Island peatlands, state of global peatlands and a presentation covering this project (**annex 4**). The group has been attended by FIG partners, SAERI, Falkland's farmers and land managers and interested members of the Falklands community. Links to adverts for the Peaty Pals meetings, and other presentation in **annex 5**.

The project has worked with 14 volunteers and 10 FC staff who have helped with surveys and developing the media outputs as well as when working with youth groups. The survey teams have been an even mix between male and female helpers. This year the project has worked with the following landowners:

- Hugue and Marie-Paul x 4 – Dunbar Farm re: soil samples and managed the yacht based field work
- Sonia Felton x 3 – Cape Dolphin re: soil samples, time lapse footage and main project surveys
- Ben Bernstein x 4 – Cape Dolphin and Elephant Beach Farm re: soil samples, time lapse footage and main project surveys
- Jo Turner x 3 – Weddell Island re: spider ID

- New Island wardens – re spider ID
- Suzi and Gilberto x 3 – Fitzroy re soil samples
- Mike Evans x 3– South Harbour Farm, Springpoint Farm, Harpoon Island re: soil samples and main project surveys
- Mount Pleasant Complex x 3 – c/o Kevin Lane re: soil samples and main project surveys
- Falkland Islands Govt.x 8 – access to Kidney Island and FIG land re: soil samples, time lapse footage and main project surveys
- Falklands Conservation land holdings – 10 FC owned sites visited re: soil samples, time lapse footage, tussock grass restoration and main project surveys
- Antarctic Research Trust (ART) x 1 - Hummock Island re: soil samples and main project surveys
- Jeremy Poncet x 1 – New House Farm re: soil sampling and site visit at his new holding
- Sally Poncet and Ken Passfield x 4 - re: Hummock Island and survey advice
- Helen and Leon Marsh x 2 - Long Mountain re: soil samples, time lapse footage, and main project surveys
- Giselle x 1 – Dyke Island re: soil samples and main project surveys
- Stephen and Sue Luxton x 1 – Patricia Luxton National Nature Reserve Island re: soil samples and main project surveys
- John Hellowell x 1 – Kidney Islands (Lively Island Group) Island re: soil samples and main project surveys

The following stakeholders have also been involved in training on collecting soil samples taken place with:

- Mike Evans (Springpoint and South Harbour)
- Ben Bernsten (Cape Dolphin and Elephant Beach Farm)
- Jeremy Poncet (New House)
- Suzi and Gilberto (Fitzroy)
- Hugue and Marie-Paul (Dunbar)

Work has continued with Falklands Island TV (FITV) and Falkland Island Radio Service (FIRS). FITV have continued to follow the project for the second year of surveys with a videographer joining the surveys on two extended boat trips and one three-day survey trip to West Falkland. Two short films have been already broadcast by FITV this year and a further four are waiting to be broadcast (**annex 6**). The delay has been due to the 40th anniversary of the Falklands Conflict taking precedence.

Professor Chris Evans, CEH project partner, visited the Falkland Islands in November 2021 and split his time working with the project, a Peatlands PhD student (Katy Ross) and SAERI. His time with the project was of real benefit especially regarding the relationships between soil variables. Two other CEH staff members, Angus Garbutt and Dr Ed Rowe, had planned to visit at the same time but Covid issues prevented the visit.

3. Project progress

3.1 Progress in carrying out project Activities

Output 1: *Peat-wetland habitats (including, but not necessarily limited to, all peat-wetland habitats listed as 'Vulnerable' under the national Biodiversity Framework and associated documents) are characterised and described*

Year 2 work has focused on fine-tuning the methods, preparing the survey trips and seeking access permission from the appropriate landowners as well as carrying out 49 full surveys, processing soil samples and preparing the data. Activities in year 2 are described below.

1.2 Delayed CEH visit

Unfortunately, the CEH visit from Angus Garbutt and Dr. Ed Rowe had to be postponed for a second occasion due to Covid difficulties. This will be rearranged for year 3. Professor Chris Evans was able to travel to the Falkland Islands and split his time working with his PhD student, SAERI and the DPLUS110 Peat-Wetlands project.

1.3 Field work planned

Planning for field work was built on from the year one work. Methods have been established and all necessary field kit purchased or made. Invertebrate sampling using pit fall traps was swapped for a vac sampler. This was considered a better option given the limited time available at most island survey sites. Hugue and Marie-Paul have been contracted to take the survey team to seventeen offshore islands. Accommodation booked on West Falkland for work on fachine habitats.

Planning for 2021/22 survey season following methods developed & trailed in previous quarter. Pit fall traps swapped for vac sampling due to the limited time available on island sites.

Olly Thompson, FITV videographer, is working with the project to continue the 'peat story' through lifetime of project. A list of survey sites can be seen in **annex 7**.

Bird survey protocols have been adapted from methods used on Falklands and South Georgia, devised alongside RSPB staff, taking a 100m stretch with the sample point as the centre of the X-plot looking at a maximum of 50m either side of the transect. At some locations the habitat is not of sufficient area and so at these locations birds are recorded if within the habitat or in an adjacent habitat which is similar enough to expect the bird species to utilise the niche as a contiguous habitat. This is often the case with bluegrass and Fuegian couch. The bird survey methods can be seen in **annex 8**.

1.4 Field work undertaken

The survey season started at the fachine habitats along the flanks of Long Mountain (West Falkland) at Rincon Ridge Farm. Time-lapse cameras were set up at this location to capture footage of orchids coming into flower. The next two survey tours were boat-based working with Hugue and Marie-Paul Delegnieres on board Le Sourire. These took place down the west coast from Dunbar to Dyke Island and then the east coast around the Lively Island group. The third major field trip took place on West Falkland visiting 2 National Nature Reserves and five farms. Several day trips on East Falkland took in Cape Dolphin, MPC, Mile Pond, Kidney Island, The Murrell and Rincon Ridge Farm.

During the summer survey season the fieldwork team visited 30 sites carrying out 49 full surveys in Boxwood, Bluegrass, Fachine /Whitegrass and Tussac habitats (onshore and offshore). The survey team visited the following sites visited:

West Falkland Islands:

- North Island (blue grass and tussac grass)
- Hummock Island (boxwood, blue grass and tussac grass)
- Saddle Island (tussac grass)
- Tea Island (boxwood and tussac grass)
- Dyke Island (blue grass)
- Harpoon Island (tussac grass)
- South Twin Island (tussac grass)
- West point island (blue grass)
- Seal rocks (Grant Munro only landed and checked tussac habitats for signs of prions and cobbs wren – both were found)

- Split Island (boxwood, blue grass and tussac grass)

West Falkland:

- Long mountain (fachine/whitegrass)
- Purvis (fachine/whitegrass)
- South Harbour (fachine/whitegrass and extra soil samples)
- Roy Cove (a look for suitable habitat but none found)
- Hill Cove (a look for suitable habitat but none found)
- Hawks Nest Pond (fachine/whitegrass)
- Patricia Luxton NNR (fachine/whitegrass)
- Dunbar (extra soil samples)

East Falkland Islands:

- Middle Island (blue grass and tussac grass)
- Motley Island (blue grass and tussac grass)
- Green Island (tussac grass)
- Centre Island (tussac grass)
- Pyramid Islet (tussac grass)
- Kidney Island (tussac grass)
- Kidney Islands (Lively Group - tussac grass)
- North-East island (a look for suitable habitat but none found – bluegrass coastal and on sandy soils)

East Falkland:

- Cape Dolphin (onshore tussac grass)
- Mile pond (a look for suitable habitat fachine/whitegrass to be surveyed next season)
- MPC (fachine/whitegrass)
- Rincon Ridge Farm (a look for suitable habitat fachine/whitegrass to be surveyed next season)

Annex 9 shows maps of the survey suites. In addition to the main surveys, further soil samples taken at Elephant Beach Farm, Cape Dolphin, South Harbour, Dunbar and Fitzroy.

1.5 Data analysis

Data has been largely recorded in excel spreadsheets. There are some gaps while processing of soil samples continues in the DoA labs. Some analysis has been complete exploring the relationships between soil variables and the physical structure of the habitats and soil moisture. The PO will be visiting the UK in July and August to work with CEH partners for data analysis.

Output 2: *Habitat Action Plans developed incorporating straight-forward protocols for assessing and monitoring change in chosen habitats (to include the 5 nationally 'Vulnerable' peat-wetland habitats).*

2.1 project development with stakeholders

The steering group has offered valuable guidance and feedback during the steering group meetings as well as ongoing assistance as required. FIG staff, including those that sit on the steering group, are offering assistance with developing improved invertebrate sampling methods as well as on the development of action plans. Staff at DoA are providing access to the labs and invertebrate identification assistance.

Land managers and farmers are assisting with protocols and are showing good engagement with the project. Knowledge sharing has been two-way and access to land freely granted. The protocols will be further developed in the early stages of year 3,

Output 3: *Decision makers, landowners and wider Falkland Islands community members have engaged in the project and are able to independently progress the project outcome.*

3.1 training sessions

Training on collecting soil samples took place with:

- Mike Evans (Springpoint and South Harbour)
- Ben Bernsten (Cape Dolphin and Elephant Beach Farm)
- Jeremy Poncet (New House)
- Gilberto Castro & Suzi Clarke (Fitzroy Farm)
- Hugue and Marie-Paul Delignieres (Dunbar)

These training sessions were fitted in with the main project survey visits allowing landowners to see the full scope of the surveys while also taking soil samples from specific locations in addition to the main work. These sessions were informal allowing a two-way learning experience with the survey team gaining better understanding of land management and tapping into the wider expertise of the land managers, including the historical changes in management and the farming response to the drying climate that the Falkland appear to be experiencing.

Extra soil samples collected on Hummock Island by Antarctic Research Trust researchers to be processed with work experience student during April and May 2022 along with some outstanding pH and Loss on Ignition (LoI) processing for the main project. Five landowners joined the full surveys and assisted with the work gaining hands-on knowledge of the methodologies and how the data will help with understanding the Falklands threatened peat-wetland habitats.

3.3 youth field trips

During year 2 the project has worked with the following youth groups covering peatland habitats, conservation and restoration:

- Watch Group weekend trip to Bleaker Island for tussac planting & habitat ID hosted by owners Nick Rendall, Phyll Rendall and Mike Rendall.
- Frin's seed bombs with the local Scout Group as part of DPLUS110 experiment on germination.
- Watch group to Middle Island for tussac planting coincided with planting/restoration funded by Georgia Seafoods Ltd. The trip explored DPLUS110 habitats before joining the main group for seed bomb dispersal (boxwood) & tussac planting.
- Produced video of WG as they engage with election process covering environmental issues including peatland management and restoration.

See **annex 10** for further information regarding work with youth groups.

3.4 land manager fieldwork involvement

The previous 2 quarters has involved work with 6 landowners covering 7 farms (Fitzroy, Elephant Beach Farm, Cape Dolphin, Springpoint, Dunbar, The Murrel and Rincon Ridge) in addition to farms already visited. Soil samples from this work were taken and processed for moisture, bulk density, carbon & pH from CD, EBF & Fitzroy. Habitats identified & access permissions granted for 2021/22 survey season.

Bird survey protocols adapted from Falklands and South Georgia were developed alongside Sally Poncet, an island owner and key worker on Hummock Island. During year 2 the project has worked with 21 landowners, see section 2 for details.

Extra soil samples were collected on Hummock Island by Antarctic Research Trust staff. These are to be processed with the help of volunteers and a work experience student during April and May 2022 along with some outstanding soil processing for the main project.

Output 4: *Project Management, monitoring, evaluation and communication schemes.*

4.2 data management protocols established

Long-term data management and accessibility will be through the IMS-GIS centre with maps. Project data will be processed with the assistance of UKCEH staff while the PO is in the UK during July and August 2022.

4.3 steering group updates M&E

There have been two steering group meetings in year 2. The assistance and expertise from the members has been invaluable to the project.

4.7 website updates

The website has recently been updated to reflect the years' work with embedded videos of the survey methods and one of the FITV broadcasts.

3.2 Progress towards project Outputs

Output 1:

Peat-wetland habitats (including, but not necessarily limited to, all peat-wetland habitats listed as 'Vulnerable' under the national Biodiversity Framework and associated documents) are characterised and described

There have been 49 surveys carried out in year 2 at 30 sites including 18 islands. The habitats surveyed are those habitats listed as 'Vulnerable' under the national Biodiversity Framework including tussac grass (onshore and offshore), bluegrass, boxwood and whitegrass/fachine. The baseline condition is a lack of formal surveys and information especially in remote locations. Some habitat types, such as boxwood, are so limited the project is exploring every good example in the Falklands. Others, such as tussac grass, are prevalent on off-shore islands and so site selection has been based on accessibility, landowner permission and FC owned islands. Each survey has been randomly selected within these limitations. Each survey involves soil sampling, botanical surveys following the x-plot methodology of the England and Wales Countryside Surveys, bird surveys and invertebrate surveys.

Soil samples have been processed and the final pieces of data are being added to the spreadsheet. Scatterplots have been processed to develop basic information on the relationships. The next stage is to explore and analyse the data thoroughly alongside CEH staff while the PO is in the UK from July to August.

Output 2:

Habitat Action Plans developed incorporating straight-forward protocols for assessing and monitoring change in chosen habitats (to include the 5 nationally 'Vulnerable' peat-wetland habitats).

Work has started on this output with initial discussions with FIG staff to develop the action plans to ensure they are fit for purpose and cover land that is both in good condition and areas that have suffered damage and erosion and require more restoration effort. A short workshop is being prepared for the next Peaty Pals meeting in early June 2022.

Protocols are being developed alongside colleagues and with the landowners that have engaged in the project. Feedback from landowners has been especially useful and has shown a wide knowledge base among the farming and landowning community. Certain bird species appear to be associated with specific habitat types. For example grass wrens are clearly associated with whitegrass/fachine habitats, while seabirds are attracted to tussac grass habitats along with sea lions which in turn attract turkey vultures. Soil conditions differ between the habitat types with tussac grass and bluegrass appearing to hold greater moisture with reduced moisture in whitegrass/fachine habitats.

Output 3:

Decision makers, landowners and wider Falkland Islands community members have engaged in the project and are able to independently progress the project outcome.

At the national level FIG and Members of the Legislative Assembly are increasingly showing interest in the carbon capture potential of peatlands as well as potential restoration. The project, along with a wider group of peatland researchers visiting the Falkland Islands, has helped develop a groundswell of interest in peatlands. The recent Falkland Island elections showed how all the candidates developed manifestos with strong environmental statements

Work has taken place to develop Action Plans alongside FIG environment staff to write management and restoration into government targets. The Action Plans will be developed over the coming 2 quarters with a workshop being developed for the next Peaty Pals meeting in June 2022. Recent FIG work on 'Drying climate and impacts for land management in the Falkland Islands' highlights the developing interest for land management change and the importance of peatlands and native vegetation.

The number of landowners that have worked with the project has allowed a 2-way sharing of information covering habitats and land management. There appears to be a growing consensus that a changed approach to farming would be to reduce stock numbers while improving fleece quality through reduced micron size. This offers new opportunities for partnerships between land managers and conservation to take pockets of land out of production and revert back to natural areas. This has taken place at Blue Beach Farm, Rincon Farm, Springpoint, South Harbour, Dunbar, Elephant Beach Farm and Cape Dolphin and creates opportunities for engagement with land managers. The interest shown throughout the project suggests greater information on habitat types is being well received. The farmers and land managers that have joined the project have shown interest in the work, peatlands in general and the information coming from the data.

MLAs and FIG staff have attended the presentations at Farmers Week and Peaty Pals. The candidate manifestos in the recent elections highlighted how the environment is becoming increasingly mainstreamed and there appears to be a keen interest to develop better management of FIG land. Discussions have taken place with the FIG Environmental Officer and Biodiversity Officer to develop Action Plans as a collaborative approach based on project findings. The Action Plans will be targeted to both higher value habitats and those areas that have suffered severe erosion and require restoration. The project findings and proximity to natural habitats will help govern the prescriptions in both management and action plans.

In addition to the FIG input the project has worked directly with over 20 landowners and farmers with several taking part in the surveys and soil sampling. Training in soil sampling has taken place with 5 landowners. The engagement has been outstanding and highlights how important peat-wetlands are now being seen in the Falkland Islands.

Output 4:

Project Management, monitoring, evaluation and communication schemes.

There have been 2 steering group meetings in year 2 as well as regular sharing of ideas. Professor Chris Evans visited the Falkland's on an advisory visit and split his time between 3 projects. He joined the project for one full survey and Kidney Island and assisted with data analysis.

There is regular communications with landowners and farmers and strong links with several FIG staff including the Environmental Officer and Biodiversity Officer. Feedback and assistance

has been offered through FIG to develop better invertebrate sampling methods for year 3 surveys.

Communication has taken place through presentations at Farmers Week and Peaty Pals meetings. Two articles have been written for the FC Annual Newsletter and the MOD Sanctuary Magazine. A third has been written to be published in the FC 2022 Newsletter. The website has been updated after the summer surveys and regular posts are made on Twitter and Facebook. There are discussions with the Yorkshire Peat Partnership to develop a 'global peatlands' exhibition.

3.3 Progress towards the project Outcome

Outcome:

Nationally 'Vulnerable' peat-wetland habitats are recognised, can be assessed and monitored to inform appropriate management by Government and community alike. The importance of plant habitats for fauna is newly understood.

Surveys in year 2 have covered a broad range of sites and explored the relationships between the physical environment along with flora and fauna at 49 survey sites across 30 locations within boxwood, bluegrass, fachine /whitegrass and tussac habitats (onshore and offshore). There have been some interesting relationships displayed during this work. The rare green spider (*Molinaranea magellanica*), which anecdotal evidence suggests once thrived across the Falkland Islands, was found to be prevalent in the boxwood stands of Split Island. An absence of passerine birds perhaps explains this abundance while the paucity of both passerine birds and seabirds could be explained by the presence of non-native foxes. In terms of habitat structure on Split Island there are some interesting banding of habitat types with a coastal strip of tussac grass merging into a strip of boxwood stands which gives way to bluegrass on the higher elevations. This could perhaps describe Falkland Islands climax communities prior to people arriving.

At each survey site soil samples are taken for bulk density, moisture and pH analysis along with in-situ measures of depth and compaction. The x-plots allow an understanding of the botanical diversity providing understanding of the species-area relationships. Measures of physical structure are taken including sward height and shrub height in boxwood and fachine habitats. Bird and invertebrate surveys are carried out to understand the relationships between broad habitat types, soils, structure and fauna within and between the habitats. Year 2 data is collected and scatterplots created to develop an understanding of relationships. The data will be further analysed to help tease out the information during first quarters of year 3.

The habitat types are becoming increasingly understood by the Falklands community, and FIG, through presentations and FITV broadcasts which have been invaluable for describing the project. These broadcasts have covered each of the peat-wetland types explored during year 2 (fachine, tussac grass, boxwood and bluegrass). There is increasing interest in adapting management of peatlands, with the project acting as a catalyst in conjunction with a drying climate that has resulted in lakes, ponds and soils drying throughout the Falkland Islands. The project appears to show soil moisture levels are higher in habitats where the grass sward is highest. This is especially the case in tussac grass and bluegrass habitats. This offers some potential for adapting management in response to reduced precipitation, or enhanced drying from win.

The number of landowners that have worked with the project has allowed a 2-way sharing of information covering habitats and land management. There appears to be a growing consensus that a changed approach to farming would be to reduce stock numbers while improving fleece quality through reduced micron size. This offers new opportunities for partnerships between land managers and conservation to take pockets of land out of production and revert back to natural areas. This has taken place at Blue Beach Farm, Rincon Farm, Springpoint, South Harbour, Dunbar, Elephant Beach Farm and Cape Dolphin and creates opportunities for engagement with land managers. The interest shown throughout the project suggests greater information on habitat types is being well received. The farmers and land managers that have

joined the project have shown interest in the work, peatlands in general and the information coming from the data.

MLAs and FIG staff have attended the presentations at Farmers Week and Peaty Pals. The candidate manifestos in the recent elections highlighted how the environment is becoming increasingly mainstreamed (**annex 11**) and there appears to be a keen interest to develop better management of FIG land. Discussions have taken place with the FIG Environmental Officer and Biodiversity Officer to develop Action Plans as a collaborative approach based on project findings. The Action Plans will be targeted to both higher value habitats and those areas that have suffered severe erosion and require restoration. The project findings and proximity to natural habitats will help govern the prescriptions in both management and action plans.

The project appears to be running within the timelines and should be completed within the timeframe. There have been adaptations from the monitoring and lessons learnt as the project moves forward but the indicators appear adequate for assessing achievements and keeping the project moving forward.

3.4 Monitoring of assumptions

| Assumption | Response |
|---|---|
| FC retains positive working relationship with Government including Department of Agriculture. FC have a good and pro-active relationship with Government through regular meetings at all levels from Departmental representatives to Members of the Legislative assembly (MLAs). FC has been receiving Government funding for projects, working jointly on policy development and providing advice to Government for over 30 years. | These assumptions remain true with solid work partnerships between FC and FIG including DoA. The PO has forged good collaborative work relationships with the laboratory manager and FIG agricultural advisors. Members of FIG staff have joined the project surveys as have MLAs. At a more strategic level FC and FIG continue to work jointly. |
| Project Officer or replacement remains in the Falklands to complete field work program. FC have a good record of project staff retention. Project partners remain sufficiently resourced to support the project. Key partners are large well-established organisations or Government backed. | The PO continues to work well in the Falklands and intends to complete contract. PO will be returning to the UK to work with CEH and Kew Gardens staff during year 3 Q1 and Q2. Partners continue to support the project with financial and practical support from FIG and project advice from the steering group partners. Covid has limited visits to the Falkland's from partners but these will be planned to go ahead during year Q3 or Q4. |
| A suitable charter vessel is available for hire to support field work on islands. FC have existing relationships with vessel owners. Sites are accessible and logistics affordable. Best/only good examples of some habitats are on remote offshore islands. Weather can influence access. In order to get to remote islands and have flexibility to accommodate bad weather a live aboard boat is necessary. These platforms are costly, as fieldwork often competes with the option for commercial | Year 2 surveys were undertaken from SY Le Sourire owned by Marie-Paul and Hugue Delignieres. All of the multi-day island surveys went very well and Marie-Paul and Hugue Delignieres have expressed a willingness to be chartered again during year 3. Logistics were devised between PO and boat owners. All islands which we aimed to land on were accessed. Sea conditions determined the route we took and there was a degree of flexibility day by day. However, Marie-Paul and Hugue are |

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| <p>tourist hire, and prices can rise annually. The costs in the project for fieldwork travel aim to remain as cost effective as possible, but ensure, as much as possible, that necessary sites can be accessed.</p> | <p>extremely skilled and experienced. They were joined by their daughter who is equally experienced and between them they ran an excellent charter allowing us to access some difficult locations and survey the best examples of boxwood, tussac grass and bluegrass habitats.</p> |
| <p>IMS-GIS data centre</p> | <p>There is no change with this assumption.</p> |
| <p>Enough land managers willing to engage to trial protocols.</p> <p>FC have invested significant time and resource in building relationships with the Falkland landowners and have an established outreach programme. For the initial submission of this project an unprecedented number (31) of landowners were motivated to write or sign letters of support for the project.</p> <p>Enough land managers willing and enthusiastic to engage through project either immediately or as a result of engagement activities.</p> | <p>To date the project has worked with 24 landowners and farm managers. The interest in the project has been considerable and already 8 landowners have been trained in how to take soil samples and have provided samples for analysis. This interest has grown from the large number of landowners that provided support at the application stage.</p> |
| <p>Suitably qualified candidate found in Falklands or externally who is willing to travel to the Falklands. FC appointment processes have provided successful project officers for numerous projects including Darwin. FC's website is fully functioning throughout the lifespan of the project.</p> | <p>The initial delay in arrival of the PO has not hindered the project and year 2 surveys have gone well with 49 full surveys taking place at 30 sites which includes 18 islands. The PO has expressed their intention to continue to the end of the project.</p> |
| <p>The website has recently been overhauled and continuous technical support is available to ensure functioning.</p> | <p>The website has recently been updated to cover year 2 survey: https://falklandsconservation.com/peat-wetlands-project/</p> |
| <p>Stakeholders willing to collaborate and cooperate.</p> | <p>Local engagement in the project has been excellent with 37 sites accessed over the 2 years of the project and permission granted for new access to several new sites in year 3. The local TV company (FITV) have now filmed 10 short films covering the project with 6 already broadcast along with 2 radio interviews which includes 1 in year 2.</p> |

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

Given that the Falkland Islands are signatories to an array of international agreements, whereby international commitments toward targets for the conservation and management of biodiversity have been made, this project directly supports the Falkland Islands to meet their obligations under multi-lateral agreements such as the Convention on Biological Diversity and the Sustainable Development Goals. This statement from FIG specifically relates to its current development of an Environment Strategy, which will be the key environmental policy document for the Falklands, incorporating the national biodiversity strategy equivalent. The field methods involve capturing data on above ground carbon and soil carbon which will produce evidence for future routes towards carbon offsetting schemes.

Important Falkland Islands commitments include

- The Kyoto Protocol and UN Framework Convention on Climate which set out to reduce GHG emissions and global warming
- UK government's ambition for Net Zero GHG emissions by 2050, which could be extended to incorporate GHG removals in the Overseas Territories.
- The Falkland Islands Biodiversity Framework which identifies climate change as a threat to Island biodiversity
- The Falkland Islands 'Islands Plan 2018-2022' which states a government commitment to 'Fulfil our commitments under international treaties and agreements such as climate change accords, and strive to mitigate our carbon footprint', 'Encourage research into the Falkland Islands environment to provide greater understanding of ecosystems, biodiversity and wider influences' and 'Encourage natural habitat restoration and preservation'
- The Falkland Islands Government Energy Strategy 2017
- Private sector agreements on carbon offsetting such as the aviation sector CORSIA scheme, which could finance carbon offsetting activities in the Falklands and elsewhere.

The project has been a major driver of interest in peatlands both within FIG and at a broader scale. The UK government, through Defra, are showing interest in developing further peatland work in the Falkland Islands including the potential deployment of flux towers to describe the sequestration potential of different peat-wetland habitats. During year 1 the UK Government Department for Business, Energy and Industrial Strategy provided match funding to the project to carry out work exploring above ground carbon capture potential of whitegrass camps under different grazing regimes.

At the national level FIG and Members of the Legislative Assembly are increasingly showing interest in the carbon capture potential of peatlands as well as potential restoration. The project, along with a wider group of peatland researchers visiting the Falkland Islands, has helped develop a groundswell of interest in peatlands. The recent Falkland Island elections showed how all the candidates developed manifestos with strong environmental statements.

Work has taken place to develop Action Plans alongside FIG environment staff to write management and restoration into government targets. The Action Plans will be developed over the coming 2 quarters with a workshop being developed for the next Peaty Pals meeting in June 2022. Recent FIG work on 'Drying climate and impacts for land management in the Falkland Islands' (**annex 12**) highlights the developing interest for land management change and the importance of peatlands and native vegetation.

5. OPTIONAL: Consideration of gender equality issues

The survey team has consisted of 14 volunteers and 10 staff joining at different times over the life of the project. There has been an even mix between male and female survey team members. Volunteers, and staff, working on the project have been selected on a mix of an open call and targeting of specific individuals. For example, Sonia Felton is both a brilliant amateur botanist and solid field worker and was specifically asked to join the project. She has proven to be an invaluable volunteer. Marilou Delignieres was also targeted due to her specific skills as

boat crew, field guide and outdoor expertise. She proved to be another exceptional asset to the project team and delivered the survey team to and from some very difficult to access remote islands. There has been huge interest in joining the project on the survey tours resulting in oversubscription of volunteers. The benefit of the Falkland Islands community is that there are numerous people with high skill levels throughout the genders, nationalities, religions and ages. The age of project volunteers has ranged from 18 to 74.

There are no specific barriers to engagement of particular genders in activities in the Islands or specifically in this project. For example our Watch Group for young children actively engages equal numbers of boys and girls (this equal representation has occurred naturally), and our Falklands Conservation Volunteers, who carry out a range of practical actions, include around 101 females and 68 males. Falklands Conservation employs 8 females and 3 males. The project will provide equal opportunities for different gender involvement and will endeavour, as per logframe statements, to achieve good representation of gender types in project activities, including training events for adults and field trips for young people.

6. Monitoring and evaluation

Monitoring and evaluation is an ongoing process on the project with colleagues, steering group members and other stakeholders, including farmers, all adding useful feedback to the project. Specific assistance has been sought from FIG staff and steering group members regarding adapting the invertebrate methods to ensure they're fit for purpose.

Project partners and steering group members have been reviewing work and assisting with project development. Key FC staff have offered continual feedback, guidance and advice on all stages of the project including development of the working methods, approaching local landowners and other stakeholders. CEH reviewed methodologies and are assisting with data analysis ensuring the project maintains high level scrutiny and the outputs are rigorous and fit for purpose.

The Project Lead will have overall project accountability; however, project delivery will be overseen and managed by the Steering Group. The Steering Group and Project Officer met twice in year 2. The involvement of partners in project elements ensures they have regular oversight. The Project Officer will provide Steering Group members with project updates including a budget summary from the FC's Finance Officer (who will administer finance for the project).

Within Falklands Conservation weekly meetings are held between FC project staff to share updates on project progress. This will facilitate finer scale monitoring and evaluation of and by the Lead Organisation. Darwin M & E reporting (spend predictions and half-yearly and annual reports) will be delivered by the FC staff: Project Lead, Project Officer, Project Administrative Officer and Community Outreach Officer and the Communications and Marketing Officer. The Project Lead and Project Administrative Officer will communicate regularly to ensure appropriate tracking of budget lines and address any administrative challenges. Broader, external feedback on overall progress, or specific relevant elements of it, will be gained through communication with relevant stakeholders. Accounting will be managed as an auditable restricted fund.

7. Lessons learnt

The initial plan was to use pit fall traps for sampling invertebrates but time constraints, particularly the island sites, meant the traps weren't deployed long enough to ensure a good catch rate. Timed vac sampler was considered a good alternative and was deployed for this year's surveys. Work by Roger Key on South Georgia and St Helena Island suggested catches between pit fall traps and vac sampling were not significantly different except when the vac sampler is sited on vegetation. However, there have been further issues with a poor catch rate and the sampler becoming 'clogged' with plant material especially in tussock grass habitat. Adapted Berlese Funnel extractions, using naphthalene instead of heat to move invertebrates into sampling bottles, was considered a suitable method for processing the samples. This has proven difficult with very few invertebrates being caught in the preservative. Again this method

has worked well on St Helena Island and South Georgia but doesn't appear to be working well in the Falkland Islands. Advice is being sought from UKCEH specialists but it appears that next year's surveys will use multiple invertebrate sampling methods to gather the information needed.

The CEH visit was cancelled due to Covid however the PO is returning to UK to work directly with CEH on data analysis and a later visit is being planned with CEH STAFF to the Falklands. Chris Evans did make the trip and he worked alongside two Darwin projects, including DPLUS110, and A PhD student taking on a role to explore carbon stocks in peat soils

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

1/ nothing to report

2/ The leaflet for the Watch Group activity is shown in **annex 13**. The second field trip at Elephant beach Farm was a more informal event during the annual weekend camp. I trained the watch group leader in basic soil survey methods and he then worked with the other group leaders and young people to carry out some soil depth measures and take soil samples for carbon and density measures. Because it wasn't a dedicated field trip there isn't a report available on this one.

3/ The timeframe for the whitegrass project was tight and the project was reliant on the land managers and farmers to choose the camps we surveyed based on their knowledge of the grazing regimes. No other information was available so there wasn't a formal process of randomly selecting the main sites we worked on. Once in the field we chose a starting point away from any trackways or gates to avoid issues of exacerbated soil compaction. Then we set up a line transect and carried out the surveys at 50m intervals along the line.

9. Other comments on progress not covered elsewhere

Difficulties have been covered in the 'Lessons Learnt' and 'Impact of COVID-19 on project delivery' sections

10. Sustainability and legacy

In year 2 the project we have produced articles for the FC annual newsletter (**annex 14**) and an article for the MOD Sanctuary Magazine (**annex 15**). There has been an interview on the local radio station and FITV are working with us to prepare a series of TV reports covering peatland habitats and project progress throughout the project life. To date six reports have been broadcast with a further four are still to be aired. We regularly post on Twitter and Facebook receiving positive feedback with numerous likes and retweets.

During years 1 and 2 we have been privileged to witness some outstanding restoration efforts on Falklands Conservation and Antarctic Research Trust islands, as well as on mainland sites in private ownership such as Cape Dolphin, Blue Beach Farm, Dunbar and Spring Point. The floristically-rich fachine habitats of Purvis Rincon, Patricia Luxton National Nature Reserve and Long Mountain have highlighted how private ownership can protect some of the best examples of threatened peat-wetland habitats. The groundswell of interest in Falkland's peat habitats has been encouraging. The Peaty Pals meetings are well attended. Information from overseas researchers, and those working in the Falkland Islands, highlight fascinating information. For example, the highest recorded rate of carbon sequestration in a terrestrial habitat takes place in a tussac grass peat-wetland in the Falkland Islands; Beauchêne Island has the highest carbon capture rate of any other recorded terrestrial habitat. The second highest is the tussac peat habitat of Kidney Island, a half hour boat trip from Stanley. Where islands such as North, Saddle and Split (off West Falkland) sit in terms of carbon sequestration is yet to be established, but it would be safe to assume they're also positioned towards the top end. Falkland peatlands are both extensive and globally unique and this information is being well-received by FIG and the Falklands community.

This knowledge is also embedding into the psyche of local, and international, decision makers. Defra, and BEIS have already provided, or are discussing providing funds, for peatland research in the Falkland Islands. The Falkland Islands Government are showing keener interest in better peatland management. Over the last two years FIGs Environmental Unit has grown from one staff member to five. There appears to be a developing convergence between landowners, farmers and conservation interests with solid restoration work taking place on private land such as Blue Beach Farm, Dunbar, Cape Dolphin and Springpoint among others. New landowners at New House, Dyke Island and Elephant beach Farm are developing their own programmes of restoration. Businesses are funding restoration effort of tussac grass habitat as part of their corporate responsibility efforts. For example, Georgia Seafoods have funded several hectares of restoration on Falkland's Conservation's Middle Island. This is in addition to the good work already taking place on Antarctic Research Trust and other Falkland Conservation owned islands.

Other key sustainability components will be maintaining the public use of outputs and an interest in habitat assessment and monitoring. Much of this will be through FC's permanent roles and functions. The Communications and Marketing Officer maintains FC's website (hosting project outputs) and delivers communications around FC's key strategic aims, including informative, positive messaging around habitat restoration and land management. The Community Outreach Officer ensures engagement in related activities, whilst the Habitats Officer engages landowners on sustainable land management (including site protection and habitat restoration). The outcomes from this project will be built into the habitat officer's function. These roles will support stakeholders in terrestrial habitat conservation (as guided by the current project), into the future. FC commits around £150,000 annually to support these core roles. CEH will ensure methods are future-proof for straight-forward, long-term, field-use, including for repeated or expanded national habitat surveys. Relevant lessons will be shared with other OT's. FC has an ongoing Memorandum-of-Understanding with Government to support policy development including Biodiversity and Action Planning. The MoD and Government will mainstream the use of project outputs into the future, to inform strategic environmental decision making, extension work with land managers and working towards "best practice" for sustainable land-management. Long-term data management and accessibility will be through the IMS-GIS centre.

As the new data and knowledge is developed Action Plans and changing management regimes are expected to enhance native peat-wetland habitats as well as improve already modified peatlands. FIG are taking an interest in these developments as are local landowners. The exit strategy is to provide enhanced knowledge of the habitat types and provide training and accessible information on key indicators, management suggestions and more formal action plans.

11. Darwin identity

There is already good awareness of the Darwin Plus Initiative in the Falkland Islands and this has been enhanced through the DPLUS110 project. Two presentations have taken place in year 2, one at the annual Farmers Week and the second at the Peaty Pals meeting, which have described the initiative alongside the project. The Darwin Plus logo or identity has been publicised in the Falklands Conservation Newsletter and in the MOD Sanctuary Magazine (**appendices 14 and 16**). FITV have broadcast two new programmes based around Long Mountain and Hawks Nest Pond with a further four to be broadcast covering both the east and west island trips (**annex 6**). These have been delayed due to coverage of the 40th conflict anniversary which is being prioritised. A radio interview with the Falkland Islands Radio Service was broadcast on 2/2/2022 covering the west islands trip.

In addition, a series of tweets and Facebook posts have been published throughout the year including time-lapse videos of habitats and survey work. We always tag Darwin Initiative in the posts. Falkland Conservation's website page for the peat-wetlands project has recently been updated to cover the work carried out in year 2. **Annex 16** has links to some of the time-lapse videos posted on social media.

The Darwin Plus programme is already well-known in the Falkland Islands due to previous projects funded by Darwin Plus. FIG departments we work closely with, such as environment and policy, are aware of the Darwin initiative as well as other stakeholders engaged in the project. Present FC and SAERI Darwin Plus projects are regularly publicised in the Falkland Islands through the local media channels and social media posts. The Darwin Initiative is well known in the Falkland Islands and each Darwin funded project receives media attention and publication.

Time-lapse cameras have been deployed at:

- Long Mountain
- Kidney Cove
- Cape Dolphin

Another set of winter time-lapse will be attempted at two locations at Cape Dolphin. The best results so far have been at Kidney Cove of gentoo penguins moving to and from the rookery on peat soils near the coast. The next few months will involve processing the footage and uploading to social media.

12. Impact of COVID-19 on project delivery

The Falkland Islands are due to remove all travel and quarantine restrictions on 4th May 2022. Four days prior to this there was an initial outbreak with over 50 people reporting positive lateral flow tests. This quickly increased to 1126 cases, nearly a third of the Falklands population. At the moment no-one has been hospitalised which may be due to a good government response to the vaccinations programme with the vast majority of the population having three doses and a fourth round in the planning. The Falklands population are taking pro-active measures and wearing masks in greater numbers with alcohol hand wash used before entering shops and other public spaces. Given that this hasn't been a legal requirement the voluntary approach appears to be gathering pace and working well.

Given this new situation Falklands Conservation have responded in several ways. More staff are working remotely while cases are high and there has been changes in seating within the office to minimise close contact. Meetings have been reduced and remote access to meetings encouraged. Alcohol hand wash is available within the office. Several staff have been, or are, infected with Covid-19. Some have been asymptomatic and worked from home, attending meetings remotely as required. FIG are keeping the community informed with regular posts on the measures they're taking along with advice on how individuals and businesses should respond.

In terms of the project the biggest impact was the visit by Angus Garbutt and Dr Ed Rowe of UKCEH being postponed for a second time. This was due to the quarantine period of five days, which could have been extended to ten days if a close contact was made on the flight. Given this scenario it could have been possible that there would have been only one day working together. Now that the restrictions have all been lifted we will aim to reschedule for year 3 of the project but this will have to be discussed with CEH while the PO is in the UK.

13. Safeguarding

Please tick this box if any safeguarding violations have occurred during this financial year.

If you have ticked the box, please ensure these are reported to ODA.safeguarding@defra.gov.uk as indicated in the T&Cs.

There have been no safeguarding issues. Project staff, along with all FC staff, have completed online training. All staff have been police checked and DRB checked.

14. Project expenditure

Table 1: Project expenditure during the reporting period (1 April 2021 – 31 March 2022)

| Project spend (indicative) in this financial year | 2021/22 D+ Grant (£) | 2021/22 Total actual D+ Costs (£) | Variance % | Comments (please explain significant variances) |
|---|----------------------|-----------------------------------|------------|---|
| Staff costs | ██████ | ██████ | 0 | |
| Consultancy costs | ██████ | ██████ | 0 | |
| Overhead Costs | ██████ | ██████ | 0 | |
| Travel and subsistence | ██████ | ██████ | 0 | |
| Operating Costs | ██████ | ██████ | 0 | |
| Capital items | ██████ | ██████ | 0 | |
| Others (Please specify) | ██████ | ██████ | 0 | |
| TOTAL | ██████ | ██████ | | |

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

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

| | |
|---|---|
| Different reporting templates have different questions, and it is important you use the correct one. Have you checked you have used the correct template (checking fund, type of report (i.e. Annual or Final), and year) and deleted the blue guidance text before submission? | X |
| Is the report less than 10MB? If so, please email to Darwin-Projects@ltsi.co.uk putting the project number in the Subject line. | |
| 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. | X |
| Have you included means of verification? You should not submit every project document, but the main outputs and a selection of the others would strengthen the report. | X |
| Do you have hard copies of material you need 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. However, we would expect that most material will now be electronic. | |
| Have you involved your partners in preparation of the report and named the main contributors | X |
| Have you completed the Project Expenditure table fully? | X |
| Do not include claim forms or other communications with this report. | |