DPLR3\1058

Darwin Plus Local - Final Report (1)

Officer: Linzi Ogden

Section 1 - Darwin Plus Local Project Information (Essential)

Project Reference Number

DPL00080

Project Title

No Response

Overseas Territory(ies)

☑ Falkland Islands (FI)

Lead Organisation or Individual

South Atlantic Environmental Research Institute

Partner Organisation(s)

Oregon State University

Value of Darwin Plus Local Grant Award

£39,222.00

Project Start Date

01 April 2024

Project End Date

31 March 2025

Project Leader Name

Alastair Baylis

Project Website/Twitter/Blog etc.

https://www.south-atlantic-research.org/saeri-front-page/our-science/ecosystems-projects-landing-page/

Report Author(s)

Alastair Baylis & Rachael Orben

Report Date

30 April 2025

Project Summary

No Response

Project Outcomes

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.**

Section 2 - Project Outcomes (Essential)

On a scale of 1 (high – outcome substantially exceeded) to 5 (low – outcome substantially did not meet expectation), how successful do you think your project has been?

⦿ 3 - Outcome met expectation

Project outcomes and justification for rating above

For the very first time, satellite tags were successfully deployed on Southern Giant Petrels (Macronectes giganteus) in the Falkland Islands, marking a significant milestone in South Atlantic seabird research. his achievement is especially important given that the Falkland Islands are home to approximately 40% of the global breeding population of this species. Despite their abundance and ecological significance, little was previously known about the species' at-sea distribution, foraging behaviour, or regional connectivity.

Understanding these aspects is critical not only for ecological research and conservation planning but also for identifying potential routes of disease transmission. As obligate scavengers, these birds are likely to move between remote locations, potentially linking otherwise isolated wildlife populations. Insights from this pilot study support this hypothesis, highlighting the potential for petrels to act as vectors for disease transmission—particularly relevant in light of recent outbreaks of Highly Pathogenic Avian Influenza (HPAI).

A total of 10 Telonics satellite tags were deployed during the project. The tags were lightweight (35 g) and

compact (5 × 2 × 2 cm), with an estimated battery life of six months. At the time of writing, six tags remain active, providing daily high-resolution tracking data (Figure 1 - supporting evidence). The data are publicly available via the Wildlife Computers online portal: https://my.wildlifecomputers.com/data/map/?id=673353f013a54786680d888a. To complement the tracking data, we also collated existing satellite telemetry records of both Northern and Southern Giant Petrels that transit through Falklands waters (Figure 2 - supporting evidence). This broader dataset allows us to characterize regional and ocean scale connectivity (please refer to report submitted, along with final project report).

A notable technical success of the project was the development of tag attachment methods for Southern Giant Petrels. By combining Tesa® tape with a single suture, we were able to significantly extend the duration of deployments—tags remained attached nearly twice as long compared to using tape alone. This method also enabled us to tag individuals that had already begun molting, increasing the potential for long-term data collection, and providing flexibility in captures. Longer deployments ultimately yield more meaningful data, enabling better insights into movement, behavior and potential routes of disease transmission.

Beyond the scientific outcomes, the project also fostered strong engagement within the Falklands community. A final public presentation held on 27 March 2025 (Figure 3 - supporting evidence) attracted approximately 20 attendees, including representatives from local government, NGOs, and members of the public. The event sparked positive discussion around the importance of scavengers in ecosystem connectivity and generated interest in further work across the islands.

This project has demonstrated the feasibility and value of tracking key scavengers, like Southern Giant Petrels, in the Falkland Islands, which have traditionally been overlooked. Our Darwin Plus Local project has successfully developed methods to enable a proposed larger-scale HPAI follow-up project, currently under review by Darwin Plus, and represents an important step toward improving our understanding of seabird ecology and the dynamic roles scavengers play in marine ecosystems - particularly in the context of wildlife disease.

Supporting Evidence - file(s) upload

DPL00080_Project Report_Giant Petrel Tracking
08/05/2025
13:21:53
pdf 1.25 MB

DPL00080_supporting material
30/04/2025
20:28:13
pdf 441.74 KB

IMG_2636 (1)
30/04/2025
20:25:33
jpg 4.34 MB

Supporting Evidence - links to published document/online materials

Please see our website: https://www.south-atlantic-research.org/saeri-front-page/our-science/ecosystems-projects-landing-page/

Project Challenges

Devising effective methods to capture Southern Giant Petrels in the Falkland Islands presented a number of anticipated, yet complex, challenges. Unlike their counterparts in South Georgia, giant petrels in the Falklands tend to be far more wary and skittish, particularly around nesting sites. This meant that traditional approaches used elsewhere were not suitable, and great care had to be taken to avoid disturbing breeding individuals. To address these concerns, we adopted an opportunistic and low-impact field strategy. Rather than targeting birds

at colonies, our efforts focused on individuals feeding on carcasses - natural aggregations that offered the chance to capture birds with minimal disturbance to colonies. This approach required considerable patience, flexibility, and logistical planning. We travelled extensively across multiple islands and locations, surveying different sites to assess local conditions, bird behaviour, and potential access. In total, we visited eight locations across East and West Falkland, with successful captures at three locations (two birds captured on West Falkland, and the remainder on east Falkland). While many of these exploratory trips did not result in captures, they were instrumental in helping refine our understanding of capture practicalities and constraints. Over time, we adapted our techniques and ultimately arrived at a successful capture method.

In summary, the challenges associated with capturing giant petrels in the Falklands were expected but required adaptive thinking and trial and error. The experience gained through this iterative process not only enabled successful captures but have laid a strong foundation for more efficient and targeted fieldwork in future.

Lessons Learned

i) Targeting Southern Giant Petrels at feeding sites was highly effective. Many landowners regularly butcher livestock, and these predictable carcass sites attract aggregations of giant petrels, offering ideal opportunities for low-disturbance captures. Additionally, natural mortality events, such as the recent outbreaks of HPAI among penguins, created focal feeding areas that could be monitored and used for opportunistic capture. Using a noose to capture adult birds was particularly successful and allowed for safe and efficient captures, without disturbing breeding colonies or nesting birds.

ii) Some exploratory field trips, particularly those aimed at identifying new capture locations, did not result in captures and were time- and resource-intensive. While informative in shaping our overall field strategy, these efforts had limited short-term payoff. In total, we visited eight sites, with successful captures at only three locations.

iii) If undertaking this work again, we would focus our efforts more strategically from the outset - prioritizing known feeding sites linked to livestock carcasses or natural die-offs. This would allow for efficient use of field time and increase capture success. We would also plan to include the capture of chicks just prior to fledging, which presents a reliable and low-disturbance opportunity. However, due to the timing of this project, chick captures were not feasible, as fledging typically occurs in April - after project end.

iv) Leverage predictable food sources: Work with local landowners to identify sites where petrels regularly feed on carcasses. These locations offer low-disturbance and highly effective capture opportunities.

Section 3 - Project Finance (Essential)

Project Expenditure

Project Spend (indicative) since last Annual Report	2023/24 Grant (£)	2023/24 Total actual Darwin Plus Costs (£)	Variance %	Comments (please explain significant variances)
Staff Costs	[redacted]			
Consultancy Costs				

Overhead Costs	[redacted]		
Travel and Subsistence			
Operating Costs			
Capital Items			
Others			
Total	39,222.00	39,222.00	0

Please provide a short narrative summary on project finances.

There were no significant differences between planned and actual expenses. Any variation is largely due to currency fluctuations, realized currency gains, and bank charges when paying for invoices in USD (tags and our project partner and from the USA). There was considerable in-kind funding via SAERI (field kit, vehicles) as well as the in-kind contribution of time from numerous field volunteers.

Section 4 - Contribution of Project to Darwin Plus Programme Objectives

Please select up to **one** indicator that applies within **each group/indicator list (A, B, C, D)** and report your results for that indicator in the text box underneath. If you do not have relevant results to report for any of the indicators in a particular group, you can leave them blank.

Please also submit some form of evidence (above) to demonstrate any results you list below, where possible.

Group A: Capability and Capacity - Core Darwin Plus Standard Indicators (select one)

Unchecked	**DPLUS-A01: Number of people from key national and local stakeholder groups completing structured and relevant training.**
Unchecked	**DPLUS-A02: Number of secondments or placements completed by individuals of key local and national stakeholders.**

Checked	**DPLUS-A03: Number of local/national organisations with improved capability and capacity as a result of project.**
Unchecked	**DPLUS-A04: Number of people reporting that they are applying new capabilities (skills and knowledge) 6 (or more) months after training.**
Unchecked	**DPLUS-A05: Number of trainers trained reporting to have delivered further training by the end of the project.**

Group A Indicator Results

1 - Significant learning curve, and we now have the experience and expertise to successfully track the largest population of Southern Giant Petrels

Group B: Policies, Practices and Management- Core Darwin Plus Standard Indicators (select one)

Unchecked	**DPLUS-B01: Number of new/improved habitat management plans available and endorsed.**
Unchecked	**DPLUS-B02: Number of new/improved species management plans available and endorsed.**
Unchecked	**DPLUS-B03: Number of new/improved community management plans available and endorsed.**
Unchecked	**DPLUS-B04: Number of new/improved sustainable enterprises/ community benefits management plans available and endorsed.**
Unchecked	**DPLUS-B05: Number of people with increased participation in local communities / local management organisations (i.e., participation in Governance/citizen engagement).**
Unchecked	**DPLUS-B06: Number of Local Stakeholders and Local Communities (people) with strengthened (recognised/clarified) tenure and/or rights.**

Group B Indicator Results

NA

Group C: Evidence and Best Practices - Core Darwin Plus Standard Indicators (select one)

Unchecked	**DPLUS-C01: Number of best practice guides and knowledge products published and endorsed.**
Unchecked	**DPLUS-C02: Number of new conservation or species stock assessments published.**

Unchecked	**DPLUS-C03: New assessments of habitat conservation action needs published.**
Unchecked	**DPLUS-C04: New assessments of community use of biodiversity resources published.**
Checked	**DPLUS-C05: Number of projects contributing data, insights, and case studies to national Multilateral Environmental Agreements (MEAs) related reporting processes and calls for evidence.**

Group C Indicator Results

1 - We have for the first time tracked Giant Petrels from the Falklands. This data will support numerous MEAs, including CBD.

Group D: Sustainable Benefits to People, Biodiversity and Climate - Core Darwin Plus Standard Indicators (select one)

Unchecked	**DPLUS-D01 Hectares of habitat under sustainable management practices.**
Unchecked	**DPLUS-D02: Number of people whose disaster/climate resilience has been improved.**
Unchecked	**DPLUS-D03: Number of policies with biodiversity provisions that have been enacted or amended.**

Group D Indicator Results

NA

Section 5 - Project Partnerships, Wider Impacts and Contributions

Project Partnerships

(i) The satellite tracking component of the project was delivered through a partnership between SAERI and Oregon State University (OSU). OSU provided technical expertise in avian telemetry, including guidance on equipment selection, tagging protocols, and data interpretation. SAERI led on project planning, permitting, field implementation, and coordination with local stakeholders. Both partners collaborated closely throughout the design and execution of fieldwork, sharing responsibilities in decision-making and scientific oversight.

(ii) The Falkland Islands Government (FIG), particularly Veterinary Department, was a key stakeholder in the project. While not a formal partner, FIG was involved from the outset through permitting processes, technical discussions, and data-sharing. The Department has shown strong interest in the results, especially in relation to disease preparedness and wildlife connectivity.

(iii) The successful deployment of satellite tags on Southern Giant Petrels - a species known for being difficult to capture due to its sensitivity to disturbance - is a breakthrough, that paves the way for future tracking studies. The collaboration allowed for the testing of two different attachment methods under field conditions, generating valuable methodological insights for future studies.

(iv) Engagement extended beyond formal partners through a well-attended public talk delivered in Stanley, which generated strong interest from the local community and landowners. As a direct result, several landowners expressed interest in supporting future tracking efforts, recognizing the value of this research for both conservation and understanding movements in the context of livestock. This positive reception has opened opportunities for wider collaboration and longer-term monitoring of Falklands Southern Giant Petrels.

Wider Impacts and Decision Making

As wide-ranging scavengers, Southern Giant Petrels are likely to play a significant role in the transmission and spread of diseases such as Highly Pathogenic Avian Influenza (HPAI). Despite the Falkland Islands supporting approximately 40% of the global breeding population of this species, little was previously known about their individual movement patterns or the extent of their connectivity to other populations across the South Atlantic.

This project provided the first satellite tracking data for Southern Giant Petrels originating from the Falklands, offering critical insight into their national and regional movements. These findings are vital for understanding potential transmission pathways between breeding colonies and across international boundaries. The results have already informed discussions with the Falkland Islands Government and regional partners, emphasising the importance of including scavenger species in both conservation planning and disease response strategies.

Importantly, the project has elevated the profile of Southern Giant Petrels as key indicators of ecosystem health and potential vectors of emerging diseases. It has laid the groundwork for a broader HPAI-focused study on avian scavengers, which is planned to commence in the 2025/26 summer season, pending funding approval. This future research will build directly on the knowledge and methods developed through this project, ensuring continuity and expansion of its impact.

Sustainability and Legacy

The project has established a strong foundation for long-term impact, with clear pathways for continued research, policy relevance, and capacity building. By generating the first satellite tracking data for Southern Giant Petrels in the Falkland Islands - home to 40% of the global population - the project has filled a critical knowledge gap that will inform conservation and disease preparedness for years to come. A key legacy of the project is its role in catalyzing a larger study on Highly Pathogenic Avian Influenza (HPAI) in scavenging seabirds. HPAI is an unprecedented global epizootic that could devastate UKOTs globally significant wildlife. The groundwork laid through this project - both in terms of methodology, stakeholder engagement, and supporting planned future research - has positioned the Falklands at the forefront of avian disease monitoring in the South Atlantic region. The planned follow-on Darwin study (pending funding approval), will directly build upon these results, ensuring scientific and strategic continuity. Ultimately, the follow-up study will enable the development of robust, informed and targeted disease monitoring.

Beyond research outputs, the project has reinforced long-standing research ties with Oregon State University, while local interest—particularly from landowners—has opened doors for expanded tracking and collaborative monitoring across multiple sites.

Project staff remain active within SAERI and affiliated networks, continuing to contribute to environmental research, policy support, and capacity development in the Falklands. As a result, the project's benefits extend well beyond its funded timeframe, ensuring a lasting legacy in seabird conservation, disease ecology, and regional collaboration.

Section 6 - Communications & Publicity

Exceptional Outcomes and Achievements

Avian scavengers play key roles in UKOTs food webs, and influence HPAI transmission, yet are virtually unstudied. An exceptional achievement of this project was the successful deployment of satellite tags on Southern Giant Petrels in the Falkland Islands—the first time this has ever been done. This marks a major step forward in understanding the movement ecology of a species for which the Falklands holds approximately 40% of the global population, yet which has remained poorly studied due to its sensitivity to human disturbance and the remoteness of many breeding sites.

The project generated the first real-time data on Southern Giant Petrel movements from Falklands colonies, revealing patterns of connectivity at both national and regional scales. This is particularly significant given the unpredictable nature of HPAI outbreaks and Southern Giant Petrels role as long-range scavengers (1000's of km) and potential disease vectors.
This achievement lays the foundation for a more extensive HPAI study planned for 2025/26 (pending funding), which aims to develop robust, informed and targeted disease monitoring. Our successful pilot project showcases how targeted, science-driven research can close key knowledge gaps and support policy-relevant outcomes.
Data is available via:
https://my.wildlifecomputers.com/data/map/?id=673353f013a54786680d888a

Photo, video or graphic to be used for publicity and communications.

Please upload at least one relevant and engaging image, video or graphic that you consent to be used alongside the above text in Defra, JNCC or NIRAS communications material.

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Photo, video, and/or graphic captions and credits.

IMG_2626 - Falkland Islands, Researchers deploying a satellite tag - SAERI

I agree for the Biodiversity Challenge Funds Secretariat, Administrator, and/or JNCC to publish the content of this section.

⦿ Yes, I agree for the BCFs Secretariat and/or JNCC to publish the content of this section.

Please list any accounts that you would like tagged in online posts here. This can include project pages, partners' pages or individuals' accounts for any of the following platforms: LinkedIn, Facebook, Twitter, or Instagram.

@SAER_FI

Section 7 - Darwin Plus Contacts

Please tick here to confirm that you have read and acknowledge the BCF's Privacy Notice on how contact details will be used and stored and that you have sought agreement from anyone that you are sharing personal details with us on their behalf.

⦿ I confirm I have read the Privacy Notice and have consent to share the following contact details

Project Contact Details

Project Contact Name	Alastair Baylis
Role within Darwin Plus Project	Project lead
Email	[redacted]
Phone	
Do you need further sections to provide additional contact details?	◉ Yes

Additional Project Contact Details

Project Contact Name	Racheal Orben
Role within Darwin Project	Project Partner
Email	[redacted]
Phone	
Do you need further sections to provide additional contact details?	○ Yes ○ No