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# DPLR5\1010

## **Biodiversity of Falklands sandy beaches**

This is the first baseline study of macrofauna on sandy beaches across FI, comparing beaches with different morphodynamic types and varying levels of human intervention and fauna. By evaluating macrofaunal diversity and abundance on penguin-colonized versus undisturbed beaches, the project also seeks to understand how both human activity and these key faunal actors influence ecosystem structure and functioning. Findings will support sustainable beach management and conservation strategies, balancing ecological needs with low-impact human use. It will inform future Island-wide studies.

PRIMARY APPLICANT DETAILS

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Title	Dr
Name	Paul
Surname	Brickle
Organisation	South Atlantic Environmental Research Institute
Website (Work)	<a href="http://www.south-atlantic-research.org/">http://www.south-atlantic-research.org/</a>
Tel (Work)	[REDACTED]
Email (Work)	[REDACTED]
Address	[REDACTED]

# DPLR5\1010

Biodiversity of Falklands sandy beaches

## Section 1 - Project Title & Contact Details

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### Q1. Project Title

Biodiversity of Falklands sandy beaches

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

☒ Organisation

#### PRIMARY APPLICANT DETAILS

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Title	Dr
Name	Paul
Surname	Brickle
Organisation	South Atlantic Environmental Research Institute
Website (Work)	
Tel (Work)	
Email (Work)	
Address	

#### GMS ORGANISATION

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Type	Organisation
Name	South Atlantic Environmental Research Institute
Phone (Work)	[REDACTED]
Email (Work)	[REDACTED]
Website (Work)	[REDACTED]
Address	[REDACTED]

## Section 2 - Overseas Territory(ies)

**Q3.** Please state whether the same (or a similar) project proposal has previously been submitted (or you are planning to submit it) to the UK Government for funding. This includes through Darwin Plus Local, Defra's other Darwin Plus grant schemes or other UK Government funding mechanisms. Failure to share this information may result in the application being ineligible (see Guidance section 2.1.1).

☒ No

### Q4. Overseas Territory (Guidance section 1.3):

Which UK Overseas Territory(ies) will your project be working in?

☒ Falkland Islands (FI)

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

*No Response*

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

### Q5. Project partners (Guidance section 3.2)

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

<b>Project Leader name:</b> (Guidance section 3.1)	Dr Paul Brickle
<b>Lead Organisation name:</b> (if applying as an organisation; Guidance section 3.1)	South Atlantic Environmental Research Institute (SAERI)
<b>Lead Organisation Website (if applicable):</b>	<a href="https://www.south-atlantic-research.org/">https://www.south-atlantic-research.org/</a>
<b>Is the Lead Organisation based in a UKOT where the project is working?</b> (Guidance section 3.1)	<input checked="" type="radio"/> Yes
<b>List other partners involved and where are they based:</b>	South Atlantic Environmental Research Institute (SAERI) – Falkland Islands University of the Republic (UdelaR) – Montevideo, Uruguay Shallow Marine Surveys Group – Falkland Islands
<b>Summary of roles and responsibilities of each partner in the project:</b>	<p>SAERI – will lead the project.</p> <p>In collaboration with UdelaR and SMSG we will establish a sampling regime for FI beaches, collect and identify the samples. SAERI will be responsible for logistics and health and safety.</p> <p>UdelaR, specifically Prof. Omar Defeo, will provide technical advice and lead a field campaign in the Falkland Islands. Prof. Defeo is a world leading sandy beach expert based in Uruguay. Prof. Defeo will provide training in sampling techniques.</p> <p>SMSG will provide a number of volunteers to sample beaches over the year so there are spatial and temporal components to the study. In addition, SMSG will provide boating expertise to the project, specifically with the RV Jack Sollis will be used to access beaches that are difficult to get to by land.</p>
<b>I confirm that all listed partners are aware of this application and have indicated support:</b>	Checked

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

 [Combined LoSs](#)  
 25/11/2024  
 20:28:52  
 pdf 806.5 KB

## Section 4 - Project Summary & Description

### Q6. 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.

This is the first baseline study of macrofauna on sandy beaches across FI, comparing beaches with different morphodynamic types and varying levels of human intervention and fauna. By evaluating macrofaunal diversity and abundance on penguin-colonized versus undisturbed beaches, the project also seeks to understand how both human activity and these key faunal actors influence ecosystem structure and functioning. Findings will support sustainable beach management and conservation strategies, balancing ecological needs with low-impact human use. It will inform future Island-wide studies.

## Q7a. Description (Guidance section 2.1 and 6)

**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?**

**Overall Objective:** We aim to generate data on the benthic macrofauna of sandy beaches across different morphodynamic types in the Falkland Islands, focusing on the effects of human activity and faunal interactions, particularly those involving penguins. This is an area that has not been studied well in FI. By documenting macrofaunal composition, abundance, and distribution across beach type and levels of human intervention, we will assess the ecological roles of both human presence and penguins in shaping beach ecosystem structure and functioning. The project ultimately aims to provide preliminary data-driven insights to inform further work and future sustainable beach management and conservation strategies.

**Current Situation and Problem Addressed:** FI hosts diverse sandy beaches, from sheltered bays near settlements to remote, undisturbed shores. However almost nothing is known about them. Human activity on these beaches is generally low but causes localized impacts near popular sites. Penguins, as a key faunal components on many beaches, may alter sediment compaction and structure by depositing guano, enriching sediments with organic matter and nutrients. This activity, along with localized human interventions, may influence the structure and function of benthic macrofaunal communities. This project will compare benthic communities across different morphodynamic beach types, varying levels of human impact, and penguin presence to explore how human and natural disturbances shape these ecosystems.

**Project Approach and Activities:** This study will involve sampling benthic macrofauna from various sandy beaches categorized by their morphodynamic type and level of human and faunal (penguins) influence. The selected sites will represent a gradient of human intervention, from beaches near settlements with moderate human presence to remote areas with minimal disturbance. We will also compare beaches with active penguin colonies to those without to determine how penguin activities may act as ecological drivers within these ecosystems. Sediment infauna will limited to 500 micron mesh size, and sub-samples may be taken for meiofauna and micro-molluscs if time/budget permits.

**Field and laboratory work will involve:**

1. Sampling and identification: Collecting samples from intertidal zones, identifying species, and recording their abundance. DNA barcoding will be applied to enhance species identification.
2. Sediment analysis: Assessing sediment compaction, grain size, slope, and organic matter at each site to evaluate how penguin activity and human use might alter physical beach properties.
3. Data analysis: Using statistical methods to examine differences in community composition and diversity across different sites and disturbance types.

**Success and Measurement**

Project success will be defined by the establishment of a the first detailed, accessible species list of FI benthic macrofauna for a selection of beaches, categorized by beach type and disturbance level. This list and voucher

collection will offer a reference for long-term monitoring and assessment of human and ecological impacts on these ecosystems. In addition, where appropriate, novel specimens will be deposited in museums.

Key success indicators include:

1. Species list and voucher specimens: Creation of a comprehensive species lists and voucher on benthic macrofaunal diversity and distribution across different morphodynamic types.
2. Quantitative analysis of impacts: Data on the influence of human activity and penguin colonies on macrofaunal communities, providing evidence of any ecological effects.
3. Management guidelines: Recommendations to guide sustainable management practices and conservation priorities.
4. Gap analysis. This first-of-its-kind project will inform future studies.

The project's impact will be measured through both quantitative and qualitative approaches. Benthic community diversity and abundance will be assessed across sites, with statistical analyses revealing the significance of human and faunal influences on ecosystem structure and functioning.

This approach enhances understanding of how beach ecosystems respond to natural and anthropogenic pressures, supporting conservation efforts in line with the environmental and social context of FI.

## Q7b. Long-term sustainability (Guidance section 2.1 and 6)

**Please describe the long-term benefits of the project and the change it will bring about. How will the outcomes of the project be sustained after the funding is finished?**

The long-term benefits of this project lie in its contribution to the sustainable management and conservation of FI's sandy beach ecosystems. By establishing a species lists and voucher specimens of benthic macrofauna, the project will provide insights into how human activity and penguin colonies impact beach biodiversity. These data will serve as a reference for future monitoring efforts, enabling stakeholders to detect changes over time and respond proactively to emerging threats.

Local institutions will be encouraged to adopt the methodologies developed in this project, enabling continued assessment and adaptive management practices. This approach supports a sustainable framework for conserving biodiversity on sandy beaches in the Falklands, ensuring that the outcomes of this project extend beyond the initial funding period and contribute to the long-term resilience of these ecosystems.

To ensure sustainability, the project will engage local stakeholders, including conservation organizations and community groups, through knowledge-sharing events. These partnerships will foster local expertise and empower stakeholders to continue monitoring and managing beach ecosystems effectively. Additionally, the project's findings will be made publicly accessible, encouraging further research and conservation initiatives aligned with its objectives.

**(Optional) Please upload any additional and supporting materials or files (such as maps of project sites, etc) below. Maximum of 5 sides of A4, and is combined as a single PDF:**

*No Response*

## Section 5 - Project Outcome(s)

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### Q8. 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 with a clear focus on biodiversity and the natural environment, either by the end of the project or soon after through a credible plan.**

**Please note: Any proposals including research or monitoring are required to demonstrate a clear link to tangible outcomes for conservation of biodiversity and the natural environment. Please explain how any new research will be applied to drive environmental outcomes on the ground.**

**Please confirm that your project has a clear focus on biodiversity and the natural environment.**

Checked	<b>Biodiversity: improving and conserving biodiversity, and slowing or reversing biodiversity loss and degradation;</b>
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**Please tick which additional theme(s) of Darwin Plus your project contributes to (if relevant):**

Unchecked	<b>Climate change: responding to, mitigating and adapting to climate change and its effects on the natural environment and local communities;</b>
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Checked	<b>Environmental quality: improving the condition and protection of the natural environment</b>
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Checked	<b>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.</b>
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**Please justify your selection. Please use quantitative information where possible here.**

This project aims to conserve biodiversity in FI by creating the first baseline of benthic macrofauna across diverse beach types and disturbance levels, addressing biodiversity risks from human and faunal impacts. Quantitative data on species richness, abundance, structure, and functioning will guide conservation strategies to protect and enhance biodiversity and ecosystem integrity, reducing loss by tackling threats and mitigating degradation. The project includes capacity building by training FI staff in data analyses and conducting a dissemination workshop with local stakeholders to encourage sustainable beach management, supporting both immediate and long-term conservation goals for these fragile coastal ecosystems.

## Section 6 - Workplan

### Q9. Workplan (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 Workplan (available at: <https://darwinplus.org.uk/how-to-apply/local-applications/>) 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 must start after 1 April 2025 and be completed by 31 March 2026.**

Start date:	End date:	Duration (e.g. 3 months):
01 April 2025	31 March 2026	1 year

**Please upload the completed Darwin Plus Local Project Workplan with your proposed project activities here**



## Section 7 - Costs

### Q10. 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).

☒ Yes

How much matched funding are you seeking and where from?

SMSG volunteers for three months. Time in kind = £12,000 therefore 24% match funding.

Budget line	Explanation	Cost in GBP
<b>Staff costs:</b>	Field operator; PL time at 10%; Sandy beach expertise.	
<b>Consultancy costs:</b>	N/A	
<b>Overhead costs:</b>	Overhead costs for all staff at 35%	
<b>Travel &amp; subsistence costs:</b>	To and from Montevideo and local travel costs in the Falkland Islands	
<b>Operating costs:</b>	Two days charter for the RV Jack Sollis for beach access	
<b>Capital equipment:</b>	N/A	
<b>Other Costs</b>	Genetics; field materials, postage; sample pots and ethanol (fixative)	
<b>Total:</b>		

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)

Staff costs cover 7.5% of the PL's time; GIS time (5% over 6 months) and costs of Prof. Defeo and 30 days of a field ecologist's time for sampling.

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

35% on all staff costs

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

To and from Montevideo and local travel costs in the Falkland Islands. This includes flights for two collaborating sandy beach experts from the Universidad de Republica, Montevideo and local accommodation expenses.

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

2 full days of charter on the RV Jack Sollis to allow for access to beaches that are not readily accessible by land.

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

N/A

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

N/A

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

Costs of genetic barcoding; sample postage; sampling materials; field equipment; ethanol; car hire.

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**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:
No Response	No Response	No Response	No Response

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**Darwin Plus Local has been created to build capacity and contribute to local economies in-territory (Guidance section 2.1.1 and section 1.8.4 of the Finance Guidance).**

**In-territory spend is defined in Darwin Plus Local as including funding spent on:**

- Equipment purchased in-territory;
- Equipment that cannot be acquired in-territory and is therefore purchased abroad, but will remain and be used in-territory beyond the life of the proposed Darwin Plus Local project;
- Training or skills that cannot be acquired in-territory and are therefore purchased abroad, but will be used in-territory beyond the life of the proposed Darwin Plus Local project;
- Time for consultants or staff based in-territory.

**In-territory spend does not include:**

- Time for consultants or staff who are based abroad, even if they travel to the OT to undertake the work;
- Shipping and import costs for equipment purchased abroad;
- Travel and subsistence costs where they incur spend outside the OT.

What % of the total will be spent in-territory? 76

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**If less than 80% of the total project spend is to be spent in-territory, please explain why.**

While we aim at maximising the financial involvement of the project in the OTs, the budget, however, includes the travel and local accommodation costs for 2 Uruguayan sandy beach experts to provide training and sampling expertise. This is very much seen as a capacity building exercise. Prof. Omar Defeo is a world-leading expert on sandy beach ecology.

## Section 8 - Local and National Priorities

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### Q11. 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.**

Improving capacity for higher quality marine habitat and biodiversity surveys will benefit robust environmental understanding, management and protection from increasing environmental pressures. Sandy beaches are an enigma in FI and have received little to no attention. This is particularly important as beaches are included in the inshore Marine Managed Area from the mean high tide down;

- The Falkland Islands Environment Strategy (2021-2040) theme of Oceans and Coasts objectives: To have healthy, functioning and robust marine and coastal ecosystems through protections and management.

- Elected Assembly Islands Plan 2022-2026 commitment to Implementing marine management and protection (ExCo 116/22).

- Environment Charter 10 (study and celebrate our environmental heritage as a future treasure).

- CBD: Global Biodiversity Framework long-term goals A, B and D, and 2030 targets 2 (habitat loss), 3 (protected areas management), 4 (threatened species), 10 (sustainable ecosystem use), 14 (biodiversity integration into policy and processes), 20 (capacity building) and 21 (best available data)

- FI Biodiversity Framework 2016-2030: cross-cutting challenge "lack of information".

**Will the project...**

**Take place on Government owned land or water?**

☒ Yes

**Involve biocontrol, invasive alien species control or eradication?**

☒ Yes

**Require permit(s) from Government departments for completion of activities?**

☒ Yes

**If you have answered yes to any of the questions above, please attach evidence that you have Government support for this project i.e. a Letter of Support. Applications which indicate that they do not take place on Government land or water, but which propose work that appears to the reviewers would be difficult/impossible to carry out without working on government land or waters may be ineligible if no Letter of Support is provided.**

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## Section 9 - Project Risks

### Q12. Project Risks

Please demonstrate your consideration of any risks involved in this project and how you intend to manage them. Please note the importance of health and safety and environmental risk assessment in the design of your project. If there is any possibility that your project may have negative impacts on the environment or human health, it is important that you provide a comprehensive analysis of potential environmental and human health risks, and the prevention measures you will take to ensure the work does not cause harm.

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.  
For example, you should consider the ratio of vulnerable people or children to adults, ensuring there are appropriate background checks of all staff, and informing vulnerable groups and children of their right to safety and protection.

Risk	Mitigation
Biosecurity risk: transport and spread of introduced species or pathogens during travel between beaches. This include HPAI.	All field activities within the project will be scrutinised and approved by SAERI, the status of HPAI will monitored, and advice will be sort from FIG's Veterinary department.
Health and Safety risk: hazards and injuries during field work	The project operators on the field will have experience of fieldwork on the Territory and coordinate their activities with project staff. Risk assessments and mitigations will be in place
No Response	No Response

Do you require more fields?

☒ No

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## Section 10 - Terms & Conditions

### Q13. 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://darwinplus.org.uk/how-to-apply/local-applications/> 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

**Supporting documents list (please have these ready to attach with application)**

- Cover Letter of no more than two A4 pages. (Guidance section: 4.2 has information on what this cover letter should include).
- If the project takes place on public land or water, is addressing invasive alien species or includes activities requiring a permit, a Letter of support from OT Government.
- Project Workplan in the template provided for Darwin Plus Local (available at: <https://darwinplus.org.uk/how-to-apply/local-applications/>).
- Map and additional information (optional) maximum five additional pages.

**If your application is successful**

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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:	Dr Paul Brickle
Position in the organisation: (if applicable)	CEO
Signature (please upload e-signature)	<div> Paul sig</div> <div> 25/11/2024</div> <div> 20:44:05</div> <div> jpg 11.98 KB</div>
Date:	25 November 2024

## Section 12 - Submission Checklist

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### 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 or is addressing alien invasive species, I have uploaded a Letter of Support from Government.	Checked
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 (found at: <a href="https://darwinplus.org.uk/apply/local-applications/">https://darwinplus.org.uk/apply/local-applications/</a> ) for this fund.	Checked
I have provided actual start and end dates for my project that fit this Round.	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 workplan using the specific template provided (available at: <a href="https://darwinplus.org.uk/apply/local-applications/">https://darwinplus.org.uk/apply/local-applications/</a> ).	Checked
I have uploaded all supplementary documents if I have any.	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.

Unchecked

### 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).**