

Applicant: **Myers, Andrew**  
Organisation: **Island Solutions Inc.**  
Funding Sought: XXXXXXXXXX  
Funding Awarded: **£0.00**

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# DPLR3\1021

## **Implementation of In Situ Nature-Based SCTL D Treatment Program - Montserrat**

Stony Coral Tissue Loss Disease (SCTL D) continues to impact corals throughout the region. Through funding from DPLR1, the UKOTs' and the region's first probiotic coral treatment facility was created and trials were conducted to identify viable treatments. This project will conduct the first in-situ treatment using probiotics to reduce the impact of SCTL D in the Caribbean, a treatment option found to be as effective as antibiotics. The project will also continue to trial viable treatments at the treatment facility.

## PRIMARY APPLICANT DETAILS

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**Title** Mr  
**Name** Andrew  
**Surname** Myers  
**Organisation** Island Solutions Inc.  
**Website (Work)** [REDACTED]  
**Tel (Work)** [REDACTED]  
**Email (Work)** [REDACTED]  
**Address** [REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]

## CONTACT DETAILS

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**Title** Ms  
**Name** Emily  
**Surname** Aston  
**Organisation** Island Solutions Inc.  
**Website (Work)** [REDACTED]  
**Tel (Work)** [REDACTED]  
**Email (Work)** [REDACTED]  
**Address** [REDACTED]  
[REDACTED]  
[REDACTED]

# DPLR3\1021

Implementation of In Situ Nature-Based SCTL D Treatment Program - Montserrat

## Section 1 - Project Title & Contact Details

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### Q1. Project Title

Implementation of In Situ Nature-Based SCTL D Treatment Program - Montserrat

### 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	Mr
Name	Andrew
Surname	Myers
Organisation	Island Solutions Inc.
Website (Work)	[REDACTED]
Tel (Work)	[REDACTED]
Email (Work)	[REDACTED]
Address	[REDACTED]

#### CONTACT DETAILS

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Title	Ms
Name	Emily
Surname	Aston
Organisation	Island Solutions Inc.
Website (Work)	[REDACTED]
Tel (Work)	[REDACTED]
Email (Work)	[REDACTED]
Address	[REDACTED]

#### GMS ORGANISATION

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Type	Organisation
Name	Island Solutions Inc.
Phone (Work)	[REDACTED]
Email	[REDACTED]
Website	[REDACTED]
Address	[REDACTED]

## Section 2 - Overseas Territory(ies)

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### Q3. Overseas Territory (Guidance section 1.3):

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

Montserrat

**\* 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)?

Yes

**Please list these below and describe how they will benefit:**

The probiotic treatments that were developed from and tested on Montserrat corals have a very high likelihood to be similarly effective on SCTLTD for other reefs within the region (200 km), in particular:

1. UKOT - Anguilla;
2. Commonwealth - Antigua and Barbuda, St. Kitts and Nevis, Dominica,
3. EU-OT - St. Barths, St. Martin/Maarten, Guadeloupe

## Section 3 - Project Partners

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### Q4. Project partners (Guidance section 3.2)

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


**Project Leader name (Guidance section 3.1):** Andrew Myers


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<b>Lead Partner name (if applying as an organisation; Guidance section 3.1):</b>	Island Solutions Inc.
<b>Lead Partner Website (if applicable):</b>	www.islandsolutions.org
<b>Is the Lead Partner based in a UKOT where the project is working (Guidance section 3.1)?</b>	<input checked="" type="radio"/> Yes
<b>List other partners involved and where are they based:</b>	<ol style="list-style-type: none"> <li>1. Government of Montserrat (GoM) - Department of Environment; Department of Agriculture/Fisheries</li> <li>2. The Ushijima Lab for Coral Health and Restorative Microbiology - University of North Carolina - Wilmington</li> </ol>
<b>Summary of roles and responsibilities of each partner in the project:</b>	<p>The GoM will provide support through:</p> <ol style="list-style-type: none"> <li>1. Policy advice and permitting,</li> <li>2. Access to the JNCC/GoM dive team,</li> <li>3. General support and interaction,</li> <li>4. Reduction of customs taxes.</li> <li>5. Monitoring and evaluation guidance.</li> </ol> <p>The Ushijima Lab will:</p> <ol style="list-style-type: none"> <li>1. Produce and provide probiotic treatments developed from Montserrat biome samples,</li> <li>2. Assist in the design of testing protocols and advise on any adjustments required.</li> <li>3. Analyse results of the treatment programme.</li> </ol> <p>Island Solutions will:</p> <ol style="list-style-type: none"> <li>1. Be responsible fully for the management and delivery of this project.</li> <li>2. Lead training program for the GoM marine science team</li> <li>3. Engage with the marine science team to implement in field treatment program.</li> <li>4. Continue candidate testing at the coral research facility.</li> <li>5. Document all programmes and maintain a minimum of 2 copies of each file and provide the GoM with a copy.</li> <li>6. Conduct a public education and outreach programme.</li> <li>7. Lead interactions with project partners and public stakeholders.</li> </ol>
<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).**

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## Section 4 - Project Summary & Description

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### Q5. Project Summary (Guidance section 3.8)

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

Stony Coral Tissue Loss Disease (SCTLD) continues to impact corals throughout the region. Through funding from DPLR1, the UKOTs' and the region's first probiotic coral treatment facility was created and trials were conducted to identify viable treatments. This project will conduct the first in-situ treatment using probiotics to reduce the impact of SCTLD in the Caribbean, a treatment option found to be as effective as antibiotics. The project will also continue to trial viable treatments at the treatment facility.

### Q6a. 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?**

The coral reef habitats throughout the Caribbean continue to face impacts from climate stresses, human activity and coral diseases. Since 2014 SCTLD has been impacting reefs from Florida to South America. Different treatment efforts have been implemented with varying success. One of the most prevalent treatment processes uses antibiotics to combat the disease. Long term effectiveness and impacts of the introduction of these non-natural, non-marine medications are yet to be determined but in terrestrial application on human and livestock collateral impacts and resistance are known. This project will implement a nature-based treatment programme to combat the disease by using probiotic treatments developed from disease resistant corals found in Montserrat.

Island Solutions, in collaboration with the Ushijima Lab for Coral Health and Restorative Microbiology - University of North Carolina - Wilmington and the Smithsonian Marine Station, constructed a first in the region and within the UKOTs facility to identify the most effective probiotic treatments for Caribbean corals - the Montserrat Coral Research Facility (MCRF). Successful trials and treatment programs have been conducted in Florida but not yet in the Caribbean. The trials are currently ongoing but from the minimum of 12 probiotics that will be evaluated the expectation is multiple viable treatments will be identified using the best practices and systems developed by the Ushijima Lab.

This project will:

1. Conduct a minimum of 2 in-situ treatment programs on a Montserrat reef using a process of 4 weeks of treatments, followed by 3 months of monitoring using 2 different probiotics. 25 corals will be treated documented with each probiotic and 25 control will be documented - 75 corals per program.
2. Documentation data will be analysed to identify effectiveness of each treatment.
3. The Montserrat Coral Research Facility will continue to test probiotic treatment candidates. A minimum of 3 testing rounds will be conducted on no less than 12 new candidates, with the focus of testing probiotics derived from different coral species.
4. A minimum of 4 members from the Montserrat marine science dive team will be trained on the in-situ probiotic treatment process.
5. Results from the project will be prepared for publication in marine science journals. Results will be shared with other researchers and relevant regional government and NGOs to assist with the effort to reduce the impacts of SCTL D.
6. A minimum of 1 public outreach event will be conducted.

## Q6b. 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 overall goal of this project is to reduce the impacts of coral disease through the use of nature-based solutions. The focus on our program will be SCTL D but probiotics developed from corals resistant to various stressors can provide treatments to combat multiple diseases and climate change. We expect that the treatments developed in this project will reduce further decline to Montserrat reefs and have the potential to help other Caribbean UKOTs' reefs.


The project has already established a strong working relationship with three international marine research organisations - the Ushijima Lab for Coral Health and Restorative Microbiology - University of North Carolina - Wilmington, the Smithsonian Marine Station, and the JNCC . Through each of these collaborators there is potential for future supporting funding. Additionally, we will continue with our efforts to engage educational institutions, NGOs and regional partners. An informal agreement has been made with a university, Bard College, that is establishing a campus in Montserrat. Island Solutions also self generates funds for projects through commercial contract projects (full rate) and donations to support and continue active programs.


**(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:**

 [1021-Nature-Based Coral Disease Treatment-M](#)

[NI-Supporting documents](#)

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## Section 5 - Project Outcome(s)

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

Successful Darwin Plus Local projects must demonstrate measurable outcomes in at least one of the themes of Darwin Plus 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 confirm that your project has a clear focus on biodiversity and the natural environment.

Checked **Biodiversity: improving and conserving biodiversity, and slowing or reversing biodiversity loss and degradation;**

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Checked **Climate change: responding to, mitigating and adapting to climate change and its effects on the natural environment and local communities;**

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Checked **Environmental quality: improving the condition and protection of the natural environment**

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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.**

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**Please justify your selection. Please use quantitative information where possible here.**

Biodiversity - Implementing systems designed to reduce species loss and habitat degradation. By reducing the impacts of SCTLTD the health of Montserrat's reefs can be maintained.

Climate Change - Temperature loggers at the treatment sites will provide data on sea temperatures during the in-situ trials.

Environmental quality - Successful treatments will reduce species loss, maintain the balance needed for a health habitat, and have the high likelihood of being viable on reefs throughout the region.

Capability and capacity building - Use of the JNCC funded GoM dive/marine science team and the testing facility will expand skill sets and national capacity.

## Section 6 - Workplan

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### Q8. 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: [Darwin Plus website](#)) 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 2024 and be completed by 31 March 2025.**


Start date:	End date:	Duration (e.g. 3 months):
01 April 2024	31 March 2025	12 months


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

 [1021-In Situ Nature-Based SCTLD Treatment Program-Montserrat-Workplan](#)

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## Section 7 - Costs

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

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

Are you seeking any matched funding for this project?

Yes

How much matched funding are you seeking and where from?

This project will receive in-kind support through our organisation and through our collaborative partner, the Ushijima Lab Coral Health and Restorative Microbiology.

Island Solutions - reduced management and staff rates, reduced or free equipment hire rates, covering of 2/3 of overhead costs - [REDACTED]

Ushijima Lab - reduced costs or free production of testing strains, result analysis, consultancy and travel support - approximately [REDACTED]

Total - [REDACTED]

Budget line	Explanation	Cost in GBP
<b>Staff costs:</b>	Covers project management lead and outreach/data/porgram support	[REDACTED]
<b>Consultancy costs:</b>	Covers visit to Montserrat by 1 Ushijima Lab staff (1 staff covered through the lab)	[REDACTED]
<b>Overhead costs:</b>	33% contribution to 10 months of project overhead costs. island Solutions will cover the rest.	[REDACTED]
<b>Travel &amp; subsistence costs:</b>	No T&S	£0.00
<b>Operating costs:</b>	Covers the training program, in-situ dive treatment program (personnel, equipment, supplies), and the test tank program costs (personnel, utilities and supplies).	[REDACTED]
<b>Capital equipment:</b>	No capital expenses	£0.00

<b>Other Costs</b>	Covers shipping of treatments, banking charges, outreach programs supplies, and M&E costs	██████████
<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)**

Andrew Myers - Project manager - responsible for overall delivery of project - average 2 paid days per month (Island Solutions covers 2 days) - ██████████

Emmy Aston - Program implementation, data and outreach manager - average 2 paid days per month (Island Solutions covers 2 days) - ██████████

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

N/A

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

N/A

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

Boat - 14 operating days - ██████████

Dive support - 6 persons per day - 14 days - ██████████

Equipment hire/supplies - scuba tanks, dive gear, general, fuel - ██████████

Testing facility operations - staff, utilities and maintenance - 84 operating days - ██████████

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

N/A

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

Travel costs of Ushijima lab personnel for program delivery - Blake Ushijima or Erin Papke - 10 days - ██████████

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

Shipping of probiotic treatments - FedEx or other shipping option - ██████████

Monitoring and Evaluation - Dr. Greta Abby - ██████████

**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:**

<b>Other currency:</b>	<b>Exchange rate:</b>	<b>Source of this exchange rate:</b>	<b>Date exchange rate accessed:</b>
USD	1 USD = 0.788 GBP	xe.com	29 November 2023

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

What % of the total will be spent in the OTs? 80

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

*No Response*

## **Section 8 - Local and National Priorities**

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### **Q10. Local and national priorities**

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

This project aligns with these international, regional and local priorities:

International agreements:

- Convention on Biological Diversity (CBD) – educating Montserrat public on the interactive relationship of habitats, species, and impacts that make up biodiversity.
- UN SDP Goals 13,14 - Climate action and life below water.

Regional agreements via the Organisation of Eastern Caribbean States (OECS) include:

- St. George's Declaration of Principles for Environmental Sustainability (SGD 2040) - Addresses goal focused on "biodiversity and ecosystems", "climate and disaster resilience", and "oceans and fisheries".

SGD 2040 associated sustainable development goals:

- Eastern Caribbean Regional Ocean Policy and Strategic Action Plan;
- Marine Research Strategy;
- OECS Green Blue Economy Strategy and Action Plan;
- Caribbean Regional Fisheries Mechanism Strategic Action Plan, 2013 to 2021;
- Sustainable Management of Shared Marine Living Resources in the Caribbean;
- Regional Strategy and Action Plan for the Valuation, Protection and/or Restoration of Key Marine Habitats in the Wider Caribbean 2021-2030.

National:


- Montserrat Environment Charter - 2001 - protection of Montserrat species and habitats;
- Conservation and Environmental Management Act (CEMA) - 2019 - protection of Montserrat species and habitats;
- Fisheries Act (2000) - Conservation of habitat and species and development of protected areas.


**Will the project take place on Government owned land or water or involve biocontrol, invasive alien species control or eradication?**


Yes


**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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 [MAHLE-Letter of Support for DARWIN Local Submissions-Island Solutions](#)

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## Section 9 - Project Risks

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### Q11. 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.

Risk	Mitigation
Field operations - Diving risks	To reduce risk the following will be done: 1) All divers must be assessed for competence, provide proof of certification, 2) All divers must have dive insurance, 3) Island Solutions has an Emergency Action Plan for dive operations. This plan will be discussed. 4). All participants must agree to abide by safety procedures, 5). A minimum of 2 professional level divers with first aid train will be on each dive. 6) Dive safety equipment will be provided during every dive operation. 7) A policy will allow any diver to stop operations if the conditions are deemed unsafe
Weather and extreme weather impacts	1) The project will avoid field work during peak hurricane season. 2) Weather conditions will be assessed prior to in field operations. 3) Systems have been implemented to protect the testing facility from weather damage and an extreme event plan has been designed to secure the equipment if required. 4) Vessel will have regular maintenance and carry required safety equipment for weather impacts during operations.

Biosecurity	1) Samples, which are nontoxic, will be labelled and secured appropriately for international travel. 2) Treatment waste water will be neutralised using bleach and stored until it becomes inert.
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**Do you require more fields?**

Yes

Risk	Mitigation
Safeguarding risks	1) A policy to report inappropriate behaviour will be implemented that has multiple persons to report to. 2) Public outreach event will offer a feedback option that will allow for anonymous complaints
<i>No Response</i>	<i>No Response</i>
<i>No Response</i>	<i>No Response</i>
<i>No Response</i>	<i>No Response</i>
<i>No Response</i>	<i>No Response</i>

**Section 10 - Terms & Conditions**

**Q12. Terms and conditions (Guidance section 3.10)**

**By applying for Darwin Plus Local you are adhering in full to the grant Terms and Conditions in full (available at: [Darwin Plus website](#) 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 or is addressing invasive alien species, a Letter of support from OT Government.
- Project Workplan in the template provided for Darwin Plus Local (available at: [Darwin Plus website](#)).
- Map and additional information (optional) maximum five additional pages.

### **If your application is successful**

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

- **Financial evidence for organisations:** Year-end financial statements, the latest management accounts or audited accounts (if you have these).
- **Financial evidence for individuals:** Proof of identity such as a passport, ID card or driving licence and solvency (such as bank statements) and a police check.

## **Section 11 - Certification**

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### **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:** Andrew Myers

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**Position in the organisation: (if applicable)** President/project lead

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**Signature (please upload e-signature)**

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**Date:** 29 November 2023

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## **Section 12 - Submission Checklist**

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### **Checklist for submission**

	<b>Check</b>
<b>I have read the Guidance documents, including the "Darwin Plus Local Guidance" and the "Darwin Plus Local Finance Guidance".</b>	Checked
<b>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.</b>	Checked
<b>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).</b>	Checked

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<b>I have read, and can meet, the current</b> Terms and Conditions <b>for this fund.</b>	Checked
<b>I have provided</b> actual start and end dates <b>for my project that fit this Round.</b>	Checked
<b>I have provided my</b> summary budget based on UK government financial years i.e. <b>1 April – 31 March and in GBP in the application form.</b>	Checked
<b>I have uploaded my project workplan using the specific</b> template <b>provided.</b>	Checked
<b>I have uploaded all supplementary documents if I have any.</b>	Checked
<b>(If copying and pasting into Flexi-Grant) I have checked that all my responses have been successfully copied into the online application form.</b>	Checked
<b>The application has been signed by a suitably authorised individual (clear electronic or scanned signatures are acceptable).</b>	Checked
<b>I have checked the</b> Darwin Plus website <b>immediately prior to submission to ensure there are no late updates.</b>	Checked
<b>I have read and understood the Privacy Notice on the</b> Darwin Plus website.	Checked

### **We would like to keep in touch!**

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

Checked

### **Data protection and use of personal data**

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

This **Privacy Notice must be provided to all individuals** whose personal data is supplied in the application form. Some information may be used when publicising Darwin Plus including project details (usually title, lead partner, project leader, location, and total grant value).