

DPLR1\1063

Safeguarding Seedbanks: Securing the future of Ascension spurge

OVERALL OBJECTIVES

This project aims to enhance protection and restoration of Critically Endangered, endemic Ascension spurge (*Euphorbia organoides*), by excluding non-native grazing pressure over a collective area of 1000m² and expanding irrigation systems to build climate change resilience.

CURRENT SITUATION AND PROBLEMS TO ADDRESS

Key threats to spurge include climate change and invasive alien species, particularly feral sheep and rabbits. Immediate action is needed to save this species from falling victim to climate-induced extinction. Ascension spurge was undergoing significant population decline due to prolonged periods of drought over four years. Flash floods in 2022 saw a significant population increase due to available seedbank. However, their life-cycle, and therefore ability to set new seed, was curtailed due to subsequent heavy grazing destroying wild populations. At one location, 1051 individuals were recorded during the September 2022 plant census, but this declined to approximately 20 heavily grazed individuals in January 2023.

Monitoring during DPLUS113 established factors limiting Ascension spurge survival:

- 1) Decreased surface soil moisture at lower altitudes heavily impacts seed output and seedling survival in wild and planted populations.
- 2) Grazing causes high mortality levels, severely limiting seed dispersal.

Trials during DPLUS113 identified successful approaches that could be scaled for larger restoration attempts:

- 1) Temporary passive irrigation systems (PIS) prolong parent-plant life and reproductive output at assisted migratory sites. This safeguards a viable, long-term seedbank in-situ where naturally higher soil moisture levels ensure successful recruitment.
- 2) Fenced areas protect wild Ascension spurge from grazers enabling individuals to reach maturity and disperse seed.

These primary trials have established suitable approaches for larger restoration attempts.

HOW THIS PROJECT WILL ADDRESS THE PROBLEMS

To enhance current conservation work and ensure the longevity of populations through the preservation of seed banks, habitat protection is the highest priority. Currently, feral animal eradication is not feasible, therefore preventing site access is the most reliable option. This will be implemented via a three-action point framework:

- 1) Implement protection island-wide to maintain sub-population genetic diversity and safeguard their seedbanks via fencing.
 - A collective area of 1000m² will be fenced against sheep and rabbits across 4 known sub-populations.
- 2) Expand the assisted migration site by establishing an additional founder population from which the species can spread unaided. These will be fenced and temporarily irrigated.
 - A 144m² area will be fenced against sheep and rabbits.
 - Founder population containing 40 parent plants will be introduced from cultivation.
 - Founder population will be maintained for 2 years using PIS until the parent plants have established a seedbank large enough for natural recruitment.

- A fog catcher will be constructed to feed precipitated water via guttering into a storage tank for use in PIS.
 - PIS will be reused to set-up future assisted migration founder populations.
- 3) Trial electric fencing as a means of providing low-cost protection over larger areas in the future.
- A 100m² plot will be fenced using rabbit electric fencing.
 - This is will be positioned adjacent to an unfenced control.
 - Both plots will be regularly monitored for signs of rabbit activity to assess effectiveness.

MEASURING SUCCESS

The success of these actions will be determined through monthly surveys and the biannual plant census. Project success will be measured by the following targets:

- Installation of fencing around 1000m² of Ascension spurge habitat by December 2023.
- Absence of rabbits and sheep within fenced areas recorded through monthly surveys of droppings and footprints.
- Absence of signs of grazing on plants within exclosures measured through monthly visuals.
- Long-term success will be demonstrated by recording an increasing number of individuals reaching maturity and setting seed at fenced sites.

PRIMARY APPLICANT DETAILS

Title Dr
Name Diane
Surname Baum
Organisation Ascension Island Government
Website (Work) [REDACTED]
Tel (Work) [REDACTED]
Email (Work) [REDACTED]
Address [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

CONTACT DETAILS

Title Mrs
Name Jolene
Surname Sim
Organisation Ascension Island Government
Website (Work) [REDACTED]
Tel (Work) [REDACTED]
Email (Work) [REDACTED]
Address [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

DPLR1\1063

Safeguarding Seedbanks: Securing the future of Ascension spurge

Section 1 - Project Title & Contact Details

Q1. Project Title

Safeguarding Seedbanks: Securing the future of Ascension spurge

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

Organisation

PRIMARY APPLICANT DETAILS

Title Dr
Name Diane
Surname Baum
Organisation Ascension Island Government
Website (Work) [REDACTED]
Tel (Work) [REDACTED]
Email (Work) [REDACTED]
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[REDACTED]

CONTACT DETAILS

Title Mrs
Name Jolene
Surname Sim
Organisation Ascension Island Government
Website (Work) [REDACTED]
Tel (Work) [REDACTED]
Email (Work) [REDACTED]
Address [REDACTED]
[REDACTED]

GMS ORGANISATION

Type	Organisation
Name	Ascension Island Government
Phone	[REDACTED]
Email	[REDACTED]
Website	[REDACTED]
Address	[REDACTED]
	[REDACTED]
	[REDACTED]
	[REDACTED]

Section 2 - Overseas Territory(ies)

Q3. Overseas Territory (Guidance section 1.3):

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

St Helena, Ascension and Tristan da Cunha*

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

Ascension Island

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

No

Section 3 - Project Partners

Q4. Project partners (Guidance section 3.2)

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

Project Leader name (Guidance section 3.1): Jolene Sim

Lead Partner name (if applying as an organisation; Guidance section 3.1): Ascension Island Government Conservation and Fisheries Directorate (AIGCFD)

Lead Partner Website (if applicable): <https://www.ascension.gov.ac/>

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

Yes

List other partners involved and where are they based (Guidance section 3.2):

N/A





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

Ascension Island Government Conservation and Fisheries Directorate (AIGCFD) will take responsibility for overall project management, financial management, delivery of the project, monitoring and evaluation.

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

Checked

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

-  [Cover Letter - Safeguarding Seedbanks Securing the future of Ascension spurge](#)
-  13/02/2023
-  15:44:26
-  pdf 193.66 KB

Section 4 - Project Summary & Description

Q5. Project Summary (Guidance section 3.8)

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

Critically endangered and endemic, Ascension spurge (*Euphorbia organoides*) faces dual threats from climate change and invasive alien species, particularly grazers. Following DPLUS113 trials and monitoring, assisted migration attempts and passive irrigation system implementation has considerably improved survivorship. Building on successes, this project aims to tackle these threats by (1) implementing protection island-wide, (2) expanding previously established assisted migratory sites, and (3) trialing electrical fencing as a feral animal deterrent where Ascension spurge populations grow.

Q6. Description (Guidance section 2.1)

Please provide a description of your project, including:

- the overall objective
- the current situation and the problem the project is trying to address

- what success will look like and how you will measure it

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

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CURRENT SITUATION AND PROBLEMS TO ADDRESS

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- PIS will be reused to set-up future assisted migration founder populations.
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- A 100m² plot will be fenced using rabbit electric fencing.
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MEASURING SUCCESS

The success of these actions will be determined through monthly surveys and the biannual plant census. Project success will be measured by the following targets:

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- Absence of rabbits and sheep within fenced areas recorded through monthly surveys of droppings and footprints.
- Absence of signs of grazing on plants within exclosures measured through monthly visuals.
- Long-term success will be demonstrated by recording an increasing number of individuals reaching maturity and setting seed at fenced sites.

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

-
-  [Supporting Materials - Safeguarding Seedbanks Securing the future of Ascension spurge](#)
 -  13/02/2023
 -  15:55:56
 -  pdf 2.4 MB

Section 5 - Project Outcome(s)

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

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

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

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

Please justify your selection.

Ascension spurge is undergoing continued decline despite committed conservation efforts by AIGCFD. This project will prevent biodiversity loss by providing protection of important Ascension spurge sub-populations from sheep and rabbits. Fencing sites will ensure the immediate survival of Ascension spurge and build resilience in the population by enabling a seedbank to establish. Long-term, assisted migrations can provide suitable conditions for self-sustaining populations against climate change and facilitate future expansion. This will allow a smooth transition between current intensive management to a strategy requiring less resources.





Section 6 - Project Timeline

Q8. Project timeline (Guidance section 2.2)

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

Start date:	End date:	Duration (e.g. 3 months):
01 April 2023	31 March 2024	12 months

Please upload the completed Darwin Plus Local Project Implementation Timetable template with your proposed project activities below.

-  [R1-DPlus-Local-Implementation-Timetable- Sa feguarding Seedbanks Securing the future of Ascension spurge](#)
-  14/02/2023
-  08:39:47
-  pdf 143.53 KB

Section 7 - Costs

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

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

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

Yes

How much matched funding are you seeking and where from?

AIG in-kind matched contribution of:

- £5,900 for staff time of 3 employees
- £500 for transport costs

Budget line	Explanation	Cost in GBP
Staff costs:	None	████
Overhead costs:	None	████
Travel & subsistence costs:	None	████
Operating costs:	None	████
Capital equipment:	Fencing materials and fixtures (████) Solar powered rabbit electric fence kit (████) Fog catcher materials and fixtures (████) Passive irrigation system (████) Shipping costs (████)	████████
Consultancy costs:	None	████
Total:		████████

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

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

No Response

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

No Response

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

No Response

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

No Response

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

No Response

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

No Response

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

No Response

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

Other currency:	Exchange rate:	Source of this exchange rate:	Date exchange rate accessed:
No Response	No Response	No Response	No Response

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

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



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

No Response

Section 8 - Local and National Priorities

Q10. Local and national priorities

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

Ascension's National Biodiversity Strategy and Action Plan highlights Ascension's endemic higher plants as a conservation priority. Endemic plant conservation actions and targets outlined in the plan reflect the primary aims in this project:

- Control of grazing through fencing.
- Assisted migration of Ascension spurge.
- Install fog catchers and irrigation system to provide increased water to endemic plants.
- Planting out of cultivated endemic plants to establish new populations.

In carrying out these actions, this project addresses the highest impact threats in the Ascension spurge Species Action Plan:

- 1) Invasive non-native/alien species.
- 2) Climate change & severe weather: Droughts & temperature extremes.

By addressing these issues and carrying out the proposed actions, this project is upholding the Ascension Island Environment Charter (2001) and principle (7): 'to safeguard and restore native species, habitats and landscape features, and control or eradicate invasive species.'


The UK Government's 25 Year Environment Plan requires 'action to recover threatened iconic [...] plants, and fungi, and where possible prevent human induced extinction or loss of known threatened species in England and the Overseas Territories' aligning with this project.


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


Yes

Please attach evidence that you have Government support i.e. Letter of Support.

 [AIG Letter of support - Darwin Local R1 - Safe guarding Seedbanks Securing the future of As cension spurge](#)

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Section 9 - Project Risks

Q11. Project Risks

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

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

Risk	Mitigation
Health and Safety Risk: Injury to native flora and fauna.	Risk assessed approach. All project staff and volunteers have been briefed on risks, given awareness training and species handling training concerning relevant species in the Wildlife Protection Ordinance (2013).
Health and Safety Risk: Injury to staff from manual handling.	Risk assessed approach. All project staff and volunteers have been briefed on risks and given manual handling training. Lead staff have received appropriate first aid training for fieldwork scenarios.
Biosecurity Risk: Shipping in external equipment	Biosecurity regulations (Biosecurity Ordinance, 2020) in place to reduce the introduction of species threatening native species and people's quality of life. Inspections carried out by AIG to monitor compliance and ensure import health standards.

Do you require more fields?

No

Section 10 - Terms & Conditions

Q12. Terms and conditions (Guidance section 3.10)

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

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

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

Checked

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

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

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

Section 11 - Certification

Certification

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



Checked

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

Checked

Name: Diane Baum

Position in the organisation: (if applicable) Director of Ascension Island Government Conservation & Fisheries Directorate

Signature (please upload e-signature)  [Diane Baum - Signature](#)
 14/02/2023
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Date: 14 February 2023

Section 12 - Submission Checklist

Checklist for submission

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

We would like to keep in touch!

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

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).

Project Title:

Darwin Plus Local – Safeguarding Seedbanks: Securing the Future of Ascension Spurge

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

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

Activity #	Description (max 25 words)	No. of months	UK Financial Year 2023/24											
			Calendar Year 2023									Calendar Year 2024		
			Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
1	Order equipment	3 months												
2	Cultivate and harden off Ascension spurge for parent plants at assisted migratory sites	6 months												
3	Carry out clearance of invasive plant species at proposed assisted migratory sites	1-2 days per month												
4	Build fencing around wild populations of Ascension spurge	4 days per month												
5	Install solar powered electric fencing for rabbits	2 days												
6	Monitor wild populations and protection from grazing. Camera traps and count data entry.	Once per month												
7	Build fog catcher, install passive irrigation system and fence at new assisted migratory site	5 days per month												
8	Plant out 40 parent plants at new assisted migratory site	1 day												

Project Title:

Activity #	Description (max 25 words)	No. of months	UK Financial Year 2023/24												
			Calendar Year 2023									Calendar Year 2024			
			Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	
9	Carry out biannual endemic plant census	3 days every 6 months													
10	Data entry, evaluation and report writing.	2 days per month													