Applicant: **Galbraith, Gemma**
Organisation: **Island Solutions Inc.**
Funding Sought: [redacted]
Funding Awarded: **£0.00**

DPLR3\1036

Biodiversity and Impact Assessments of Montserrat's Mesophotic Reefs using ROVs

This project will conduct mesophotic coral ecosystem surveys around Montserrat using Remotely Operated Vehicles (ROVs) and data loggers to assess reef and water column biodiversity, species abundance, marine conditions and impacts. The analysed data gathered will:
-greatly augment information on deep reefs habitats, information which is currently extremely limited;
-create a broader understanding of Montserrat’s marine environment as a whole system;
-provide information to reduce ghost fishing impacts and the economic costs and habitat damage from that lost fishing gear.

PRIMARY APPLICANT DETAILS

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

CONTACT DETAILS

Title	Dr
Name	Gemma
Surname	Galbraith
Organisation	Island Solutions Inc.
Website (Work)	[redacted]
Tel (Work)	[redacted]
Tel (Work)	[redacted]
Email (Work)	[redacted]
Address	[redacted]

DPLR3\1036

Biodiversity and Impact Assessments of Montserrat's Mesophotic Reefs using ROVs

Section 1 - Project Title & Contact Details

Q1. Project Title

Biodiversity and Impact Assessments of Montserrat's Mesophotic Reefs using ROVs

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

CONTACT DETAILS

Title	Dr
Name	Gemma
Surname	Galbraith
Organisation	Island Solutions Inc.
Website (Work)	[redacted]
Tel (Work)	[redacted]
Tel (Work)	[redacted]
Email (Work)	[redacted]
Address	[redacted]

GMS ORGANISATION

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

☑ 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)?

⦿ 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):	Dr. Gemma Galbraith
Lead Partner name (if applying as an organisation; Guidance section 3.1):	Island Solutions Inc.
Lead Partner Website (if applicable):	www.islandsolutions.org

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:	Mr Benjamin Cresswell – James Cook University/Island Solutions – Townsville, Australia/Montserrat The Government of Montserrat's Departments of Agriculture and Environment.
Summary of roles and responsibilities of each partner in the project:	Island Solutions will be responsible fully for the management and delivery of this project. 1. Island Solutions support staff and James Cook University (JCU) researchers, Dr Gemma Galbraith and Mr Ben Cresswell (doctoral marine biology candidate), will lead and implement the deep reef and marine habitat surveys. Dr Galbraith and Mr Cresswell will be responsible for the analysis of survey data, presentation of results and delivery of reports. 2. The project will engage extensively with the Government of Montserrat's (GoM) Ministry of Agriculture, Housing, Land and Environment (MAHLE), who will provide critical input to survey site selection and guidance on ministerial and national goals. The GoM's Departments of Agriculture and Environment, respectively, will provide availability to Montserrat Marine Science Dive Team personnel, assist with engagement, and maintain back-up project data. Island Solutions will interact with the directors of Environment and Agriculture as part of the monitoring and evaluation aspects as well. 3. Training in remotely operated vehicle (ROV) piloting and the installation of marine temperature and current loggers will be delivered by Island Solutions/ JCU researchers for GOM personnel. 4. All communications and outreach activities will be led and conducted by the Island Solutions/JCU team. Outreach programs and educational material will be led by our organisation, but will engage the Montserrat Marine Science Dive Team for delivery. 5. Financial management will fall to Island Solutions, however, it will be maintained by the outside accounting firm that does our organisation's audits. 6. Island Solutions will secure and back-up all data.
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).

1036-MNI-ROV Deep Reef Assessment-Cover letter-Island Solutions
28/11/2023
16:13:36
pdf 108.79 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.

This project will conduct mesophotic coral ecosystem surveys around Montserrat using Remotely Operated Vehicles (ROVs) and data loggers to assess reef and water column biodiversity, species abundance, marine conditions and impacts. The analysed data gathered will:
-greatly augment information on deep reefs habitats, information which is currently extremely limited;
-create a broader understanding of Montserrat's marine environment as a whole system;
-provide information to reduce ghost fishing impacts and the economic costs and habitat damage from that lost fishing gear.

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 objective of this project is to provide essential information on Montserrat's deep marine habitats. This project will:
-Conduct deep water (>30m) habitat and biodiversity surveys to assess current health and impacts on these reefs;
-Collect data to understand local currents and temperature on deep reefs to reduce impacts from fishing practices and reduce reef damage from ghost fishing;
-Develop a dataset of the best seasons or alternative sites to avoid adverse conditions for deploying fishing gear.

Using best practices developed by a research team from James Cook University, Australia, remotely operated vehicles (ROVs) will be used to conduct the deep reef habitat surveys on Montserrat below typical depths of SCUBA diving surveys. This project will enhance the capacity and skill-sets of the local GoM marine science team, established during a JNCC-funded SCTLD project, and increase public knowledge of coral reefs and deep-water habitats via community outreach educational events and media.

Current Situation
Knowledge of deep reefs globally is lacking, particularly from small island states with limited research capacity, like Montserrat. This project will contribute the first quantified deep-reef ecological surveys from a minimum of 20 locations around Montserrat and its offshore habitat features. There is also very limited fine-scale data available on the hydrodynamic conditions around the island. The use of the current and temperature loggers in this project will significantly improve understanding of Montserrat's marine environment and changes in temperature and currents over time.

Fish traps, cage structures constructed locally from wood and wire mesh, are the main form of subsistence fishing on Montserrat. Fish traps, which are frequently lost by local fishers, are observed negatively impacting the island's reefs by stakeholders and visitors by damaging habitat and often containing substantial ghost-bycatch. Social surveys amongst local fishers conducted by Island Solutions have found that the main cause of fish-trap loss is entanglement on complex benthic habitat and/or float loss due to submergence by strong currents. A better understanding of the island's deep-water habitats and current conditions will provide guidance to fishers as to where and when fish traps are best deployed to avoid loss, without impacting their livelihoods.

Measures of success:
(1) The video record of current state of Montserrat deep reefs generated will provide the most detailed assessment of these habitats, a comparable baseline for future surveys, and be relatable to the broader public compared to spreadsheet data.

(2) The results from deep-reef surveys on Montserrat will be prepared for publication in international scientific journals. This will contribute the first ROV deep reef data from Montserrat to global efforts in deep reef research. The collaboration with the JCU team, and their in-kind contribution of the equipment for this project, will establish a strong working relationship between international researchers and the on-island conservation initiatives led by Island Solutions and the GoM.

(3) All data generated through this project will be provided to the Government of Montserrat collaborative partners, the Departments of Agriculture and Environment. The project will also produce educational project media and conduct a minimum of 1 public outreach event.

(4) Members of the GOM marine science dive team will be trained in the deployment and data analysis of the temperature and current loggers. This will add to their developing skill set in using marine instrumentation and enhance local capacity to collect and analyse important marine environmental data.

(5) To measure the success of applying new fish trap deployment guidance, social surveys will be conducted amongst the fishing community before and after the project. Numbers of traps lost will be compared and perspectives from fishers collected to evaluate project perception within the community.

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?

Long term benefits of this project will include new and fundamental information on the distribution of Montserrat's deep marine habitats and their biodiversity. This will be available to inform future national strategies on biodiversity and habitat protection. Further, by assessing areas where fish traps are frequently lost and surveying other suitable locations with more appropriate environmental conditions, fishers will have better knowledge of where and when to deploy traps. This will ultimately reduce the number of traps lost, improve the sustainability and management of Montserrat's fisheries and reduce ghost gear bycatch.

The ROV, current and temperature loggers used in this project will be maintained and re-deployed in additional locations around the island after this project has been completed through Island Solution's self generated program funding. This will allow the continued collection of environmental data to better understand Montserrat's marine environments. This will be particularly valuable for coral reef habitats over future periods of high thermal stress.

(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:

1036-Map and Systems infomation
28/11/2023
12:13:52
pdf 3.33 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 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;**
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.**

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

Biodiversity: Survey video footage will provide a reviewable record that will be analysed for species and ecosystem data.

Climate Change: The 10 Temperature and current loggers will collect data on seasonal water temperature changes, variances in currents, while videos will show actual temperature impacts.

Environmental quality: Data collected will support educated policy decisions

Capability/capacity building - A minimum of 4 members of the GoM marine science team and 1 youth diver will participate in the training program. 1 public outreach event will be conducted. A publication on the findings will be produced for government use, public access and peer review.

Section 6 - Workplan

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

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

1036-Local-Workplan-ROV PROJECT
22/11/2023
12:00:42
docx 38.25 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?

⦿ Yes

How much matched funding are you seeking and where from?

This project has secured matched funding and in kind contributions totalling [redacted]

Total secured matched funding = [redacted]
Funding has been secured through the project leader's Smithsonian Institution grant that will cover travel, equipment and equipment usage.

Total in-kind funding = [redacted]
Island Solutions has provided reduced project management, staff and equipment hire rates over established rates, as well as, covering overhead costs and providing free access to certain equipment.

Budget line	Explanation	Cost in GBP
Staff costs:	Staff costs includes compensation for the project leader and support manager, the programs and outreach manager, and training personnel for delivery.	[redacted]
Consultancy costs:	No consultancy costs.	£0.00
Overhead costs:	No overhead costs.	£0.00

Travel & subsistence costs:	No T&S costs.	£0.00
Operating costs:	Operating costs cover all expenses associated with the deployment, collection and maintenance of the data loggers (a minimum of 5 operating days), the training session on systems, and all expenses associated with the ROV operations (a minimum of 20 operating days). These costs include equipment, supplies, support personnel, and general resources in al operations.	[redacted]
Capital equipment:	The project will purchase a micro ROV.	[redacted]
Other Costs	Other costs will include shipping costs, outreach and project promotional items, bank and currency exchange fees, monitoring and evaluation costs.	[redacted]
Total:		[redacted]

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)

G Galbraith - project leader - [redacted]
A Myers - Grant delivery manager - [redacted]
B. Cresswell - data analysis/systems manager - [redacted]
E Aston - Outreach and educational support - [redacted]

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 usage - [redacted]
Dive support - [redacted]
Fuel/supplies - [redacted]
Equipment hire - [redacted]

A minimum of 25 field work days.

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

Micro remote Operated Vehicle (ROV) - [redacted]

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

N/A

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

N/A

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:
USD	1 USD to 0.7867 GBP	xe.com	28 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?	90

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

N/A

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.

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.

MAHLE-Letter of Support for DARWIN Local Submissions-Island Solutions
29/11/2023
15:42:52
pdf 1001.63 KB

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. 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
Biosecurity – ROV robot has been used in Australian and Eastern Pacific marine habitats.	ROV Robot will be thoroughly cleaned using an alcohol dilution spray before travel to Montserrat. In between dives at different locations around the island the robot will be cleaned in freshwater.

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
Field operations - ROV risks	To reduce risk the following will be done: 1) The ROV will be operated by trained ROV pilots only for survey activities. 2) The ROV will undergo regular maintenance and checks before and after each deployment and dive. 3) Prior to any ROV training activities to be delivered a risk assessment will be conducted with participants. 4) ROV piloting training will be delivered by experienced ROV pilots only and will be conducted in a contained environment (e.g. swimming pool).

Do you require more fields?

⦿ Yes

Risk	Mitigation
Weather and extreme weather impacts	1) Prior to any dive operation sea conditions will be assessed and during operations will be reassessed if changes occur, 2) ROV operations will avoid extreme weather season - hurricane. Field work will be conducted over a 16 week on window to ensure that enough suitable weather windows are available to conduct surveys during the field commitment to the project. 3) Vessel will have regular maintenance and carry required safety equipment for weather impacts during operations.

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
No Response	*No Response*
No Response	*No Response*
No Response	*No Response*

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

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
Position in the organisation: (if applicable)	President/Project delivery manager
Signature (please upload e-signature)	SIGNATURE 28/11/2023 19:39:57 jpg 229.84 KB
Date:	28 November 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 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.**	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.**	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.

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).