

# **DPLR1\1059**

## **Strengthening Montserrat's Marine Ecosystem through Coral Restoration Implementation and Training**

### Objective

Coral reef ecosystems are threatened with climate change, disease, loss of species and other human driven impacts throughout the world, the Caribbean and Montserrat included. Habitat loss and species degradation has been extensively documented throughout the Caribbean over the past 50 years. This project will focus on increasing populations of two IUCN Red List critically endangered species – *Acropora palmata* and *Acropora cervicornis*. These species are high value corals as they provide important habitat for other reef animals, especially fish, by creating intricate protective void spaces. These “fast” growing corals also provide valuable coastal protections in addition to being beautiful coral structures which benefit the tourism industry. This project will expand the capabilities, skill sets and capacity of the Government of Montserrat (GoM) SCUBA team, which was developed during the JNCC funded SCTL D project which the Island Solutions team was the lead private partner. The project will also provide increase local knowledge of reefs via community outreach educational events and media.

### Current Situation

Montserrat, has seen throughout the Caribbean, lost a vast majority of the *Acropora* corals in the 1980s. Over the nearly 17 years the Island Solutions team has been operational in Montserrat we have found scattered living colonies of *Acropora* throughout the Montserrat reef tract but through the SCTL D reef survey program additional colonies have been found while conducting the GPS and photo documentation used to track the presence of SCTL D. Those surveys also generated information on areas *Acropora* had been previously prevalent. As coral coverage continues to be reduced from SCTL D the presence of these survivor *Acropora* colonies indicate resilience in these corals and potential for restoration using the established reef rehabilitation techniques. This project will create 2 nursery locations in areas that were previously heavily populated by *Acropora* to establish both artificial reef structure systems and out planting nursery systems. Through the reestablishment of this aspect of a healthy reef system the reef has the opportunity to rejuvenate additional species populations and increase biodiversity.

### Measure of Success

This project has the following goals and delivery of them will be indicative of success:

1. Creation of 2 coral nursery sites that have a minimum of 50 propagated *Acropora* corals from multiple donor colonies at each location. Each location will use two types of artificial reef structures - 1) reef ball concrete designed reefs and steel rebar constructed reef spiders/stars to create new reef structures for long term coral transplants or propagation and 2) hanging propagation lines and trees for out planting propagation purposes. Sites will be photo/video documented and survival and growth rates will recorded.
2. A minimum of 4 JNCC/GoM trained divers and 1 youth diver will be trained on coral propagation, reef restoration, and nursery maintenance techniques. The project log will record participation in dive sessions and training sessions, dive activity will be photo/video documented and divers who complete all aspects of the program will receive a certification of competence.
3. This pilot project will use collected data to support program expansion using local best practices. All data generated through this project will be provided to current Government of Montserrat collaborative partners, the Departments of Agriculture and Environment. The project will also produce educational project media and conduct the minimum of 1 public outreach event.



## PRIMARY APPLICANT DETAILS

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

# DPLR1\1059

Strengthening Montserrat's Marine Ecosystem through Coral Restoration Implementation and Training

## Section 1 - Project Title & Contact Details

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### Q1. Project Title

Strengthening Montserrat's Marine Ecosystem through Coral Restoration Implementation and Training

### 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]

#### GMS ORGANISATION

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

No

## 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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**Lead Partner name (if applying as an organisation; Guidance section 3.1):** Island Solutions Inc.

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**Lead Partner Website (if applicable):** [www.islandsolutions.org](http://www.islandsolutions.org)

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

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**List other partners involved and where are they based (Guidance section 3.2):** The Government of Montserrat's Departments of Agriculture and Environment.

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**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. The project will engage extensively with the Government of Montserrat (GOM) to provide training for GoM dive team.
2. All communications will be lead by Island Solutions.
3. Training programs, including habitat documentation, coral nursery construction and installation, coral handling and propagation techniques, nursery management and documentation, and data processing, will be lead by Island Solutions.
4. Outreach programs and educational material will be lead by our organisation but will engage the program 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 organisations audits.
6. Data processing and analysis will be done by Island Solutions and the program dive team. This data will be provided to the Government of Montserrat.

The Government of Montserrat's Departments of Agriculture and Environment will provide availability to dive team personnel, assist with engagement, and maintain back-up project data.





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

Checked

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

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## 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.**

During reef surveys focused on SCTL D conducted between October 2021 and February 2023 Island Solutions documented healthy colonies of *Acropora palmata* and *cervicornis* within the Montserrat reef tract, including colonies in high water temperatures, extreme wave action and high solar exposure zones. This pilot project will collect samples from the healthy colonies of *Acropora* from the reef system and establish 2 nursery sites using restoration best practices to increase coral population while training the government dive team on these techniques.

## 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?**

### Objective

Coral reef ecosystems are threatened with climate change, disease, loss of species and other human driven impacts throughout the world, the Caribbean and Montserrat included. Habitat loss and species degradation has been extensively documented throughout the Caribbean over the past 50 years. This project will focus on increasing populations of two IUCN Red List critically endangered species – *Acropora palmata* and *Acropora cervicornis*. These species are high value corals as they provide important habitat for other reef animals, especially fish, by creating intricate protective void spaces. These “fast” growing corals also provide valuable coastal protections in addition to being beautiful coral structures which benefit the tourism industry. This project will expand the capabilities, skill sets and capacity of the Government of Montserrat (GoM) SCUBA team, which was developed during the JNCC funded SCLTD project which the Island Solutions team was the lead private partner. The project will also provide increase local knowledge of reefs via community outreach educational events and media.

### Current Situation

Montserrat, has seen throughout the Caribbean, lost a vast majority of the *Acropora* corals in the 1980s. Over the nearly 17 years the Island Solutions team has been operational in Montserrat we have found scattered living colonies of *Acropora* throughout the Montserrat reef tract but through the SCLTD reef survey program additional colonies have been found while conducting the GPS and photo documentation used to track the presence of SCLTD. Those surveys also generated information on areas *Acropora* had been previously prevalent. As coral coverage continues to be reduced from SCLTD the presence of these survivor *Acropora* colonies indicate resilience in these corals and potential for restoration using the established reef rehabilitation techniques. This project will create 2 nursery locations in areas that were previously heavily populated by *Acropora* to establish both artificial reef structure systems and out planting nursery systems. Through the reestablishment of this aspect of a healthy reef system the reef has the opportunity to rejuvenate additional species populations and increase biodiversity.





### Measure of Success

This project has the following goals and delivery of them will be indicative of success:

1. Creation of 2 coral nursery sites that have a minimum of 50 propagated *Acropora* corals from multiple donor colonies at each location. Each location will use two types of artificial reef structures - 1) reef ball concrete designed reefs and steel rebar constructed reef spiders/stars to create new reef structures for long term coral transplants or propagation and 2) hanging propagation lines and trees for out planting propagation purposes. Sites will be photo/video documented and survival and growth rates will recorded.
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3. This pilot project will use collected data to support program expansion using local best practices. All

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

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

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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, 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;**
- 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.**

This project will:

Create habitat that supports marine species and fish life. Strengthening marine life populations are a necessary component to protecting biodiversity,

Improve coastal reef systems that protect shorelines from the impacts of rising seas and strengthen storm systems,

Improve environmental quality by expediting the return of corals. Coral restoration techniques will bring multiple donor colonies together and also increase population through asexual production,

Increase capabilities and capacity of the GoM dive team. The dive program was started to address various



impacts and collect data on reefs. This program will teach new skills to the dive team.

## Section 6 - Project Timeline





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### 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 May 2023	31 March 2024	11 months

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

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## Section 7 - Costs

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### 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?

Island Solutions is providing reduced rates for management, training, and equipment usage. Additionally we will cover all overhead costs during the project.

The total amount for in-kind and covered expenses is approximately ████████ GBP.

Budget line	Explanation	Cost in GBP
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<b>Staff costs:</b>	Staff costs will consist of a project manager, a data and outreach manager, lead diver/trainers, support divers and trainee divers.	██████████
<b>Overhead costs:</b>	Covered by Island Solutions	██████
<b>Travel &amp; subsistence costs:</b>	No T&S in this project HOWEVER there is no line for "OTHER" or M&E costs so they will be listed here: Construction of artificial reefs and coral nursery system Monitoring and Evaluation - 8 sessions	██████████
<b>Operating costs:</b>	Operating costs cover: Equipment hires and usage - boats, cameras, GPSs, scuba tanks Fuel for operations Daily operation incidentals, Educational and outreach materials/events, Monitoring equipment - tags, Shipping related costs,	██████████
<b>Capital equipment:</b>	No capital equipment will be purchased for this project.	██████
<b>Consultancy costs:</b>	No consultancy required for this project.	██████
<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, 2 days per month, 10 month - ██████ GBP  
 Emmy Aston, Data/programs manager, 2 days per month, 10 month - ██████ GBP  
 Lead divers/program trainers, Andrew Myers & Emmy Aston, 80 dives minimum - ██████ GBP  
 Support divers, Shane Caesar and Chase Buffonge, 80 dives minimum - ██████ GBP  
 Trainee divers, multiple persons - ██████ GBP

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

*No Response*

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

M&E - 8 months of M&E - Ben and Gemma Cresswell, MSC and PhD marine biology, James Cook University - ██████ GBP

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

Boat Hire - 16.5 days - ██████ GBP  
 Equipment hire - dive operations - ██████ GBP  
 Scuba tanks - usage and fills - ██████ GBP

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

No Response

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

No Response

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

Other costs

Materials and construction of coral nursery systems - █████ GBP

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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:
USD	1 USD = 0.829 GBP	xe.com	12 February 2023

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**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? █████

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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

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## 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 international, regional and local priorities:

International agreements that are relevant to this project include:

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 - 2007 - Achieve the Long-term protection and Sustained 13 Productivity of the Region's Natural Resource Base and Ecosystem Service it Provides


Nationally:




Montserrat Environment Charter - 2001 - protection of Montserrat species and habitats


**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.**

 [Surveys, Treatments and Monitoring of SCTL D and also the establishment of a nursery plot f or critically endangered Corals](#)

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 [Andrew Myers- 2023- Darwin Local](#)

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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. 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) Prior to any dive operation sea conditions will be assessed and during operations will be reassessed if changes occur, 2) Coral nurseries will use systems proven to be able to deal with extreme weather events known to occur within the region, 3) In the case of an expected extreme weather event nursery sites will be fortified or adjusted as required
Safeguarding risks	1) A policy to report inappropriate behaviour will be implemented that has multiple persons to report to including the M&E persons not in Montserrat, 2) Public outreach event will offer a feedback option that will allow for anonymous complaints

**Do you require more fields?**

No

## Section 10 - Terms & Conditions

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### 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

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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 manager

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**Signature (please upload e-signature)**  SIGNATURE  
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**Date:** 12 February 2023

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## Section 12 - Submission Checklist

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### Checklist for submission

	Check
<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, 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
<b>I have read, and can meet, the current Terms and Conditions for this fund.</b>	Checked
<b>I have provided actual start and end dates for the project.</b>	Checked

<b>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.</b>	Checked
<b>I have uploaded my project implementation timetable using the specific template provided.</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 Darwin Plus website immediately prior to submission to ensure there are no late updates.</b>	Checked
<b>I have read and understood the Privacy Notice on the Darwin Plus website.</b>	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).

### Darwin Plus Local

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	Ordering and sourcing of necessary supplies for coral nursery construction. Purchase of some items will have to be done via US suppliers.	0.25												
2	Detailed surveys of existing Acropora donor colonies on Montserrat reef tract (locations already established during the SCTL D survey program). 2 days of diving, 6-8 dive sites.	0.5												
3	Construction of coral nursery systems on land. Approximately 1 week of work.	0.25												
4	Installation of coral nurseries at 2 locations. 1 day per site.	0.2												
5	Coral collection and nursery establishment. Small samples will be collected from donor colonies at multiple locations and propagated for use on the nursery systems. 3 dive days.													
6	Maintenance, monitoring and data collection for nurseries. 1 day per month, 9 months, 6 divers													



Project Title: Strengthening Montserrat's Marine Ecosystem through Coral Restoration Implementation and Training

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
7	Data processing of information gathered on donor colonies, nursery creation, survival rates at nurseries and growth rates for random selection of tagged corals.	11												
8	Out planting of hanging coral nursery propagates to reef. 2 sessions – October 23 and March 24	2												
9	Outreach – Development of project infographic posters, social media posts and 1-2 events (dates TBD)	9												
<b>WORKPLAN COLOUR CODE</b>														
	LAND BASED OPERATIONS													
	IN WATER OPERATIONS													