

# **DPLR4\1010**

## **Building Sustainable Coral Propagation Capacity in Bermuda**

Bermuda's Living Reefs Foundation (LRF) partners with Coral Spawning Lab (CSL) to build the island's capacity in controlled spawning and culture of massive corals. Since 2018, LRF has focused on developing hatchery-based techniques for restoration. However, scaling up is limited by the current reliance on natural spawning events, subject to environmental factors. By manipulating key drivers in coral reproduction with CSL's system, LRF increases its capacity to produce a supply of juvenile corals for reef recovery and nature-based breakwater solutions.

# DPLR4\1010

Building Sustainable Coral Propagation Capacity in Bermuda

## Section 1 - Project Title & Contact Details

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### Q1. Project Title

Building Sustainable Coral Propagation Capacity in Bermuda

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

Organisation

#### PRIMARY APPLICANT DETAILS

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Title	Dr
Name	Samia
Surname	Sarkis
Website (Work)	[REDACTED]
Tel (Work)	[REDACTED]
Email (Work)	[REDACTED]
Address	[REDACTED]

#### GMS ORGANISATION

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Type	Organisation
Name	Living Reefs Foundation
Phone (Work)	[REDACTED]
Email	[REDACTED]
Website (Work)	[REDACTED]
Address	[REDACTED]

## Section 2 - Overseas Territory(ies)

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**Q3. Please state whether the same (or similar) project proposal has previously been submitted to the UK Government for funding, including through Darwin Plus Local, Defra's other Darwin Plus grant schemes or other UK Government funding mechanisms. Failure to do so may result in the application being ineligible.**

No

**Q4. 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.**

Bermuda

**\* 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 here and describe how they will benefit:**

The project provides direct long term benefits to other UKOTs and countries of the Wider Caribbean, by enabling the development of methods on conspecific corals applicable to the Region. By installing a highly technical coral spawning system managed by Bermuda scientists, in-depth research in the conditioning of parent colonies will be enabled and shared through presentations and peer-reviewed publications. Methodologies developed will be applicable beyond Bermuda and will especially benefit coral restoration practitioners in the Wider Caribbean.

## **Section 3 - Project Partners**

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

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

**Project Leader name (Guidance section 3.1):** Dr. Samia Sarkis

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**Lead Organisation name (if applying as an organisation; Guidance section 3.1):** Living Reefs Foundation

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**Lead Organisation Website (if applicable):** [www.livingreefs.org](http://www.livingreefs.org)

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**Is the Lead Organisation 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:**

Coral Spawning Lab,  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]

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

Living Reefs Foundation (LRF) will be responsible for the:

- overall management of the project including distribution of funds and adherence to workplan
- clear definition of the local needs and objectives planned for the new system to Coral Spawning Lab (CSL)
- provide detailed information to CSL on the allocated space and other structural components necessary for the installation and functioning of the new system
- prepare the existing hatchery for installation of the new system and ensure all system requirements are in place and functional.
- process administrative requirements in a timely fashion (including custom clearance, reporting to Darwin Plus Local).
- Keep Bermuda government officers engaged by demonstrating installed system at the end of the grant period

Coral Spawning Lab (CSL) will be responsible for:

- Production of drawings of system in-situ
- Procurement of equipment and pre-assemble
- Installation and testing the equipment on site
- Training LRF staff in ex situ broodstock conditioning and system management
- Preparation of an SOP for system management and ex situ spawn management


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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).**


 [CSL Letter of support](#)


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 [LRF Cover letter 2024](#)

 24/06/2024

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## Section 4 - Project Summary & Description

### Q6. Project Summary (Guidance section 3.8)

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

Bermuda's Living Reefs Foundation (LRF) partners with Coral Spawning Lab (CSL) to build the island's capacity in controlled spawning and culture of massive corals. Since 2018, LRF has focused on developing hatchery-based techniques for restoration. However, scaling up is limited by the current reliance on natural spawning events, subject to environmental factors. By manipulating key drivers in coral reproduction with CSL's system, LRF increases its capacity to produce a supply of juvenile corals for reef recovery and nature-based breakwater solutions.

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

**Please provide a description of your project, including:**

- the overall objective
- the current situation and the problem the project is trying to address
- what success will look like and how you will measure it.

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

Overall objective: To install a coral conditioning system which enables precise control of key environmental parameters for the reliable gametogenic development of parent colonies and the release of viable eggs/larvae producing a steady supply of corals for reef restoration.

Current situation: Coral researchers in Bermuda rely on the collection of coral larvae or gametes released during the natural spawning cycle occurring over a short 3-months time period in Bermuda's sub-tropical waters. Living Reefs' hatchery consists of an open seawater system with the capacity to hold parent colonies in ambient seawater and to culture larvae and spat. Parent colonies are transferred from the field to the hatchery 3-4 days prior to the expected spawning event, spawning ex situ is monitored and larvae or gametes released are collected for culture studies. Timing of natural spawning depends on environmental factors, namely seawater temperature; in Bermuda, successful gamete or larval release is correlated with seawater temperatures averaging 26.5°C during a full lunar cycle (dePutron and Smith, 2011). In 2023, a one-month delay in spawning was recorded for *Porites astreoides* by LRF scientists due to abnormally low seawater temperatures in May and June. Of greater concern was the absence of coral spawn slicks expected in August 2023, which form a conspicuous pink ribbon in the vicinity of reefs extending over several km seaward and consist of a mix of at least three coral species (Wyers, 1991). Both in situ and ex situ monitoring confirmed the absence of spawning for two reef-building species in August and September (*Pseudodiploria strigosa* and *Diploria labyrinthiformis*). This severely impacted laboratory-based research projects and coral spat production, and substantially reduced LRF's juvenile supply for restoration. The 2023 non-event was unexplained, and may be related to several factors, including temperature and high winds. Seawater temperatures exceeding optimal levels may affect planulation and known to correlate with fewer planulae larvae (dePutron and Smith, 2011); extended high winds disturb periods of calm weather which potentially inhibit gamete release (van Woessik, 2009).

The absence of natural spawning in 2023 highlights the increasing need to control environmental factors for successful recruitment in the face of unexpected changing weather patterns. This is even more critical in Bermuda's northern latitudes, where optimal seawater temperature for reproduction is a narrow window and must be optimised to enable yearly scientific studies for the advance in coral conservation and restoration

protocols. The Coral Spawning Lab (CSL) has designed an off the shelf broodstock conditioning system; installed in 12 countries, this system has demonstrated success in manipulating three main governing factors- seawater temperature, solar insulation and the lunar cycle - to generate several spawning events within one year and release viable gametes or larvae.

A successful project will result in the installation of an efficient compact coral conditioning system in the LRF hatchery and a Bermuda-based skillset to programme and manage it. It will fill the gap in current coral culture facilities by enabling the manipulation of three governing factors for complete planulation and gametogenesis and shift the diel cycle to carry out critical sampling during the day, greatly improving productivity by aquaculturists.

Success within the scope of the project will be measured by:

- New capacity to condition 2 species of massive coral and hold up to 24 colonies at any one time.
- Functioning of the system with respect to seasonal programming and resulting water quality verified.
- A standard operating manual for system management.
- Training of at least 1 LRF staff in system management

The system installation and training completed within the 6-months grant period builds new capacity to conduct coral conditioning and increases existing capacity in culturing spat.

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

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

This project is a first in Bermuda in establishing a controlled approach to spawning corals with the capacity to predictably induce spawning in captivity, and alter the diel cycle. It builds new capacity to conduct coral conditioning and increases the number of sexually-produced corals available for outplanting beyond this grant. Current efforts in investigating early life stages of corals to accelerate growth and maximise resilience prior to outplanting on the reef will be optimised through the reliable supply of gametes/larvae. LRF's operations will increase in efficiency; unlike in 2023, where 3 staff members were mobilised during one week for preparation and monitoring of a spawning event which did not occur.


In the long term, improving the capacity to reliably produce genetically diverse corals through land-based sexual propagation enables the implementation of coral restoration objectives identified in Bermuda's Marine Spatial Plan.


Beyond the scope of this project, LRF has core funding to implement a regular broodstock conditioning programme for the establishment of a continuous source of corals for restoration. In addition LRF and CSL plan to continue their collaboration and seek joint funds to assess growth biochemical and physiological requirements, relevant to the development of scalable culture techniques for spat production.


**(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:**

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 [LRF hatchery and CSL system details](#)

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 pdf 1.78 MB

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## Section 5 - Project Outcome(s)

## Q8. Project Outcome(s) (Guidance section 1.2)

Successful Darwin Plus Local projects must demonstrate measurable outcomes in at least one of the themes of Darwin Plus with a clear focus on biodiversity and the natural environment, either by the end of the project or soon after through a credible plan.

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

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

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

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Please tick which additional theme(s) of Darwin Plus your project contributes to (if relevant):

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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Unchecked **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.**

This project has a clear focus on improving biodiversity for Bermuda's coral reefs by:

- Enabling reliable supply of genetically diverse coral for massive species to enhance or restore coral cover on denuded and damaged reefs

In the long-term it is a tool to mitigate Climate change by:

- Providing a sustainable source of young corals to build nature-based breakwaters and safeguard the coastline and its key infrastructures against increased storm activity and strength.

Within 6 months, measurable outcomes are:

- New infrastructure for a coral conditioning and spawning system
- 1 trained LRF staff for long-term system operation

## Section 6 - Workplan





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## Q9. Workplan (Guidance section 2.2)

**Please provide anticipated dates for the start and end of your planned project here. Please use the Darwin Plus Local Project Workplan (available at: <https://darwinplus.org.uk/apply/local-applications/>) to provide a list of the individual activities you have planned for this project, a brief description of what each activity entails, and the months in which the activities will be carried out. If the project involves only one activity (e.g. a purchase), please still provide project start and end dates (noting estimated times for procurement). Please note that your project must start after 1 October 2024 and be completed by 31 March 2025.**

Start date:	End date:	Duration (e.g. 3 months):
01 October 2024	31 March 2025	6 months

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

-  [LRF R4 DPlus Local Implementation Timetable Template FINAL](#)
-  24/06/2024
-  17:28:51
-  pdf 111.99 KB

## Section 7 - Costs

### Q10. Costs (Guidance section 2.2 and please read the Finance Guidance)

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

**Are you seeking any matched funding for this project?**

Yes

**How much matched funding are you seeking and where from?**

In-kind contributions by LRF:

Dr. Sarkis - 2-weeks in-kind to prepare the hatchery and draft final report, based on monthly rate (@£[redacted] for a total of £[redacted]

Corporate Secretary- financial review, [redacted]

By CSL:

Dr. J. Craggs - reduced daily rate from £[redacted] to £[redacted] amounting to in-kind contribution of £[redacted] for a 7-day site visit and an additional 5 days in-kind for remote consultation (£[redacted])

Total matched in-kind funding: £[redacted]

Budget line	Explanation	Cost in GBP
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<b>Staff costs:</b>	<p>LRF's Dr. S. Sarkis: Project management, coordination and timely preparation and timely preparation and delivery of reports.</p> <p>a. Prepare Bermuda hatchery- allocate free space to coral spawning unit, adapt seawater system and lines for ease of connection</p> <p>b. Provide accurate dimensions and existing layout to CSL partner for suitable assembly of new coral unit</p> <p>c. Timely implementation of workplan and distribution of funds</p> <p>d. Complete necessary documentation for shipping and custom clearance and any other required regulatory documentation</p> <p>e. Manage budget and prepare final report</p> <p>f. Demonstrate new setup to Government officers</p>	£ [REDACTED]
<b>Consultancy costs:</b>	<p>Coral Spawning Lab (Dr. J. Craggs):</p> <p>a. Install unit on site</p> <p>b. Train LRF staff to programme and manage coral spawning unit on site</p> <p>Fees covered by this grant are for: A 7-day on site-period to install, test and train LRF staff</p>	£ [REDACTED]
<b>Overhead costs:</b>	<p>Overhead costs cover shipping expenses for a container estimated @18% of equipment cost purchased overseas. Price of equipment excluding VAT equals £29,727.50; this includes all equipment described in capital costs necessary to the assembly of the coral spawning system.</p>	£ [REDACTED]
<b>Travel &amp; subsistence costs:</b>	<p>One Coral Spawning Lab staff member (Dr. Jamie Craggs) will travel to Bermuda to install the coral spawning unit, test its good functioning and train LRF staff to programme and manage it.</p> <p>Costs cover:</p> <ul style="list-style-type: none"> <li>-Airport transfer from Sevenoaks to London Heathrow</li> <li>- One return flight London to Bermuda</li> <li>- Accommodation Bermuda 7-day visit</li> </ul>	£ [REDACTED]
<b>Operating costs:</b>	<p>Operating costs are for:</p> <ul style="list-style-type: none"> <li>- materials (pvc, electrical parts) to adapt current hatchery space and seawater system to CSL system</li> <li>- replace 2-sided wooden door to move existing tanks and new CSL system in and out of hatchery</li> <li>- additional wifi to monitor and track environmental controls on CSL system</li> </ul>	£ [REDACTED]

<b>Capital equipment:</b>	<p>Equipment details for coral spawning unit:</p> <ul style="list-style-type: none"> <li>1 Broodstock holding tank (1.9m x 0.6m x 0.35m);</li> <li>• 1 Filtration sump tank (1.6m x 0.6m x 0.38m)</li> <li>• 1 black out spawning tent</li> <li>• System microprocessor (Neptune systems apex bundle)</li> <li>• 2 energy bars for microprocessor</li> <li>• pH, redox and temperature probes</li> <li>• MXM wifi connection module</li> <li>• Lunar simulator module with x5 lunar LED's</li> <li>• Internal protein skimmer</li> <li>• Fluidised filtration media reactor</li> <li>• DC main drive pump</li> <li>• Reef aquarium lights EcoTech Radion Gen 6 and wavemakers</li> <li>• Refugium algae grow lights</li> <li>• Aquarium heaters, chiller, filter bags</li> </ul> <p>Includes VAT</p>	£ [REDACTED]
<b>Other Costs</b>	Not Applicable	£0.00
<b>Total:</b>		49,922.00

**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)**

Samia Sarkis is the hands-on hatchery manager in this project and will be responsible for the preparation of the hatchery, as well as the overall management of the project. She will dedicate 12 full days of payable time to the project. Her fee is based on a monthly rate of £ [REDACTED]

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

All of the equipment is purchased and fabricated overseas as there are no suppliers on Bermuda. This incurs high shipping costs which are based on expenses incurred for previous imports by LRF.

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

Flight from London to Bermuda averages [REDACTED] GBP. Airport transfer from Sevenoaks is estimated at 200 GBP. Accommodation is estimated at @£ [REDACTED]/night for 7 nights.

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

Not applicable

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

Coral spawning system cost of £ [REDACTED] includes 20% VAT, with the ex VAT cost of equipment being £ [REDACTED]

This turnkey system contains all the equipment (broodstock holding tank, filtration system, microprocessor, heaters, chiller, day light LED's, lunar simulator module and lunar LED's) required to reliably spawn broadcast coral species. This is a pre-assembled system, and materials and equipment used have been selected to provide a highly precise unit, which cannot be broken down to reduce costs. This system has been developed over a 12 year period and is successfully utilized by researchers all around the world to spawn corals.

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

Standard rates for consultancy services by Coral Spawning Lab (£█ GBP/day) are reduced to £█/day for this project.

7-day on site installation and training: £█

There is no capacity in Bermuda to simulate seasonal changes in seawater temperature, solar insolation and lunar cycles for conditioning of coral broodstock. The installation of a high technology unit requires external expertise. The consultancy provides value for money by building long-term capacity at LRF by installing the coral spawning system infrastructure, preparing an SOP and training on site. The additional capacity will scale up LRF's coral spat production for its restoration and coastal protection programme.

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

Not relevant

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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	1GBP:1.27USD	XE currency converter	17 June 2024

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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.**

Not relevant. Capital equipment consists of the majority of expenses and remains in Bermuda beyond the scope of this project.

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## Section 8 - Local and National Priorities

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### Q11. Local and national priorities

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

By developing scalable coral propagation tools, the project aligns with Bermuda's national priorities of coral conservation, coral restoration and blue tourism.

Coral restoration is explicitly named in Bermuda's new Marine Spatial Plan under two key goals: 1. Conservation and restoration of damaged and/or denuded coral reefs due to coastal development and boat groundings, and 2. Prioritising coral restoration in areas vulnerable to storm damage, based on the recognized \$250 million/year value of reefs as natural breakwaters. It is anticipated that well-tested procedures are needed to supply a





sustainable source of genetically diverse corals preserving the site's biodiversity and assisting its ecosystem's resilience. These techniques will also serve to expand the visiting experience on Living Reefs Foundation's unique 'Coral Gardens', recently flagged as a Blue Investment Project under Bermuda's Blue Economy Strategy.

The Department of Environment and Natural Resources has been a strong supporter of the Foundation's work since its inception, and gives its full approval to increasing capacity of the land-based hatchery facility. This project enables LRF to conduct in-depth research and production of corals with a state of the art infrastructure and independent of overseas expertise, to assist Bermuda's government in preserving and restoring its coral reefs.

**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.**

-  [DENR Letter - Living Reef Foundation - Darwin PI us Local - June 2024 - Signed](#)
-  24/06/2024
-  18:09:22
-  pdf 151.67 KB

## Section 9 - Project Risks

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### Q12. Project Risks

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

**Depending on your project, you may wish to consider:**

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

Risk

Mitigation

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CSL system does not fit in given space and is not installed properly due to inadequate plumbing and electrical configurations. Low risk	Accurate measurements and dimensions will be taken by S. Sarkis of the allocated space and surrounding environments (doors, hallways) for installation capacity and communicated to CSL Layout of CSL system will be drawn prior to ordering on sketch out to confirm proper fitting by J. Craggs Electrical needs and seawater pumping capacity will be provided by CSL and verified locally by S. Sarkis.
No Biosecurity risks. No live material is imported.	Seawater and corals used in the system are native. All equipment for the coral spawning system has been previously tested for coral culture, and there are no potentially toxic materials imported.
No Safeguarding risks.	The CSL system is a compact well-tested system, safe to use by all researchers utilising the LRF hatchery. This includes university students, mature technicians and research scientists. The hatchery is not open to the public.

**Do you require more fields?**

Yes

Risk	Mitigation
Risk of corals not spawning in the new CSL system. Low risk	It is highly unlikely that corals conditioned in the new CSL system do not spawn. To date the CSL system has been used for 50 coral species native to the Caribbean , Red Sea and Indo-Pacific; all have been reported to spawn using the same system. LRF has been spawning massive species collected from Bermuda reefs in the hatchery since 2018, resulting in an 85% larval settlement rate and rearing of sexually-produced corals for a 2-year period prior to transfer to LRF's ocean-based nursery.
<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: <https://darwinplus.org.uk/apply/local-applications/>).
- 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:** Samia Sarkis

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**Position in the organisation: (if applicable)** Living Reefs Foundation

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Signature (please upload e-signature)  [Signature Sarkis](#)  
 24/06/2024  
 18:18:00  
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Date: 24 June 2024

## 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 (found at: <a href="https://darwinplus.org.uk/apply/local-applications/">https://darwinplus.org.uk/apply/local-applications/</a> ) for this fund.	Checked
I have provided actual start and end dates for my project that fit this Round.	Checked
I have provided my summary budget based on UK government financial years i.e. 1 April – 31 March and in GBP in the application form.	Checked
I have uploaded my project workplan using the specific template provided (available at: <a href="https://darwinplus.org.uk/apply/local-applications/">https://darwinplus.org.uk/apply/local-applications/</a> ).	Checked
I have uploaded all supplementary documents if I have any.	Checked
(If copying and pasting into Flexi-Grant) I have checked that all my responses have been successfully copied into the online application form.	Unchecked
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).



Project Title:

## 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. Round 4 is for a **maximum of 6 months** with activities starting from 1 October 2024. All activities must be completed by 31 March 2025.

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 2024/25						
			Calendar Year 2024			Calendar Year 2025			
			Oct	Nov	Dec	Jan	Feb	Mar	
1	Identification and preparation of hatchery needs for adaptation to CSL system	1							
2	Order of CSL equipment and materials system	0.5							
3	Assembly CSL	2							
4	Shipping CSL to Bermuda and clearing customs	0.5							
5	Installation of CSL on site (LRF hatchery, Bermuda)	0.25							
6	Commissioning and testing of CSL on site (seasonal programming, water flow, temperature control)	0.25							
7	Final Report	0.5							
8	Demonstration of system to Government officers	0.1							

Handwritten signature or scribble, possibly reading "R. M. 10/12".