

DPLR2\1041

Demonstrating Adaptation and Sustainability at the Montserrat National Trust's Botanical Gardens

Longer drier periods and frequent, intense natural disasters will require adaptation if the ambitions to protect native wildlife and food security are to be realised on Montserrat. Montserrat National Trust can bring together the community to empower itself through the demonstration of irrigation systems based on climate adaptation techniques with the introduction of interpretation boards, and appropriate descriptions and labelling of plant fauna throughout the Botanical Garden, to increase local knowledge of the islands flora and adaptation to the changing environment.

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Section 1 - Project Title & Contact Details

Q1. Project Title

Demonstrating Adaptation and Sustainability at the Montserrat National Trust's Botanical Gardens

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

Organisation

PRIMARY APPLICANT DETAILS

Name	Delmaude
Surname	Ryan
Organisation	Montserrat National Trust
Website (Work)	[REDACTED]
Tel (Work)	[REDACTED]
Email (Work)	[REDACTED]
Address	[REDACTED]

CONTACT DETAILS

Title Mrs
Name Sarita
Surname Francis
Organisation Montserrat National Trust
Website (Work) [REDACTED]
Tel (Work) [REDACTED]
Tel (Fax) [REDACTED]
Email (Work) [REDACTED]
Address [REDACTED]

GMS ORGANISATION

Type	Organisation
Name	Montserrat National Trust
Phone (Work)	[REDACTED]
Email (Work)	[REDACTED]
Website	[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):	Delmaude C Ryan
Lead Partner name (if applying as an organisation; Guidance section 3.1):	Montserrat nNational Trust
Lead Partner Website (if applicable):	http://www.montserratnationaltrust.ms
Is the Lead Partner based in a UKOT where the project is working (Guidance section 3.1)?	<input checked="" type="radio"/> Yes
List other partners involved and where are they based (Guidance section 3.2):	Department of Agriculture, Montserat United Kindon Conservation Forum, UK

The Montserrat National Trust is the lead partner responsible for overall project implementation and management, financial management, reporting, and general administration of the project. The major components of the project will be undertaken by MNT's team which includes: MNT's Conservation Officer, Junior Conservation Officer, MNT's Trail & Garden staff, and interns, with oversight by the Project Officer

MNT takes a participatory approach to its' work. It has the capacity to deliver the project entirely.

Director of MNT, Mrs Sarita Francis will have overall oversight of the project supported by implementing senior officer Mrs Delmaude Ryan. Senior Conservation Officer, Chris Sealys, will be responsible for day-to-day running of the project including procurement, installation and liaising with contractors within the botanic garden. Chris will be responsible for keeping all records which will be fed back to the Finance team and for ensuring the project is on time and on budget.

The MNT will seek advice from Extension Officers from within the Ministry of Agriculture, Land, Housing and Environment. They have implemented similar irrigation systems on private farms on Montserrat.

MNT works well with the Farmers Association, with the Head represented on MNT's Council. Expertise will be made available when requested.


UKOTF has been a longtime external project partner and will provide support on designs and of interpretation boards for irrigation. rainwater harvesting, sustainable farming techniques and with publication.


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


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).

 [MNT Cover Letter- Darwin Plus Local-R2- Demonstrating Adaptation and Sustainability at the Montserrat National Trust](#)

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 [Demonstrating adaptation and sustainability \(1\)](#)

 27/06/2023

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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.

Longer drier periods and frequent, intense natural disasters will require adaptation if the ambitions to protect native wildlife and food security are to be realised on Montserrat. Montserrat National Trust can bring together the community to empower itself through the demonstration of irrigation systems based on climate adaptation techniques with the introduction of interpretation boards, and appropriate descriptions and labelling of plant fauna throughout the Botanical Garden, to increase local knowledge of the islands flora and adaptation to the changing environment.

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?

In 1995, the threat of Montserrat biodiversity was significantly impacted by the start of eruptions over a 15 year period, of continuous ash venting, impacting all of the vegetation on Montserrat. Two-thirds of the island was declared an exclusion zone, rendering it uninhabitable. The need to understand the changes this made to the islands flora became important and protecting native flora (including endemic species) became urgent.

In 2001, in partnership with the Royal Botanic Gardens Kew, in the UK, the vision of a botanical garden was conceived and its establishment became a reality in 2002. Over the years, this has become the epicentre for information on the island's flora, with a garden covering 80,000 sqft. Five areas; depicting the Centre Hills, a Palm Walk, Economic Plants, an Orchid House and the Medicinal plants were the core elements of the botanical garden at its commissioning, starting with 101 plant species.

More recently, the garden has evolved to accommodate 3 additional sections namely, a creole garden which depicts the cultural heritage of a typical yard in Montserrat demonstrating food security through traditional garden techniques, along with the inclusion of an Air plant house and a Cacti Garden. There are currently 207 plant species housed at the Botanical Gardens. The Garden facilitates the preservation of our unique biodiversity through the propagation of plants (currently through DPL155) and the expansion of the medicinal garden section (on DPLUS192). The garden has created a haven for several near threatened reptile species such as, the Montserrat Ground Lizard, and the endemic Montserrat Anole. Several bird species to include an occasional visit by the Montserrat Oriole, also makes the garden an exciting place for visitors.

Following the COVID-19 pandemic, the garden has now become a centre of learning for visitors and the local community alike with some persons taking a gentle stroll independent of a tour guide, which does not provide the same visitor and learning experience. The garden is also frequented by persons of different abilities including those in wheel chairs, who are limited in areas of the garden that they can visit.

Over the years with the growth and expansion on the offerings at the Botanical Gardens the flora has also

been added or replaced, however the matching signage and interpretations have been missing. The wealth of the knowledge of the garden is lost to those who do not have the opportunity to walk through with a tour guide; this disadvantages those who wish to learn at their own pace. With the earlier onset of the dry season in 2023, it has become more urgent to implement additional irrigation systems to maintain the newer areas of the garden that are outside of the reach of the existing rainwater harvesting solar powered irrigation system. The Trust has explored ways to adapt to the aggressive dry spells while reducing its carbon footprint by utilising an irrigation system powered by solar energy that pumps water from a rain water catchment area.

This project will build on this principle of climate adaptation by expanding the reach of the irrigation system to the areas of the garden that has no direct water source. It will create a permanent demonstration site for the farming community with the implementation of less used irrigation techniques. It will improve walk-way surfaces to protect passage of visitors through the garden and improve access for those less able [wheelchair access], and enable complete signage and interpretation boards that are UV resistant along with the publication of a new trail map to depict the established layout of the garden.

Q6b. Long-term sustainability (Guidance section 2.1 and 6)





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



The project aims to support livelihoods for those poorest in society and struggling with the raising costs of living as well as changing environmental conditions. This permanent exhibit will demonstrate techniques and practices in water harvesting and irrigation in our quest to adapting to changing conditions. The system will be buried underground to prevent evaporation and target plants root systems and protected from the wind and exposed to the elements. This technique is not being widely used across the island and interpretation boards will explain the system being used and is intended to influence how new systems can lead to impactful results. In this case, year round year-round food production at low/minimal cost.





A new management and maintenance plan for the Botanical Garden will allow for regular upkeep of the Garden infrastructure. Garden staff will maintain the irrigation system and ensure that interpretation signage is packed away during heavier storms to prevent damage.





The irrigation system will reduce utility cost to the Montserrat National Trust as it will be more efficient. Efficiency savings can be used in protecting Montserrat's unique biodiversity where it is needed. These savings can be explained to the community also by linking this with local food production.





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

 [Original MNT Botanic Garden Plan-2002](#)
 27/06/2023
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 pdf 278.96 KB

 [R2-DPlus-Local-Application-UKOTCF Support Letter](#)
 27/06/2023
 00:34:28
 pdf 123.24 KB

 [Agriculture Lettter of Support](#)
 27/06/2023
 00:34:07
 pdf 174.85 KB

 [Agriculture letter of support-pg 2](#)
 27/06/2023
 00:34:06
 pdf 17.92 KB

 [MNT Botanic Garden-Current](#)
 27/06/2023
 00:16:12
 pdf 2.58 MB

Section 5 - Project Outcome(s)

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

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

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

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

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

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

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.

Increase in climatic changes affect the ability of the botanic garden to demonstrate horticulture and conservation of Montserrat's flora. In the short-term it will address issue of water availability in the longer term, it will address Montserrat's overall adaptation to the 'new normal'.

The creole garden area displays common crops. The project will build capacity locally in adaptation as the irrigation will serve as a model for the community of 'backyard gardeners' and farmers and encourage them to adopt best practices that can have positive outcomes for their livelihoods.

Signage will improve quality of information and better independent learning space.


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: <https://darwinplus.org.uk/apply>) 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 be completed by 31 March 2024.


Start date:	End date:	Duration (e.g. 3 months):
01 October 2023	31 March 2024	6 months

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

 [R2 DPlus Local Implementation Timetable - Demonstrating Adaptation and sustainability at the Montserrat National Trust Botanical Gardens VS](#)

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Section 7 - Costs

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

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

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

No

Budget line	Explanation	Cost in GBP
Staff costs:		
Consultancy costs:		

Overhead costs:	
Travel & subsistence costs:	
Operating costs:	
Capital equipment:	
Other Costs	
Total:	44,988.00

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)

Cost of two interns for 6 months to include liability cost , to assist with documentation, creation and implementation of signs for flora across the garden as well as assist with content for interpretation boards.

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

Covers administrative cost for managing contracts, providing stationery and use of equipment, financial management and telecommunication services

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

No Response

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

Implementation of polls and levelling of walkways to include flagstones and paved walk way to new sections
Paving of entrances to garden sections to accommodate smooth traversing of the gardens.

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

Procuring signs and Irrigation system

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

Consultanty servicecs for the design of Map and interpretation and design of irrigation system and layout

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:
XCD	3.4379	www.echangerate.org.uk	25 June 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?



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

No Response

Section 8 - Local and National Priorities

Q10. Local and national priorities

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

Montserrat's Conservation & Environmental Management Act (2014)

The Department of Environment will be supported to carry out its duties under the Act.

Montserrat's AGRICULTURAL STRATEGY AND MARKETING PLAN (ASMP) FOR MONTSERRAT 2016-21 aim to improve food security.

Montserrat's National Climate Change Policy & Action Plan for Montserrat (DRAFT) Under "Food security and nutrition" 6.11 • Explore synergies with other sectors to develop innovative agricultural programmes that support economic diversification and promote enhanced natural resource management, including via agro-forestry, agro-tourism and food and fish festivals.

Montserrat's National Cultural Policy recognising the need to preserve traditional knowledge particularly on food and food production relating to cultural heritage.

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

No

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
Child safeguarding The project will involve youth ages 14 +	All staff and volunteers of the MNT must sign a child safeguarding policy and abide by that policy in the interaction with youths. No youth is left in the presence of one Adult only. Regular workshops are undertaken on child safeguarding matters as part of the Trust's employment policy. Staff is trained in basic first aid and first aid supply present at all activities.
Storm and Hurricane Risk - The implementation of signs and levelling of walkways will be undertaken during the Hurricane season	The hurricane season begins in June and ends in November. Some flexibility is included in construction time for pathway and signage implementation to factor in heavy rains or hurricane conditions. Material on site will be secured at MNT headquarters where possible. Large signs and interpretation boards will be removed and stored during heavy stormy conditons
<i>No Response</i>	<i>No Response</i>

Do you require more fields?

No

Section 10 - Terms & Conditions

Q12. Terms and conditions (Guidance section 3.10)

By applying for Darwin Plus Local you are adhering in full to the grant Terms and Conditions in full (available at: <https://dplus.darwininitiative.org.uk/apply> and as referenced in the Guidance at section

3.10). For information, the Terms and Conditions include requirements for all applicants to (amongst other requirements as per the full Terms and Conditions):

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

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

Checked

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>).
- 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: Sarita Francis

**Position in the organisation:
(if applicable)** Executive Director

Signature (please upload e-signature)  IMG 1038
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Date: 26 June 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.	Unchecked
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
(If copying and pasting into Flexi-Grant) I have checked that all my responses have been successfully copied into the online application form.	Checked
The application has been signed by a suitably authorised individual (clear electronic or scanned signatures are acceptable).	Checked
I have checked the Darwin Plus website immediately prior to submission to ensure there are no late updates.	Checked
I have read and understood the Privacy Notice on the Darwin Plus website.	Checked

We would like to keep in touch!

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

Unchecked

Data protection and use of personal data

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

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

Project Title: MNT- Demonstrating Adaptation and Sustainability at Montserrat National Trust Botanical Gardens

Darwin Plus Local R2

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 mid UK Financial Years (**1 October – 31 March**)- therefore starts October 2023).

Activity #	Description (max 25 words)	No. of months	Calendar Year 2023/2024					
			Oct	Nov	Dec	Jan	Feb	Mar
1	Mapping of Botanical Garden Trail with assistance from Government of Montserrat’s GIS Unit		x	x				
2	Draft Trail map of garden (including areas which are to be developed under complimentary but separate work e.g. medicinal garden) and Commission draft for development and printing		x	X				
3	Prepare list of plants to be displayed and interpretation information gathered and prepared		X	X				
4	Design Signs for Garden Section heads		X	X				
5	Design plant signage for individual plants		X	X	X			
6	Commission printing of signs					X	X	
7	Installation of poles for signs						X	X
8	Installation of signage						X	X
9	Procurement of irrigation system		X					
10	Installation of irrigation equipment			X	X			
11	Paving and repairs of walkways					X	X	
12	Launch of irrigated garden and newly redesigned garden							X