

# DPLR4\1041

Darwin Plus Local - Final Report (1)

Officer: Linzi Ogden

## Section 1 - Darwin Plus Local Project Information (Essential)

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### Project Reference Number

DPL00114

### Q1. Project Title

*No Response*

### Overseas Territory(ies)

☒ Montserrat

### Lead Organisation or Individual

Daphne S Cassell

### Partner Organisation(s)

Department of Environment, Ministry of Lands, Housing and the Environment, Government of Montserrat, Brades, MONTSERRAT and Montserrat National Trust, Salem, MONTSERRAT

### Value of Darwin Plus Local Grant Award

£19,919.00

### Project Start Date

01 November 2024

### Project End Date

30 April 2025

### Project Leader Name

Daphne S Cassell

### Project Website/Twitter/Blog etc.

*No Response*

### Report Author(s)

Report Date

30 April 2025

Project Summary

No Response

Project Outcomes

Checked	<b>Biodiversity: improving and conserving biodiversity, and slowing or reversing biodiversity loss and degradation;</b>
Checked	<b>Climate Change: responding to, mitigating and adapting to climate change and its effects on the natural environment and local communities;</b>
Checked	<b>Environmental quality: improving the condition and protection of the natural environment;</b>
Checked	<b>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.</b>

Section 2 - Project Outcomes (Essential)

On a scale of 1 (high – outcome substantially exceeded ) to 5 (low – outcome substantially did not meet expectation ), how successful do you think your project has been?

☒ 1 - Outcome substantially exceeded

Project outcomes and justification for rating above

- (i)  
Custom designed production system for systematic propagation of at least five (5) endemic and native plants. The production system includes Epidendrum montserratense and Rondeletia buxifolia which are listed as critically endangered on the IUCN red list. Guaiacum officinale is endangered according to this list. The production of these plants in a sheltered environment with the view toward returning some to the wild demonstrates conservation planning and ensures that negative impacts on biodiversity and climate change are reduced thus promoting sustainable production.
- Compilation of resources materials and information for dissemination through multiple channels and at promotional events. This enhances local appreciation of native species and their role in ecosystem functioning, thus encouraging sustainability of the island’s natural resources.
- Established source for distribution of seeds and propagation plants of natives and endemics.

(ii)

Sustainable propagation of natives

Yes. The collaboration with the Department of Environment continued, with the donation of 432 seeds to the seed bank during the 2-week window from October 16 to November 1, 2024.

Additionally, 171+ seedlings were propagated during the 6-month project period. The Department of Environment has indicated its interest in post-project transplanting of a reasonable number of *Lignum vitae* seedlings in greenspaces and afforestation initiatives on island.

Two Pribby hedges of 27 feet [replacement for a 20+ year old invasive ficus hedge - see Appendix B1] and 25 feet long were installed to form stock for propagation of this endemic hedging material.

A collection of five (5) species of endemic and native orchids were sourced and planted for propagation. Samples from this collection will be returned to the wild by the Department of Environment, in due course.

Outreach and Education initiatives

Promotion of *Lignum vitae* plant was done at Market Day on March 7, 2025 celebrating International Women Day and at St Patrick's Festival Market Day on March 14, 2025. The Fact Sheet conveying information on conservation status, physical characteristics and uses of *Lignum vitae* was launched in printed and digital forms. Refer to link for published/online material for details in Fact Sheet. Also provided as supporting evidence is an audio recording of a Journalist who relocated from the St Patrick's, the southern part of the island due to volcanic eruptions and the exhilaration to learn that the *Lignum vitae* plant was being propagated as a conservation initiative [Appendix C2].


A Project Infrastructure Completion Ceremony was successfully hosted on April 29, 2025 to mark the commissioning of the sustainable production system for endemic and native plants. Branded product (see image at Appendix C4) were also distributed to guests.


(iii) The recommendation in the feedback letter was embraced to formalize safeguarding arrangements. A safeguarding policy for youth and vulnerable persons was developed and introduced. A copy of the policy is attached as Appendix C1.


## Supporting Evidence - file(s) upload

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 [DPL00114 - A2 - Construction stages](#)


 30/04/2025


 18:00:38


 pdf 3.55 MB

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 [DPL00114 - B4 - Pribby, Lignum vitae and Orchids](#)


 30/04/2025


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 [DPL00114 - C3 - Presentation at project completion activity](#)


 30/04/2025


 02:02:07


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 [DPL00114 - C4 - Programme and Guests at Project Completion Ceremony](#)


 30/04/2025


 02:01:59


 pdf 1.36 MB

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 [DPL00114 - C1 - Safeguarding Policy](#)


 27/04/2025


 20:44:57


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 [DPL00114 - B3 - Mature Guaiacum officinale \(Lignum vitae\) in fluorescence](#)


 21/04/2025

 16:07:02


 jpg 18.54 MB

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 [DPL00114 - B2 - Guaiacum officinale \(Lignum vitae\) - Fruit, Seeds and Seedlings](#)


 21/04/2025


 16:06:44


 pdf 2.97 MB

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 [DPL00114 - C2 - Media recording on Lignum vitae at Market Day for International Women's Day](#)

 21/04/2025

 16:06:40


 mp3 1.93 MB

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 [DPL00114 - B1 - Invasive Ficus Hedge replaced by Native Pribby Hedge](#)

 21/04/2025


 16:06:38

 pdf 476.03 KB

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 [DPL00114 - A1 - Old nursery infrastructure](#)

 21/04/2025

 16:06:37

 pdf 467.69 KB

## Supporting Evidence - links to published document/online materials

### Project Challenges

The challenges experienced related to:

- (i) delays in shipping, given that the water pump kit was sent from the supplier in multiple packages, rather than a single one, and;
- (ii) shortage of material locally for timely completion of the production of plant benches.

Constant follow-up with the freight forwarder in Miami by email and telephone, along with early preparation of documentation for completing customs processing for clearing materials.

### Lessons Learned

- i) Project co-ordination and budget monitoring worked well. The retention of dedicated resource to perform project management responsibilities, ensuring that project specifications were met by the Tradesman and workers.

An electronic spreadsheet was maintained for tracking of expenses and reconciliation of project funds.

ii) The main challenges related to supply issues due to shipping delays and material shortage locally, which resulted in lag with installation of the water pump and completion of the shade structure.

iii) Earlier procurement of materials, as far as is practicable and stockpiling of materials if secure storage is available.

(iv) As it pertains to the care of seedlings and plant material, to solicit technical visits and support from other experts, for tips on growing conditions and local knowledge and overall sharing of best practice.

### Section 3 - Project Finance (Essential)

#### Project Expenditure

Project Spend (indicative) since last Annual Report	2023/24 Grant (£)	2023/24 Total actual Darwin Plus Costs (£)	Variance %	Comments (please explain significant variances)
Staff Costs				
Consultancy Costs				
Overhead Costs				
Travel and Subsistence				
Operating Costs				
Capital Items				

Others			
Total	19,919.00	20,322.00	2.02

## Please provide a short narrative summary on project finances.

(i) The difference of 2% was actual project funds received based on exchange rate from sterling to Eastern Caribbean dollars. An amount of 24 sterling remains on account to cover bank charges for April and May 2025, until receipt of remaining funds to close-off the account.

(ii) No co-financing was secured for the project.

However, in-kind contributions were accessed, including:

(a) Technical advice on:

- plant care from Department of Environment and
- water sprinklers from the Montserrat National Trust;

(b) use of concrete mixer, and scrap building materials for construction of bases for shade structure and water tank.

## Section 4 - Contribution of Project to Darwin Plus Programme Objectives

Please select up to **one** indicator that applies within **each group/indicator list (A, B, C, D)** and report your results for that indicator in the text box underneath. If you do not have relevant results to report for any of the indicators in a particular group, you can leave them blank.

Please also submit some form of evidence (above) to demonstrate any results you list below, where possible.

### Group A: Capability and Capacity - Core Darwin Plus Standard Indicators (select one)

Unchecked **DPLUS-A01: Number of people from key national and local stakeholder groups completing structured and relevant training.**

Unchecked	<b>DPLUS-A02: Number of secondments or placements completed by individuals of key local and national stakeholders.</b>
Checked	<b>DPLUS-A03: Number of local/national organisations with improved capability and capacity as a result of project.</b>
Unchecked	<b>DPLUS-A04: Number of people reporting that they are applying new capabilities (skills and knowledge) 6 (or more) months after training.</b>
Unchecked	<b>DPLUS-A05: Number of trainers trained reporting to have delivered further training by the end of the project.</b>

## Group A Indicator Results

The implementation of this project has now formalized the working collaboration with both the Department of Environment and the Montserrat National Trust to progress conservation initiatives.

## Group B: Policies, Practices and Management- Core Darwin Plus Standard Indicators (select one)

Unchecked	<b>DPLUS-B01: Number of new/improved habitat management plans available and endorsed.</b>
Checked	<b>DPLUS-B02: Number of new/improved species management plans available and endorsed.</b>
Unchecked	<b>DPLUS-B03: Number of new/improved community management plans available and endorsed.</b>
Unchecked	<b>DPLUS-B04: Number of new/improved sustainable enterprises/ community benefits management plans available and endorsed.</b>
Unchecked	<b>DPLUS-B05: Number of people with increased participation in local communities / local management organisations (i.e., participation in Governance/citizen engagement).</b>
Unchecked	<b>DPLUS-B06: Number of Local Stakeholders and Local Communities (people) with strengthened (recognised/clarified) tenure and/or rights.</b>

## Group B Indicator Results

The inclusion of QR code to transmit knowledge is a creative way that was utilized in outreach initiatives. Additionally, the recognition of safeguarding and developing a policy is another element that would be useful for inclusion in any habitat or species management plan.

## Group C: Evidence and Best Practices - Core Darwin Plus Standard Indicators (select one)

Checked	<b>DPLUS-C01: Number of best practice guides and knowledge products published and endorsed.</b>
Unchecked	<b>DPLUS-C02: Number of new conservation or species stock assessments published.</b>
Unchecked	<b>DPLUS-C03: New assessments of habitat conservation action needs published.</b>
Unchecked	<b>DPLUS-C04: New assessments of community use of biodiversity resources published.</b>
Unchecked	<b>DPLUS-C05: Number of projects contributing data, insights, and case studies to national Multilateral Environmental Agreements (MEAs) related reporting processes and calls for evidence.</b>

## Group C Indicator Results

A Fact Sheet was prepared and disseminated to promulgate scientific information and uses of Lignum vitae. Refer to link for published/online material. Additionally, two (2) audio recordings emanating from promotions were channeled on the territory's sole radio station and its online platforms.

## Group D: Sustainable Benefits to People, Biodiversity and Climate - Core Darwin Plus Standard Indicators (select one)

Unchecked	<b>DPLUS-D01 Hectares of habitat under sustainable management practices.</b>
Checked	<b>DPLUS-D02: Number of people whose disaster/climate resilience has been improved.</b>
Unchecked	<b>DPLUS-D03: Number of policies with biodiversity provisions that have been enacted or amended.</b>

## Group D Indicator Results

As part of the work activities of the Department of Environment, Lignum Vitae will be planted in greenspaces across the island and the Montserrat orchid in suitable wild settings. These initiatives benefit the entire Montserrat community, contributing to biodiversity conservation and integrate climate considerations into agroforestry and forest management initiatives.

## Section 5 - Project Partnerships, Wider Impacts and Contributions

### Project Partnerships

i) Both project partners, namely the Department of Environment and the Montserrat National Trust were involved from the project conceptualization stage, to review the concept and to provide guidance on tailoring certain aspects of the project.

In addition, the project partners carried out progress checks to ascertain of any bottlenecks in implementation.

Pribby plants for the establishment of hedges and literature on natives and endemics were sourced from the



Montserrat National Trust.

ii) Yes, the Department of Environment as a project partner is an entity of Government. More specifically, the Department carried out a plant inspection and was consulted to provide technical input on nutrients for stimulating growth of *Lignum vitae* seedlings and Pribby hedges.

Also, as usual support to farmers, the Irrigation Technician from the Department of Agriculture installed the water sprinkler system.

Legislation and policies on safeguarding were provided by the Social Services department.

iii) One achievement/strength is the potential to expand the collaboration between the strategic partners. The Department of Environment will be sourcing *Lignum Vitae* seedlings propagated under the project to plant in agroforestry and reforestation initiatives.

The Department will continue to source seeds from the mature *Lignum Vitae* tree for storage in its seed bank and donation of seeds will now be extended to the Montserrat National Trust

iv) The local community was involved during the awareness and information dissemination at the two (2) Market Days and teachers and students from Montserrat Secondary School at Project Infrastructure Completion Ceremony.

## Wider Impacts and Decision Making

Discussions with the Department of Environment reveals that the project has reinforced the importance of conserving and building resilience in the native and endemic tree population. It has also introduced creativity into the generation of awareness of the island's natural resources with the inclusion of QR codes in the delivery and building of knowledge at the community level of biodiversity on island. This will aid compliance with initiatives to preserve natives and endemics.

## Sustainability and Legacy

Yes, the sustainable production system will provide the platform for the ongoing maintenance and propagation of the plant material [endemics and natives] gathered during the 6-month duration of the project. Also, it is evident that 350+ seeds and 150+ seedlings can be harvested annually from the mature *Lignum vitae* plant. Therefore, in collaboration with the Department of Environment and the Montserrat National Trust, these plant material will be used in afforestation and reforestation initiatives put on by these agencies.

Additionally, the plant nursery has been equipped to facilitate education and awareness sessions. In particular, a Plant Nursery Tour concept was spawned to offer guided tours to learn about endemics and native plants, under the branding "Nature's Treasures – A Botanical Escape".

Visits by children and community will enhance understanding of native trees and foster sensitivity to and knowledge of biological diversity and conservation for years to come.

## Section 6 - Communications & Publicity

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### Exceptional Outcomes and Achievements

A sustainable sheltered horticulture production system for endemics and natives

Over the years a number of studies were conducted on biodiversity and natural environments on Montserrat with the view towards investigating, developing, enhancing and maintaining functional habitats and assemblages of species in the varied ecosystems on island. From a few of the studies conducted, there is evidence that selected endemic and native flora have declined overtime, due to a combination of factors inter alia impact from volcanic fallout, pests and development pressures.

The project's objective was to construct a 576 sq ft horticulture production system [climate resilient materials and an integrated solar-powered irrigation system] for the propagation of endemics and natives. It employed QR technology and other engaging interactions at the community level as conduits through which individuals can be educated on endemic and native plants of Montserrat. The endemic plant focus was the *Epidendrum montserratense* (Montserrat orchid) and the *Rondeletia buxifolia* (Pribby) while the native plant selected for propagation was the *Guaiaacum officinale* (Lignum vitae). These endemic and native plants are listed (respectively) as critically endangered and endangered on the IUCN red List thus highlighting the need for conservation efforts to be directed towards them.

The Project Infrastructure Completion Activity took place on April 29, 2025, as evidenced in photo with the Honourable Minister (Acting) with responsibility for Agriculture, Environment and Youth Affairs, Executive Secretary of the Montserrat National Trust, Director of Environment, and Project Lead. Thirty-nine (39) individuals including teachers and students from the Montserrat Secondary School toured the production system and expressed their increased awareness of and eagerness to learn more about the endemic and native plants of Montserrat.

The platform has been set for fostering sensitivity to and deepening of knowledge of biological diversity and conservation, through:


- (i) strategic partnerships with institutions and/or individuals in the implementation of biodiversity programmes, and;
- (ii) educational opportunities /learning visits for school children, youth, conservationists and the local community to enhance their understanding of endemic and native trees.


Appreciation is conveyed to the Darwin Plus Local scheme for the injection of grant funding to realize the project outputs, the Montserrat National Trust for literature on endemics and natives, the Departments of Environment, Agriculture and Social Services for professional inputs, the project work teams for their expert knowledge and diligence and the local community for their general interest in conservation efforts.


## **Photo, video or graphic to be used for publicity and communications.**


**Please upload at least one relevant and engaging image, video or graphic that you consent to be used alongside the above text in Defra, JNCC or NIRAS communications material.**

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 [DPL00114 - Photo of Lignum vitae seedlings \(project output\) - Montserrat - Doron Cassell](#)


 30/04/2025


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 [DPL00114 - Hon Acting Minister and Officials - Montserrat - Winston Kafu Cabey](#)


 30/04/2025


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 [DPL00114 - QR Code for Lignum vitae Fact Sheet - Montserrat - Daphne Cassell](#)

 30/04/2025

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## Photo, video, and/or graphic captions and credits.

- DPL00114 - Honourable Minister (Acting) with responsibility for Agriculture, Environment and Youth Affairs, Strategic Partners from Montserrat National Trust & Department of Environment and Project Lead at Project Completion Ceremony on April 29, 2025 - Montserrat - Winston "Kafu" Cabey

From left to right - Ernestine Corbett, Director of Environment; Hon Dwayne Hixon, Minister (Acting); Daphne Cassell, Project Lead; Sarita Francis, Executive Director, Montserrat National Trust

- DPL00114 - Collection of Lignum vitae seedlings as project output - Montserrat - Doron W Cassell

- DPL00114 - QR code - Lignum vitae Fact Sheet - Montserrat - Daphne S Cassell

## I agree for the Biodiversity Challenge Funds Secretariat, Administrator, and/or JNCC to publish the content of this section.

☒ Yes, I agree for the BCFs Secretariat and/or JNCC to publish the content of this section.

Please list any accounts that you would like tagged in online posts here. This can include project pages, partners' pages or individuals' accounts for any of the following platforms: LinkedIn, Facebook, Twitter, or Instagram.

[www.montserratnationaltrust.ms](http://www.montserratnationaltrust.ms)

<https://www.facebook.com/MontserratNationalTrust>

<https://www.facebook.com/MNIMALHE>

<https://www.facebook.com/MNISpirit>

## Section 7 - Darwin Plus Contacts

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Please tick here to confirm that you have read and acknowledge the BCF's Privacy Notice on how contact details will be used and stored and that you have sought agreement from anyone that you are sharing personal details with us on their behalf.

☒ I confirm I have read the Privacy Notice and have consent to share the following contact details

## Project Contact Details

Project Contact Name	Daphne S Cassell
Role within Darwin Plus Project	Project Lead
Email	
Phone	
Do you need further sections to provide additional contact details?	<input checked="" type="radio"/> No