

DPLR3\1039

Darwin Plus Local - Final Report (1)

Officer: Linzi Ogden

Section 1 - Darwin Plus Local Project Information (Essential)

Project Reference Number

DPLR3\1039 Pirate Cove Shoreline restoration

Q1. Project Title

No Response

Overseas Territory(ies)

☒ Cayman Islands

Lead Organisation or Individual

Sustainable Cayman

Partner Organisation(s)

Caribbean Blooms / Sustainable Cayman

Value of Darwin Plus Local Grant Award

£20,000.00

Project Start Date

01 April 2024

Project End Date

30 April 2025

Project Leader Name

Melanie Carmichael

Project Website/Twitter/Blog etc.

<https://sustainablecayman.org/pirate-cove-nature-park>

Report Author(s)

Report Date

30 April 2025

Project Summary

No Response

Project Outcomes

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;
Unchecked	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.

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

The project has exceeded all my expectations.



The shoreline has survived all 2024 hurricanes and the plants have survived dry season.

I have noticed a growing number of residents are visiting the site to rest during the day. They also give me thumbs up or tell me that this was a great project as I count the butterflies and weed.

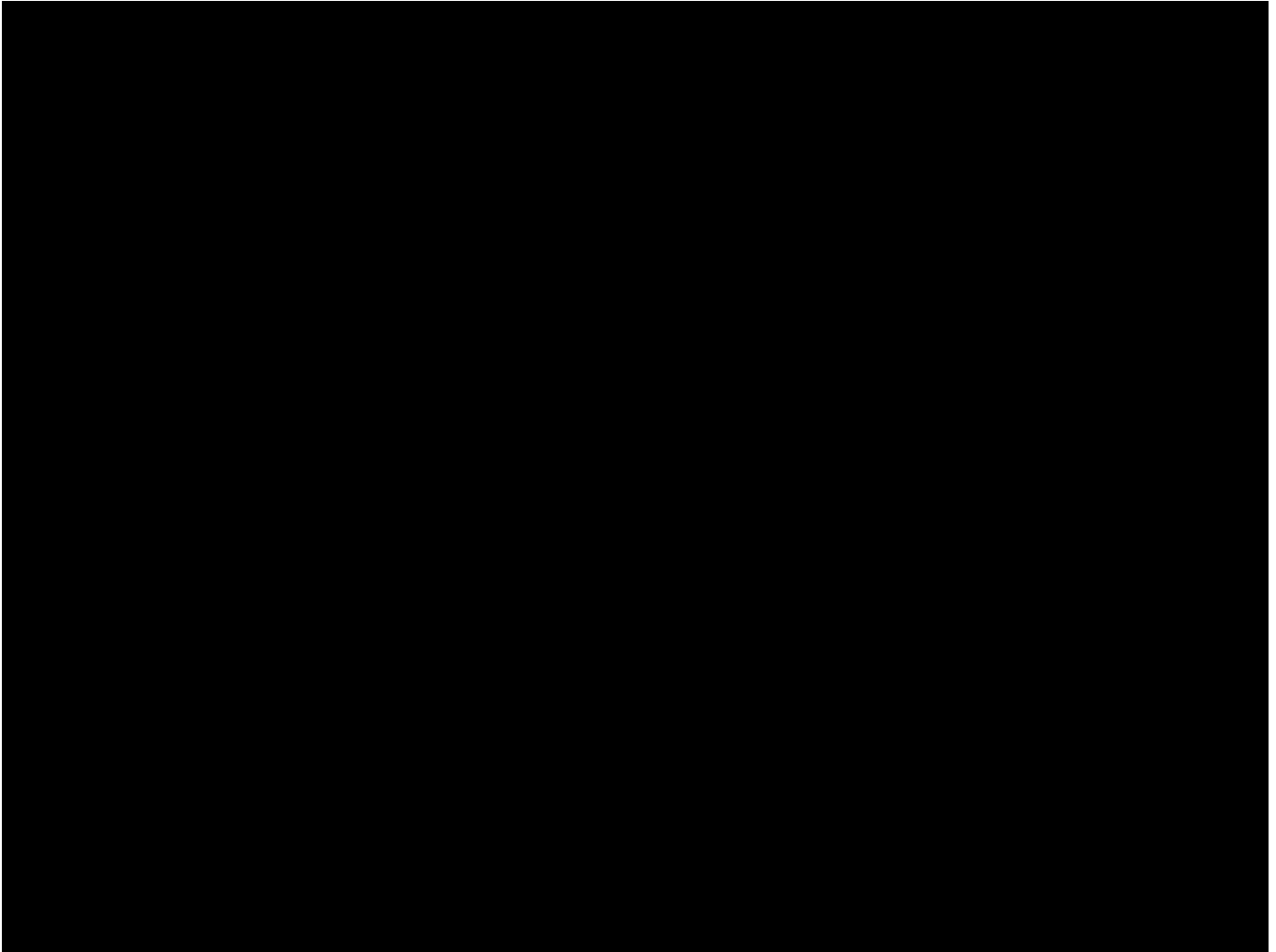
Local government are taking notice or our results and local visitors want to press the government to do more such pilot projects in other districts.

We helped another Darwin shoreline restoration recipient "Glassroot" with our coir rolls. It was used as filters to retain their crushed glass bags Mangrove substrate and their department of environment partners did take notice. The positive results can be transferred for other government purposes.

Private residents have enquired to install the coir rolls to improve their own beach erosion.

Another governmental project also approached me to do a Mangrove buffer zone restoration and Pygmy Blue conservation of a much larger scaleAt another location.

Supporting Evidence - file(s) upload



Supporting Evidence - links to published document/online materials

My partner Sustainable Cayman did wonderful publications

<https://sustainablecayman.org/pirate-cove-nature-park>

<https://www.facebook.com/reel/864979485134898>

Project Challenges

Planning had difficulty to envision the effectiveness of the project. We simply shifted the scope to the private side that was always part of the total project and filled it with the originally forecasted plant material.

Teaching the installation team how to install the coir rolls and teach the maintenance crew what were good

installed native plants or invasive weeds since I was using many native plants and not their more familiar exotic plants.

All the plants survived hurricane Helen and subsequent 2024 hurricanes.

My larval host plant is used to a moister substrate. I mitigated this by using wet baby pampers to fill a 3 gallon nursery pot and installed the plant with sandy soil to survive the drought season. As I visit the site to survey the butterfly count, I occasionally water the plants. This proved to be successful.

I worried that the location might be too windy, it was originally notoriously windy. The design incorporated taller trees in a meandering placement to divert wind flow with adequate ground cover plant material. The larval host plant is placed midway and protected by taller trees & shrubs that are effectively offer wind protection to this weak flyer butterfly. As the garden matures, it will become even better protection.

Lessons Learned

Coir rolls were fantastic even in this very exposed location of beach location.

Besides teaching installers & maintenance crew, the plant material were well chosen for the harsh environment. They flourished with each storms.

My main host plant *Salicornia virginica* & *Batis maritima* had never been used as horticultural plant material. Learning how to grow them was interesting. They both did well in nursery and in situ, it was a surprising success. The nectar plants did equally well, they had been used before. I am now ready to start monitoring what butterflies are visiting.

The introduction of a few butterfly specimens to do study on the endemic Pygmy Blue butterfly as the plants are mature required a special permit and permission from the DoE.

The process to getting the paperwork submitted and approved by the DoE for the butterfly samples is longer than I thought. The process opened doors to conservation alternatives when the DoE felt that the larval host plant couldn't be relocated. This project proved that it could.

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	20,000.00	19,999.03	0%

Please provide a short narrative summary on project finances.

The actual expenses matched the budget

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

Group A Indicator Results

Local landscaper learned how to Install coir rolls. The product was consequently used elsewhere as well for another Darwin project at Government level. Proving potential of the product and how to use it.

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

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

Group B Indicator Results

Several landscaped beds were installed, inviting biodiversity of new species from lizards to butterflies. A study is to begin. The community is actually stopping to thank me. After a few months a micro urban environment is emerging as plants are maturing.

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

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

Group C Indicator Results

The coir rolls have been requested elsewhere after observation. Knowledge of the larval host plant potential of Pygmy Blue butterfly on both location is to begin. A third location is advocating to replicate the project in

conservation goal.

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

Checked **DPLUS-D01 Hectares of habitat under sustainable management practices.**

Unchecked **DPLUS-D02: Number of people whose disaster/climate resilience has been improved.**

Checked **DPLUS-D03: Number of policies with biodiversity provisions that have been enacted or amended.**

Group D Indicator Results

The landscaped area is under a sustainable practice. Positive government outlook to increase protected larval host plants locations and relocate Pygmy Blue butterflies.

Section 5 - Project Partnerships, Wider Impacts and Contributions

Project Partnerships

My lead partner, Sustainable Cayman did the publicity as I engaged in the landscape work. We worked very well together although we had not known each other well before.

The Department of environment did help with accessing the documentation to gather the endemic butterflies that needed to be relocated to the new location. This was a first of its kind. I got a lot of support here.

We both lend a hand to another local Darwin project Glassroot. Another successful project that grew a micro habitat with increasing biodiversity.

Wider Impacts and Decision Making

Gaining understanding of the larval host plant growth habit and monitoring the butterfly itself.

A local engineering firm contacted me to recreate a similar coastal project within their building project.

An area of the development that is to be bulldozed will have a prior EIA done and plants of interest to be rescued and relocated to a protected area. More Pygmy Blue butterfly larval host plants will be installed and more butterflies will be relocated to this specifically protected conservation zone.

Sustainability and Legacy

The entire project is in place and surviving without help to date. The selected tall trees to cast shade and bushes for the project were wind, salt & drought tolerant. It is important to remember that summer 2024 was the hottest ever in the Cayman Islands and world wide.

The substrate was intentionally prepared in layers with seaweed, soil & Pine needles to retain moisture in the ground.

After the initial watering to establish the plants, there has been no care given for the dry season. The plants are maturing as they should. A micro urban habitat is emerging with growing biodiversity.

Coir rolls have protected the shore from 2024 hurricane season erosion, naturally occurring vegetation is starting to grow as well as the installed landscape.

There was no staff, the natural resources used for the project have proven their weight in gold, the area remained green without help.

People are visiting and enjoying the space.

Section 6 - Communications & Publicity

Exceptional Outcomes and Achievements

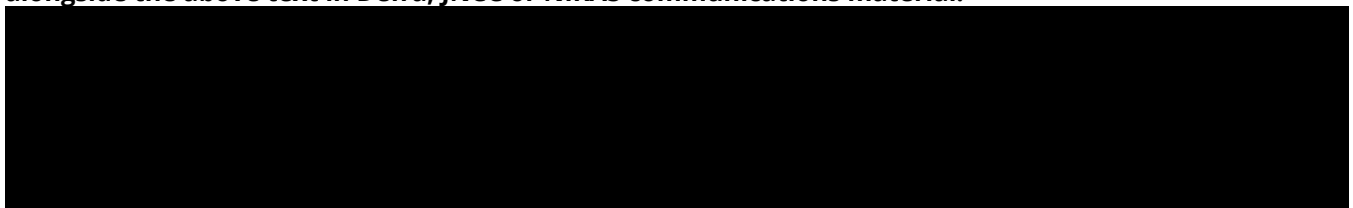
My partner in this project Sustainable Cayman did the publicity as she has a team of ambassadors that create publicity for their project.

This exceptional outcome wouldn't have been possible without Darwin funding.

<https://sustainablecayman.org/pirate-cove-nature-park>

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.



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

Lonny Coote provided these pictures while studying this Pygmy Blue butterfly in other location.

The larval host plant & nectar plant are both on the Pirate Cove location as well.

Lonny is my mentor in the project.

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.

I am in the video explaining the nectar plant of the Pygmy Blue butterfly to visitors while I was doing a butterfly count

<https://www.facebook.com/reel/8666155980156352>

My partner Sustainable Cayman has done a Face Book group to invite people to share their experience at the Cove
<https://www.facebook.com/groups/838757981602502>

Section 7 - Darwin Plus Contacts

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	Joanne Mercille
Role within Darwin Plus Project	Native plant provider / manager installer
Email	
Phone	
Do you need further sections to provide additional contact details?	<input checked="" type="radio"/> No
