Applicant: Petrovic, Clive
Organisation: Recovery & Development Agency

Funding Sought: £49,881.37

DPLR4\1072

Feasibility Assessment of Pond Restoration and Stormwater Management in BVI

Feasibility assessment for restoration of existing degraded pond and mangrove wetland. Removing invasive vegetation and replanting native species, especially mangroves. Expanding pond area to historical limits to use as stormwater retention area. Reestablishing biodiversity of native wetland ecosystem. Engineering stormwater management and flood control for residential structures in the vicinity of the wetland to improve climate resilience. Construction of mangrove boardwalk and wildlife viewing platform. Workshop for engineers and contractors working in wetlands. Workshop for teachers on wetland ecosystems.

DPLR4\1072

Feasibility Assessment of Pond Restoration and Stormwater Management in BVI

Section 1 - Project Title & Contact Details

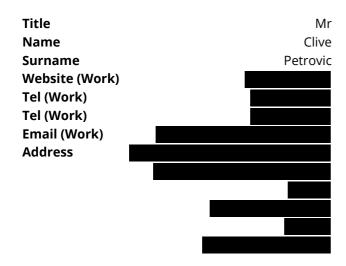
Q1. Project Title

Feasibility Assessment of Pond Restoration and Stormwater Management in BVI

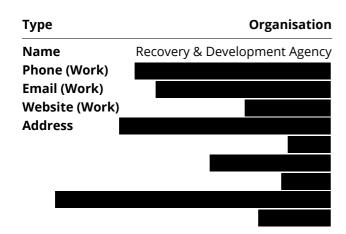
Q2. Please select whether you are applying as an organisation or as an individual (Guidance section 3 and Guidance Glossary)

Organisation

CONTACT DETAILS



GMS ORGANISATION



Section 2 - Overseas Territory(ies)

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.

☑ British Virgin Islands (BVI)

* 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 UKOTs in the Caribbean experience similar climate impacts and wetland loss due to development, pollution and general degradation. Therefore, lessons learned in this project will contribute to a better understanding of environmental issues in other OTs. It may be possible to collaborate or assist OTs with similar challenges in the future.

Section 3 - Project Partners

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):

Lead Organisation name (if applying as an organisation; Guidance section 3.1):

Recovery & Development Agency

Lead Organisation Website (if applicable):	Recovery & Development Agency
Is the Lead Organisation based in a UKOT where the project is working (Guidance section 3.1)?	⊙ Yes
List other partners involved and where are they based:	Department of Disaster Management (DDM), Tortola, British Virgin Islands
Summary of roles and responsibilities of each partner in the project:	DDM: stormwater and flood control data, drainage data, Hazard and Vulnerability Assessment, technical support. Involvement of technical personnel may be available where needed with data collection and analysis.
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).

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- pdf 128.58 KB

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.

Feasibility assessment for restoration of existing degraded pond and mangrove wetland. Removing invasive vegetation and replanting native species, especially mangroves. Expanding pond area to historical limits to use as stormwater retention area. Reestablishing biodiversity of native wetland ecosystem. Engineering stormwater management and flood control for residential structures in the vicinity of the wetland to improve climate resilience. Construction of mangrove boardwalk and wildlife viewing platform. Workshop for engineers and contractors working in wetlands. Workshop for teachers on wetland ecosystems.

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?

This project is a feasibility assessment for pond restoration and stormwater management for a degraded salt pond on Jost Van Dyke. The expected output is a workplan and cost estimate for:

- Reconstruction of a degraded salt pond.
- Expansion of pond to historical limits for stormwater retention.
- Removal of surrounding invasive vegetation.
- Replanting mangrove fringe and reintroducing native flora and fauna.
- Engineering stormwater management for surrounding community.
- Construction of mangrove boardwalk and wildlife viewing platform.
- Workshop for engineers, architects & contractors on construction design & management in wetlands.
- Workshop for teachers on wetland ecology and classroom teaching techniques.
- Development of sustainable financing through tourism and economic initiatives.

These goals are all connected and are a result of restoring wetland biodiversity. That will require identifying the environmental threats and creating solutions that will limit or eliminate future negative environmental impacts.

The goal in this project is to create a template for the reconstruction of the pond and implement the recommendations of this feasibility assessment. The current application for a feasibility assessment is designed to conduct biodiversity assessments, evaluate climate change impacts on stormwater management, and improve local capacity through educational activities. Proximity of the pond to a school (immediately adjacent to the pond) and tourism activities provides opportunity for public education and sustainable financing.

Many salt ponds and wetlands in the BVI have been degraded and are no longer functioning ecosystems. The result is loss of biodiversity, reduced coastal protection, diminished aesthetic appeal, and lost cultural resources. The limited coastal flat land in the BVI, combined with demands for development, continues to put pressure on wetlands. Since salt ponds and mangrove wetlands occur in sheltered bays, they are preferred sites to develop marinas, boatyards, or resort developments. The result has been the loss of wetlands on all inhabited islands except Anegada. In addition to destroying ponds with landfill, many have been damaged by wastewater discharges, dumping of trash and sedimentation from nearby land development.

With the destruction or degradation of many ponds, very few remain as functioning wildlife habitat. Thus, the few that remain become conservation priorities. On JVD, most ponds have been degraded with compromised ecosystem services. Thus, preserving what is left becomes an urgent conservation challenge. This pond is the last remnant of a formerly extensive wetland in Great Harbour.

An unintended consequence of the wetland loss has been periodic flooding of surrounding residential dwellings. In recent years the flooding has become more frequent and costly. Prediction of future conditions related to climate change will aggravate the property damage and place human lives at risks. Ponds and wetlands are often used to aid in flood control by capturing stormwater runoff. Therefore, the larger the pond, the more effective it will be in reducing risk of flood damage to nearby dwellings.

The information gathered by this assessment includes:

- Biodiversity assessment of pond including identifying invasives.
- Stormwater assessment by hydrologist.
- Engineering assessment of construction related to pond and surrounding site.
- Drainage map of site with recommendations to address climate change.
- Design of boardwalk and wildlife viewing platform.
- Develop workshops for contractors and teachers.
- Create sustainable financing scheme.

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 will be a feasibility assessment to gather data including workplan and budget for the restoration project. The long-term benefits will include restoration of degraded wetland and associated biodiversity, improved climate resilience for the local community through engineered stormwater management, and local capacity building through wetland workshops targeting contractors and teachers. Future management of the site may become the responsibility of the school through the Ministry of Education and additional NGOs. Once restored with a wildlife viewing platform, the pond will become a tourist attraction for visitors interested in wildlife. Charter yachts, day sails and tour boats visit JVD daily and there is demand for attractions related to the environment. That should generate sufficient revenue to cover the predicted minimal operating costs.

(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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♣ JVD pond aerial June 2024-1

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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 <u>at least one of the</u> <u>themes of Darwin Plus with a clear focus on biodiversity and the natural environment</u>, 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.

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

Checked

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

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;

Checked Environmental quality: improving the condition and protection of the natural environment

Checked

Capability and capacity building: enhancing the capacity within OTs, including through community engagement and awareness, to support the environment in the short- and long-term.

Please justify your selection. Please use quantitative information where possible here.

This will be the first wetland restoration project in the BVI. Of 6 ponds on JVD, all have been degraded or destroyed. The project will address the loss of habitat quality and biodiversity. The stormwater management needs are a result of the impact of climate change and will worsen in the future. Three dwellings near the pond experience frequent flooding. The plans for wildlife viewing access and workshops aimed at different groups of stakeholders will build local capacity for environmental awareness and foster community resiliency in the face of expected climate change.

Section 6 - Workplan

Q9. Workplan (Guidance section 2.2)

Please provide anticipated dates for the start and end of your planned project here. Please use the <u>Darwin Plus Local Project Workplan</u> (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	01 February 2025	4 months

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

- <u>Barwin_plus_implementation_timetable (1)</u>
- © 20:13:37
- docx 35.78 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?

No

Budget line	Explanation	Cost in GBP
	RDA Staff: Environmental Specialist (ES) Community Liaison Officer (CLO) RDA Engineer	
Staff costs:	ES – project lead, coordination of staff, field observations and data recording, stakeholder meetings. 9.5 days total. CLO - community engagement, stakeholder meetings, communication with government. 10 days total. RDA Engineer – survey site, design pond restoration, drainage plans, flood control design, coordination with hydrologist. 25 days total.	£
Consultancy costs:	Consultant hydrologist from Caribbean Institute of Meterology and Hydrology with expertise in stormwater and flood control engineering. Evaluation of predicted climate change impacts on stormwater events and effects on nearby dwellings. Provide cost estimates on local resident's potential loss from flooding. Suggest a strategy to reduce risk to dwellings during predicted climate events. 10 days total.	£
Overhead costs:	N/A	£0.00
Travel & subsistence	Site visits to JVD from Tortola by RDA staff: Environmental Specialist - 6 visits CLO - 5 visits	£
costs:	RDA engineer-5 visits 16 visits total	
Operating costs:	N/A	£0.00
	WTW Multi 3630 IDS Multi-Parameter Portable Meter:	
	Conducting field water quality tests including temp, pH, salinity, dissolved oxygen, conductivity, turbidity.	
Capital equipment:		£
	Nikon Z30 Camera with two lenses & accessories kit:	
	Camera/video necessary to document project and environmental site conditions.	
Other Costs	N/A	£0.00
Total:		49,881.37

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)

RDA contains staff with sufficient expertise to conduct most feasibility assessments. Included are the Environmental Specialist, Community Liaison Officer and Engineer. While the services of one engineer is planned, there is availability of additional engineers and individuals with experience in project management, architecture and a variety of construction related skills.

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

No Response

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

No Response

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

No Response

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

WTW Multi 3630 IDS Multi-Parameter Portable Meter:

Conducting field water quality tests including temp, pH, salinity, dissolved oxygen, conductivity, turbidity.

Nikon Z30 Camera with two lenses & accessories kit:

Camera/video necessary to document project and environmental site conditions.

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

Hydrologist from Caribbean Institute of Meteorology and Hydrology for 10 days, including days on site, airfare, accommodation, expenses.

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

No Response

If your project budget was prepared in another currency and converted to GBP, please provide the exchange rate, its source, and the date it was accessed:

Other currency:	Exchange rate:	Source of this exchange rate:	Date exchange rate accessed:
USD	1.26511	xe.com	21 June 2024

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

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.

This project is consistent with the goals of the Government of the Virgin Islands as expressed in the Infrastructure Development Plan from the National Sustainable Development Plan of February 2024. It also relates to the Virgin Islands Climate Change Adaptation Policy that is currently under review and being updated. The project leader for this application is a member of the climate change policy review committee. This project also aligns with goals of government in the areas of biodiversity conservation, capacity building in school curriculum development, and building capacity in the construction fields as related to work in sensitive environmental habitats.

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.

- & <u>Darwin grant letter of support</u>
- ① 19:09:13

Section 9 - Project Risks

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
Different views of stakeholders regarding pond restoration or stormwater management objectives.	Stakeholder engagement through public meetings and focus groups. Preparation of project plans for community review and discussion.
Since this is a feasibility assessment with no construction, risks should be minimal and primarily related to loss of consultant's time.	Additional support personnel are available; thus, risk is considered minimal.
Key people involved in the risk assessment could be unavailable due to sickness, vacation, or unforeseen circumstances.	The capacity of RDA is sufficient to account for loss of key individuals. A few individuals with appropriate technical expertise will be involved as observers with the ability to participate when and where needed.

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: <u>Darwin Plus website</u> 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

<u>Supporting documents list (please have these ready to attach with application)</u>

- 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

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:	Clive Petrovic		
Position in the organisation: (if applicable)	Recovery & Development Agency		
Signature (please upload e- signature)	 ♣ CP electronic signature ★ 24/06/2024 ♠ 17:39:25 ♣ jpg 24.11 KB 		
Date:	23 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: https://darwinplus.org.uk/apply/local-applications/) 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: https://darwinplus.org.uk/apply/local-applications/).	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.	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.

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 <u>Forms and Guidance Portal</u>.

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.

	Description (max 25 words)	No. of months	UK Financial Year 2024/25						
Activity #			C	Calendar Year 2024		Ca	025		
			Oct	Nov	Dec	Jan	Feb	Mar	
1	Community Liaison Officer (CLO)-stakeholder engagement. Meetings with Ministries and relevant governmental departments. Determine land ownership and limitations.	1	Х						
2	CLO- obtain agreements and permissions from Ministries, governmental departments and the Planning Authority.	2	Х	Х					
2	Project Leader- oversight of all activities	4	х	Х	Х	Х			
3	RDA engineer – produce topographic surveys, identify watershed boundaries and drainage.	1	Х						
4	Consultant hydrologist-site stormwater evaluation. Assess drainage and water retention areas.	1	Х						
5	Consultant hydrologist- assess water retention capacity of pond. Design pond boundaries accordingly.	1	Х	Х					
6	Consultant hydrologist-determine flood risk of adjacent residences and businesses.	1	Х						

Project Title:

		No. of months	UK Financial Year 2024/25						
Activity #	Description (max 25 words)		Calendar Year 2024			Calendar Year 2025			
			Oct	Nov	Dec	Jan	Feb	Mar	
7	Consultant hydrologist – design flood control measures to reduce stormwater impacts on residences.	1	X						
8	RDA engineer- review hydrologist designs and recommendations.	1	X						
9	RDA engineer-With Project Leader, design pond configuration and surface area.	3	Х	Х	Х				
10	Project Leader-conduct biodiversity survey of site and identify invasives to remove.	3	Х	Х	X				
11	RDA engineer-determine drainage options for surrounding residences.	2		X	X				
12	RDA engineer-design bottom contours of pond	1		Х					
13	RDA engineer-design slope of pond and island for egret rookery	1			Х				
14	Project Leader-design new landscaping of natives including mangroves along pond edge and upland plants along shoreline	1			Х	х			
15	RDA engineer-design mangrove boardwalk and wildlife viewing platform.	1			Х	Х			
16	Project Leader-design workshop for architects and contractors on building design and construction in and near wetlands.	1			Х	X			
17	Project leader-design workshop for teachers on mangroves and wetland teaching techniques. To include teaching in the field and designing student projects in wetlands.	1			х	Х			

Project Title:

		No. of			UK Financial	Year 2024/25		
Activity #	Description (max 25 words)	months	months Calendar Year 2024		024	Ca	lendar Year 20)25
			Oct	Nov	Dec	Jan	Feb	Mar
18	CLO- document project and produce periodic updates to local community and governmental departments and Ministries. Obtain stakeholder feedback of final designs.	1				X		
19	Project Leader- produce monthly reports on progress in stakeholder engagements and engineering designs.	4	X	X	X	X		
20	Project Leader- in multiple consultations, develop sustainable financing strategies including, guided wetland tours, yacht tourist fees, fee-based workshops, seminars and short courses, and others.	1				X		