

Applicant: **Hamilton, Martin**
Organisation: **Royal Botanic Gardens, Kew**
Funding Sought: **£275,258.00**

DPR7P\100036

Identifying and conserving resilient habitats in the British Virgin Islands

PRIMARY APPLICANT DETAILS

Title Dr
Name Martin
Surname Hamilton
Organisation Royal Botanic Gardens, Kew
Website (Work)

Tel (Work)
Email (Work)
Address

Section 1 - Contact Details

PRIMARY APPLICANT DETAILS

Title Dr
Name Martin
Surname Hamilton
Organisation Royal Botanic Gardens, Kew
Website (Work)

Tel (Work)
Email (Work)
Address

GMS ORGANISATION

Type	General
Name	Royal Botanic Gardens, Kew
Phone (Work)	
Email (Work)	
Website (Work)	
Address	

Q3. Lead organisation type

Please select one of the below options.

UK Government

Section 2 - Title, Dates & Budget Summary

Q4. Project title

Identifying and conserving resilient habitats in the British Virgin Islands

Q5. Project dates

Start date:

01 April 2019

End date:

31 March 2022

Duration (e.g. 2 years, 3 months):

3 years

Q6. UKOT(s)

(See Guidance Notes)

Which UK Overseas Territory(ies) will your project be working in? You may select more than one UKOT from the options below.

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 UKOTs you have indicated above, will your project directly benefit any other country(ies)? If so, list here.

No Response

Q7. Budget summary

Year:	2019/20	2020/21	2021/22	Total request
Q7a. Request from Darwin:	£84,877.00	£100,220.00	£90,161.00	£ 275,258.00

Q7b. Proposed (confirmed and unconfirmed) co-financing as % of total project cost 116

Section 3 - Lead Organisation Summary

Q8. Lead organisation summary

Please provide the following information on the lead organisation

What year was your organisation established/ incorporated/ registered?	1840
What is the legal status of your organisation?	<input checked="" type="radio"/> Government
How is your organisation currently funded?	Kew is a non-departmental public body. Approximately 40% of our income comes from grant in aid from Kew's sponsoring HMG Department, Defra. The remainder is generated through income from grants and donations, charitable activities (including admission of visitors to the Gardens) and retail.
Have you provided the requested signed audited/independently examined accounts? If you select "yes" you will be able to upload these. Note that this is not required from Government Agencies.	<input checked="" type="radio"/> Yes

Please attach the requested signed audited/independently examined accounts.

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 [kew-annual-report-2016-2017-print](#)


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 [RBG Kew Annual Report 201718 Web PDF](#)

 21/08/2018

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Q9. Has your organisation been awarded Darwin Initiative funding before (for the purposes of this question, being a partner does not count)?

Yes

If yes, please provide details of the most recent awards (up to 6 examples)

Reference no.	Project leader	Title
DPLUS080	Dr Rosemary Newton	Securing South Georgia's native habitats following invasive species control
23034	Dr Ruth Bone	Edible wild orchid trade: sustaining livelihoods and biodiversity in Zambia

23002	Dr Martin Cheek	Important Plant Areas in Guinea-Conakry
22012	Philip C Stevenson	Harnessing agricultural ecosystem biodiversity for bean production and food security
22006	Dr Aaron Davis	Mainstreaming biodiversity conservation and climate resilience at Yayu Biosphere Reserve
DPLUS037	Thomas Heller	Conserving the genetic diversity of St Helena's threatened endemic flora

Section 4 - Project Partners

Q10. Project partners

Please list all the partners involved (including the Lead Organisation) and explain their roles and responsibilities in the project. Describe the extent of their involvement at all stages, including project development. This section should illustrate the capacity of partners to be involved in the project, and how local institutions, local communities, and technical specialists are involved as appropriate.

Please provide written evidence of partnerships. Please add fields for more partnerships, if required. Details on roles and responsibilities in this project must be given for the Lead Organisation and all project partners.

N.B. There is a file upload button at the bottom of this page for the upload of all letters of support.

Lead Organisation name: Royal Botanic Gardens, Kew

Details (including roles and responsibilities and capacity to engage with the project):

Since 1961, NPTVI have managed national parks and protected areas in the British Virgin Islands (BVI). During this period, the park system expanded from one terrestrial park to 20 managed by 14 terrestrial wardens. Under the direction of Ms Lynda Varlack, NPTVI's biodiversity conservation and terrestrial parks programmes are managed by Deputy-Director for Science, Research and Environmental Policy, Mrs Nancy Pascoe. Mrs Pascoe will lead NPTVI's local project management including field support for visiting trainers/fieldworkers, supervision of local project staff (Natasha Harrigan, Keith Grant) and collection of data and plant material. Continued liaison with the local community and public relations will be undertaken by Deputy-Director for Marketing, Communications and Business Development, Ms Diehdra Potter.

NPTVI has worked in collaboration with local and international agencies to successfully deliver several Darwin Plus funded projects, in addition to its annual work programme. NPTVI has the institutional and technical capacity to fully engage with the project and has worked with Kew on flora inventories and field collections over the past 20 years. The local project staff manage ex-situ collections and in-situ populations of threatened flora as part of their daily activities and will be leading the ex-situ collections element of the project.

Have you included a Letter of Support from this organisation? Yes

Do you have more than one partner involved in the Project?

Yes

2. Partner Name: Fort Worth Zoo (FWZ)

Website address: <https://www.fortworthzoo.org/>

Details (including roles and responsibilities and capacity to engage with the project):

The Fort Worth Zoo (FWZ) supports projects in more than 30 countries around the world and promotes conservation efforts for a variety of species ranging from elephants to toads. FWZ supports iguana species conservation worldwide, including Jamaica, Turks and Caicos Islands and the British Virgin Islands. FWZ and NPTVI have worked closely over the past 20 years to conserve the remaining wild population of the endemic iguana, *Cyclura pinguis*, on the island of Anegada. FWZ and Kew first collaborated during the 2003-06 Darwin Initiative project (Ref: 12023) Darwin Biodiversity Action Plan for Anegada, British Virgin Islands. Since then, collaborations between FWZ and Kew have developed significantly due to the close relationship between the endemic iguana and the BVI native flora.

FWZ staff member, Mrs Kelly Bradley, will lead on the training and data collection of *Cyclura pinguis* habitat distribution and flora interactions, part of the habitat-level survey element of the project. Mrs Bradley has over 20 years of experience and has led the international conservation efforts for the endemic iguana on Anegada, BVI since 2003. Mrs Bradley visits BVI annually spending up to four months a year on the island of Anegada.

Have you included a Letter of Support from this organisation? Yes

3. Partner Name: *No Response*

Website address: *No Response*

Details (including roles and responsibilities and capacity to engage with the project): *No Response*

Have you included a Letter of Support from this organisation? Yes
 No

4. Partner Name: *No Response*

Website address: *No Response*

Details (including roles and responsibilities and capacity to engage with the project): *No Response*

Have you included a Letter of Support from this organisation? Yes
 No

5. Partner Name: *No Response*

Website address: *No Response*

Details (including roles and responsibilities and capacity to engage with the project): *No Response*

Have you included a Letter of Support from this organisation? Yes No

6. Partner Name: *No Response*

Website address: *No Response*

Details (including roles and responsibilities and capacity to engage with the project): *No Response*


Have you included a Letter of Support from this organisation? Yes No

If you require more space to enter details regarding Partners involved in the Project, please use the text field below.

No Response

Please provide letters of support from the lead organisation and all partners as a combined PDF.

 **01 LoSs Combined FINAL**

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Section 5 - Project Staff

Q11. Project staff

Please identify the core staff on this project, their role and what % of their time they will be working on the project.

These should match the names and roles in the budget spreadsheet.

Please provide 1 page CVs for these staff.

Name (First name, Surname)	Role	% time on project	CV attached below?
Martin Hamilton	Project Leader	10	Checked
Thomas Heller	Co-PI	100	Checked
Michele Sanchez	Co-investigator	10	Checked
Sara Barrios	Co-investigator	10	Checked

Do you require more fields?

Yes

Name (First name, Surname)	Role	% time on project	CV attached below?
Juan Viruel	Co-investigator	5	Checked
Colin Clubbe	Steering group co-chair	5	Checked
Kelly Bradley	Co-investigator	40	Checked
Nancy Pascoe	Co-investigator	10	Checked
Natasha Harrigan	Co-investigator	10	Checked
Keith Grant	Co-investigator	10	Checked
Diehdra Potter	Steering group member & PR lead	5	Checked
Lynda Varlack	Steering group co-chair	5	Checked


Please provide 1 page CVs (or job description if yet to be recruited) for the Project staff listed above as a combined PDF. Ensure CVs clearly correspond to the named individual and role above.

The limit for any single file uploaded as supporting materials with your application is 6MB. Please ensure documents are saved in PDF form where possible in order to minimise size.

 **00 CVs Combined**

 30/08/2018

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Have you attached all Project staff CVs?

Yes

Section 6 - Background & Methodology

Q12. Summary of Project

Please provide a brief summary of your project, its aims, and the key activities you to undertake. Please note that if you are successful, this wording may be used by Defra in communications e.g. as a short description of the project on GOV.UK. Please bear this in mind, and write this summary for a non-technical audience.

Through field survey and mapping, the project will improve understanding of the status of the BVI's forests and the globally threatened plant and animal species and ecosystem services they support. International partnerships will deliver up-to-date biodiversity information and resources, ex-situ collections of globally threatened plant species and strengthened local capacity key to habitat recovery and mitigation of natural disasters. This will enable management that encourages future resilience and BVI partners will be empowered to secure biodiversity into the future.

Q13. Background

What is the current situation and the problem that the project will address? How will it address this problem? What key OT Government priorities and themes will it address?

The BVI's forests provide vital ecosystem services and support globally threatened biodiversity including 27 plants and 14 animals. As observed following the devastation of Hurricane Irma, forests play a key role in the resilience of the landscape and its natural resources to destructive events.

Through twenty years of collaboration between Kew, NPTVI and Fort Worth Zoo, knowledge of BVI's threatened species, their distribution and threats has grown enormously. However, understanding of community-level characteristics and their importance for threatened species is lacking. With the forests of BVI still recovering from the impacts of Hurricane Irma, a unique opportunity exists to quantify the responses of vegetation and threatened species to such disturbances. The ability to identify the qualities important for sustaining viable populations of threatened species is paramount to inform management, recovery and priority setting to mitigate against future natural disasters.

The BVI Ministry of Natural Resources & Labour's mission is to effectively manage natural resources to ensure long-term sustainability. The Minister, Dr the Honourable Kedrick Pickering, has stated publicly that maintaining threatened species habitats is a government priority, which this project addresses through capacity building, data gap filling, data sharing and identifying areas of critical and resilient habitat.

Q14. Methodology

Describe the methods and approach you will use to achieve your intended Outcome and Impact. Provide information on how you will undertake the work (materials and methods) and how you will manage the work (roles and responsibilities, project management tools etc). Give details of any innovative techniques or methods.

The project will deliver capacity building, habitat-level survey and globally threatened species census to enable local stakeholders to respond to, and mitigate against, the impacts of natural disasters in relation to the BVI's globally threatened species. Exemplar species on four islands (Anegada, Fallen Jerusalem, Tortola, Virgin Gorda) will be used as case studies, including five tree species associated with distinct forest types: *Calyptranthes kiaerskovii* (CR), *C. thomasiana* (EN), *Vachellia anegadensis* (EN), *Varronia rupicola* (EN), *Zanthoxylum thomasianum* (EN); two animal species: *Cyclura pinguis* (CR), *Spondylurus anegadeae* (CR). The habitats in which these species occur will be expert classified by Kew, NPTVI and FWZ and the impacts of Hurricane Irma will be quantified during collaborative surveys.

Habitat-level survey by all partners to determine threatened species' habitat preferences and response of those habitats to Hurricane Irma will be investigated through stratified, random plot-based quantitative survey, gathering data on plant species diversity, forest structure, and micro-climate, in forest from which the species are known and compared with forest where they are absent. *Cyclura pinguis* use of habitat and flora interactions investigated using camera traps/radio tracking to develop an updated distribution map and identify suitable, but currently underutilised habitat for release of locally headstarted animals. Globally threatened species census (27 plants, 14 animals) data will be assembled in project GIS. Data enhanced through compilation of previously unavailable records and assessment of potential new sites informed by habitat-level survey, including first targeted surveys for potentially extinct *Spondylurus anegadeae*.

Zanthoxylum thomasianum population ecology further investigated to fill a major knowledge gap bringing understanding in-line with other exemplar species, including detailed survey work to establish size and sex distribution (dioecious). DNA from silica dried leaves collected using field transects and from herbarium vouchers will be extracted using a modified CTAB protocol. Genetic diversity and structure will be investigated using microsatellite markers (SSR) sequenced using Next-Generation Sequencing (NGS) platform, and phylogenomic and biogeographic patterns of *Z. thomasianum* and its congeners explored using hundreds of single copy nuclear genes and plastomes obtained through HybSeq procedure. Ex-situ collections of five globally threatened plants (above) strengthened to support conservation through seed banking/propagation at NPTVI's J.R. O'Neal Botanic Garden. Seed storage behaviour investigated with germination experiments undertaken in-territory.

Capacity building delivered to enable NPTVI to establish new ex-situ collections of globally threatened plant species and identify suitable habitat for those species through a wide range of training (overseas/in-country) provided by Kew and FWZ specialists and collaborative fieldwork. Specialist training will include germination experiments, plot-based quantitative survey techniques, presence/absence survey and species identification.

Two stakeholder meetings held: 1) at project outset to raise awareness and encourage engagement and 2) following completion of field activities to present findings and gather feedback. The survey results and stakeholder feedback will be collated for the final report. Once established, the project methodology will be shared directly with other Caribbean OTs via Kew's established networks.

Overall project management provided by Kew under project leader actively engaged with BVI since 2003, ensuring project starts immediately and is successfully delivered.

If necessary, please provide supporting documentation e.g. maps, diagrams etc., using the File Upload below.

The limit for any single file uploaded as supporting materials with your application is 6MB. Please ensure documents are saved in PDF form where possible in order to minimise size.

No Response

Section 7 - Objectives, Stakeholders & Sustainability

Q15. Project Objectives

How does this project:

- **Deliver against the priority issues identified in the assessment criteria**
- **Demonstrate technical excellence in its delivery**
- **Demonstrate a clear pathway to impact in the OT(s)**

This project will deliver against the Darwin Plus priority to respond to and mitigate against the impacts of

natural disasters, using the passing of Hurricane Irma over the BVI in September 2017 as an opportunity to better understand how forests important in supporting globally threatened animals and plants respond to such disturbance, guide necessary recovery and adapt management approaches to ensure resilience in the natural environment. Following Hurricane Irma, Kew and NPTVI staff observed that certain habitats showed greater resilience than others and this often related to areas known to harbour globally threatened biodiversity. Understanding this resilience and how to turn this knowledge into recommendations for management practices is crucial for adapting to the impacts of climate change. It was also clear that having easy access to up-to-date, high-quality species and habitat data was paramount for the local government response to natural disasters. The project will develop an approach appropriate to the region that can be extended to other habitats/islands within the BVI, as well as other Caribbean OTs. This will be achieved using a stratified random sampling method that the project team will develop as a protocol collectively to build local capacity and ensure local adoption.

The project will bring international experts from Kew and FWZ to work alongside NPTVI staff in-territory, ensuring that data and sample collection is done using the most appropriate techniques to collect the highest possible quality data and materials for analyses. This will ensure the project's success through close collaboration and it will further elevate local capacity to manage important habitats and globally threatened species with long lasting impacts that benefit future generations of BVI Islanders.

Lab-based research will be undertaken under the supervision of an international expert in plant population genetics and phylogenetics using the latest equipment and techniques available in Kew's Jodrell Laboratory. On-going phylogenomic and biogeographic literature disagreement for *Zanthoxylum thomasianum* and its congeners will be resolved, filling a critical knowledge gap. In 2003, seven *Z. thomasianum* individuals were known from Virgin Gorda. Since then, partners have documented dozens of new individuals on Virgin Gorda and Tortola. Using DNA from silica dried leaves, we will determine genetic diversity and population structure to enable meaningful conservation intervention.

Kew's expertise in experimental design and analyses will ensure that meaningful recommendations for recovery and management can be directed from these collected data. The project team, with input from stakeholders, will interrogate results and collectively develop the final report, including management recommendations appropriate for the BVI. Scientific papers, published open access following project completion, will convey findings to other scientists.

As this project builds on two decades of collaboration between experienced partners, the ability to affect change and have a demonstrable impact is greatly improved. The close working relationships between the partners and genuine desire of the individual staff members of each organisation to assist with and master techniques to conserve biodiversity, particularly beyond their current knowledge, will ensure delivery of the project using the highest standards possible.

Q16. Project Stakeholders

Who are the stakeholders for this project and how have they been consulted (include local or host government support/engagement where relevant)? Briefly describe what support they will provide and how the project will engage with them.

The main stakeholder is the local project partner, NPTVI, which is BVI's statutory body with responsibility for managing terrestrial biodiversity. The outputs of this project will provide NPTVI with direct evidence and the tools required to ensure the BVI's forest habitats are managed and protected in a way that delivers resilience. Other project stakeholders include Government of the Virgin Islands, namely the Ministry of Natural Resources & Labour, the Conservation and Fisheries Department (CFD), the Town and Country Planning Department (TCP), the BVI Tourist Board (BVITB) and the National Geographical Information System (NGIS) committee, and the local community. Consultation with these stakeholders is on-going through the NPTVI's active involvement in cross-government meetings, committees and working groups and community engagement via social media, community meetings and local newspaper/magazine articles.

The Ministry and Government Departments will be engaged during the project through participation in workshops and press events and circulation of project reports including steering group meeting minutes. The Ministry of Natural Resources & Labour will benefit through access to updated occurrence information for globally threatened flora and fauna and locations of forest habitat critical for globally threatened flora and fauna to inform the development of the local biodiversity legislation. The project will benefit CFD and TCP as it provides information to the NGIS required for their management activities. BVITB will benefit as the variety of plants and collections at the J.R. O'Neal Botanic Garden will be enhanced to provide a unique visitor experience. Resilient forests strengthen the BVI's green economy.

Q17. Institutional Capacity

Describe the lead organisation's capacity (and that of partner organisations where relevant) to deliver the project.

Kew's mission is 'to inspire and deliver science-based plant conservation worldwide, enhancing the quality of life'. Kew's UKOTs Science Team has well-established links with the UKOTs, having collaborated with all UKOTs on plant conservation projects, providing technical support in plant identification, genetic analysis, habitat surveying & GIS, seed conservation, management plans and horticultural expertise.

The project leader and Co-PI, Dr Martin Hamilton, of Kew's UKOTs Team has been collaborating with BVI partners since 2003. Kew has been involved in collaborative projects in BVI since 1998. During our long-term partnership, the UKOTs Team has built key relationships with BVI and international partners to work together and address the species conservation issues of the local area.

The National Parks Trust of the Virgin Islands (NPTVI) is dedicated to conserving natural and historical sites in the British Virgin Islands. The NPTVI's mission is "to preserve and manage designated areas in order to improve the quality of life in the British Virgin Islands". The trust has been managing national parks and protected areas for over 50 years. Biodiversity conservation and terrestrial parks programmes are managed by the Deputy Director of Science, Research and Environmental Policy. Outreach for the NPTVI is overseen by the Deputy Director of Marketing, Communications and Business Development.

The NPTVI has worked in collaboration with local and international agencies to complete several Darwin and OTEP funded projects successfully, in addition to its annual programme of work. NPTVI staff have worked with Kew on flora inventories and field collections in previous projects and as part of their daily activities they manage existing ex-situ collections of threatened flora and propagate new plant material of conservation value. NPTVI has a member of staff responsible for managing the ex-situ botanical collections, botanical resources and developing the nursery.

Other NPTVI staff members have extensive knowledge of the National Parks and strong links with the local community who support their work. Kew have provided specialist training through previous Darwin Initiative projects managed by NPTVI and UK partners for staff members and built strong working relationships.

Founded in 1909, Fort Worth Zoo (FWZ) is the oldest continuous zoo site in Texas, and has grown into a nationally ranked facility, housing more than 7,000 native and exotic animals. A commitment to affect positive change through the facilitation of conservation and sound scientific research is a key cornerstone principle of FWZ's Mission. Twenty years ago, the Anegada iguana conservation program was established to offset the mortality rate of young iguanas on the small island of Anegada in the British Virgin Islands. Since then, FWZ conservation biologists have made significant strides in the conservation of this species, in collaboration with NPTVI. These accomplishments include determining the optimal size and survivability of released headstarted animals, initiating a mark-and-recapture program, creating a secondary means of population monitoring, hatchling ecology study, confirmed the decline of population recruitment was

caused by predation of hatchlings by introduced feral cats and maintaining support of the headstart program.

Q18. Sustainability

How will the project ensure benefits are sustained after the project has come to a close? If the project requires ongoing maintenance or monitoring, who will do this and how will it be funded?

Building on two decades of collaborations, Kew, FWZ and NPTVI will continue working to secure the future of BVI's threatened biodiversity after project completion through existing memoranda. The project steering group will liaise with the BVI Government and local community on the viability of generating supplementary income through the development of a certified guide programme. The green economy will be boosted by ensuring that BVI's rare and threatened species are not lost and their habitats are more resilient, keeping the BVI slogan "nature's little secrets" true.

Project compiled data will be incorporated into the BVI National Geographic Information System (NGIS) to inform recovery, mitigation and planning activities. Collections data will be integrated into the open access UKOTs Online Herbarium (<http://brahmsonline.kew.org/ukot>), a core activity for Kew, to ensure dissemination of information. Tours, community talks, local press coverage, open access data about the project and reports to government will help encourage policy level sustainability and raise the profile of NPTVI to conserve biodiversity. The incorporation of all project compiled data into local data systems will empower NPTVI staff and enable recovery of threatened species and management of their habitats into the future.

Section 8 - Funding and Budget

Q19. Budget

Please complete the appropriate Excel spreadsheet, which provides the Budget for this application. Some of the questions earlier and below refer to the information in this spreadsheet. Note that there are different templates for projects requesting over and under £100,000 Darwin Plus budget


- **R7 D+ Budget form for projects under £100,000**
- **R7 D+ Budget form for projects over £100,000**

Please refer to the [Finance Guidance for Darwin and IWT](#) for more information.

N.B.: Please state all costs by financial year (1 April to 31 March) and in GBP. Budgets submitted in other currencies will not be accepted. Use current prices – and include anticipated inflation, as appropriate, up to 3% per annum. The Darwin Initiative cannot agree any increase in grants once awarded.

 [DPLUS R7-budget-over-100k-KewBVI2019-22](#)

 29/08/2018

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Q20. Co-financing

Are you proposing co-financing?

Yes

Secured

Provide details of all funding successfully levered (and identified in the Budget) towards the costs of the project, including any income from other public bodies, private sponsorship, donations, trusts, fees or trading activity, as well as any your own organisation(s) will be committing.

(See "Finance for Darwin & IWT" and the "Guidance for Applicants" documents)

By synergising with existing NPTVI and Fort Worth Zoo (FWZ) activities and commitments, 116% additional funding has been secured from the partners. The FWZ Anegada iguana conservation programme will provide £X to cover travel and subsistence and salary costs for Mrs Kelly Bradley to undertake four trips to BVI annually. All NPTVI staff time to the value of £X is match-funding demonstrating the BVI Government's commitment to this project.

Staff costs and overheads (100%) for Dr Michele Sanchez, Ms Sara Barrios, Dr Colin Clubbe and Dr Juan Viruel and overheads (60%) for Dr Martin Hamilton and Mr Thomas Heller to the value of £X and travel and subsistence for four Kew staff to visit BVI in year one totalling £X are included as secured match-funding contribution from Kew to the total value of £X

Unsecured

Provide details of any co-financing where an application has been submitted, or that you intend applying for during the course of the project. This could include co-financing from the private sector, charitable organisations or other public sector schemes.

Date applied for	Donor Organisation	Amount	Currency code	Comments
No Response	No Response	No Response	No Response	No Response
No Response	No Response	No Response	No Response	No Response
No Response	No Response	No Response	No Response	No Response
No Response	No Response	No Response	No Response	No Response

Please give brief details including when you expect to hear the result. Please ensure you include the figures requested in the Budget Spreadsheet as Unconfirmed funding.

N/A

Do you require more fields?

No

Section 9 - Financial Controls, Value for Money & Open Access

Q21. Financial Controls

Please demonstrate your capacity to manage the level of funds you are requesting. Who is responsible for managing the funds? What experience do they have? What arrangements are in place for auditing expenditure?

The Royal Botanic Gardens, Kew, had a total income of £x million in the year ending March 2018 and has a fully resourced Finance Department for administering and controlling these funds. Overall governance procedures lie with the Board of Trustees who are advised by the Finance Committee. The Kew Finance Department has a team dedicated to supporting financial management of all projects and assisting grant-holders with monthly reviews and with reporting to funders. Dr Martin Hamilton at Kew has 15 years of project management (including two Darwin plus projects) and will be responsible for day to day management of the funds for this project. Kew's accounts are audited each year by external accountants. An audit expenditure of £1500 has been included in the budget for year two for this project to have an independent audit.

Q22. Financial Management Risk

Explain how you have considered the risks and threats that may be relevant to the success of this project, including the risks of fraud or bribery.

Risk of fraud/bribery will be mitigated through partners' fiscal control mechanisms, aligned with financial reporting standards required and strictly implemented by Kew. Given the relative simplicity of the budget and established reputations of partners involved, we consider this risk to be very low.

There is a currency exchange risk for our partners receiving funds annually from the UK and for costs associated with Kew overseas travel. The project team have used a conversion rate of £1=\$1.3 based on the average performance over the last two years.

Regarding project outcome, there is risk due to severe weather conditions hampering boat travel or restricting field work. This risk is reduced by the project team planning most of the fieldwork outside the hurricane season. Furthermore, the local project team have the flexibility to prioritise fair weather tasks ahead of other tasks less dependent on good weather.

Health and safety risks of working in strenuous environmental conditions will be minimised by working with competent and experienced professionals familiar with local conditions. Staff will always have first aid and communication equipment with them when in the field in case of emergency.

Q23. Value for money

Please explain how you worked out your budget and how you will provide value for money through managing a cost effective and efficient project. You should also discuss any significant assumptions you have made when working out your budget.

This project delivers value for money by ensuring that BVI's tourism and green economy which are built around the environment is secured for the future.

The project team developed the budget through a consultative process. The long-term collaboration between the partners has enabled fieldwork costs to be calculated using much-reduced rates for local accommodation and transport through established contacts (i.e. reduced rate hotel rooms and rental vehicles). NPTVI and FWZ staff visiting Kew have access to local bedsits/B&B's to keep travel and accommodation costs down. Utilising team skills has eliminated the need for consultants.

Kew has invested significantly in the BVI and has a close working relationship with the NPTVI and FWZ staff. Kew costs were developed using actual salary costs. Kew contributes travel costs for the first field trip and to salary costs (four staff) and overheads (all staff, varying levels) to support this project and includes

advisory services such as policy, ethics and biodiversity conventions.

By synergising with the current endemic iguana conservation strategy, substantial costs of international air travel, boat travel, accommodation and subsistence for FWZ fieldwork have been avoided. All FWZ and NPTVI staff time is match-funding demonstrating the partners' commitment to this project.

Q24. Outputs of the project and Open Access

All outputs from Darwin Plus projects should be made available on-line and free to users whenever possible. Please outline how you will achieve this and detail any specific costs you are seeking from Darwin Plus to fund this.

Throughout the project, progress updates and individual outputs will be communicated via a range of online social media channels (e.g. Twitter via @KewUKOTs using #KewBVI, Facebook via @NPTVI). Blogs detailing the project objectives and accomplishments will be published on the Kew website at the end of year 1 and 3, respectively. Fieldwork reports and project outputs will be made available on a dedicated project webpage on the freely available ResearchGate website. All botanical data gathered for threatened species, together with field images, will be widely available through the UKOTs Online Herbarium (<http://brahmsonline.kew.org/ukot/>).

All datasets will be well described via imbedded metadata. Copies of datasets will be shared among the project partners and provided to the BVI Government's National Geographic Information System. These datasets will include the first compiled occurrence layer for the Anegada ground iguana (*Cyclura pinguis*), an updated occurrence layer for plants (including the 27 globally threatened species), a compiled layer of forest plot data and an expert reviewed layer showing locations of forest habitat critical for globally threatened flora and fauna.

The data collected will enable the project team to undertake a much-needed re-assessment of the threat status of *Cyclura pinguis* and determine if any other study species require re-assessment. The assessments will be freely available on the IUCN Red List of Threatened Species website.

A final report will detail "standards and methodologies" employed and "data collection and results" of the project to enable local partners to expand the project to new islands and encourage replication in other OTs.

Q25. Safeguarding

See Guidance Note 3.7

Projects funded through Darwin Plus must fully protect vulnerable people all of the time, wherever they work. In order to provide assurance of this, we would like projects to ensure they have the appropriate safeguarding policies in place. Please check the box to confirm you have relevant policies in place at that these can be available on request.

Checked

Section 10 - Logical Framework

Q26. Logical Framework

Darwin Plus projects will be required to report against their progress towards their expected Outputs and Outcome if funded. This section sets out the expected Outputs and Outcome of your project, how you expect to measure progress against these and how we can verify this.

Annex D and Annex E in the Guidance Notes provides helpful guidance on completing a logical framework, including definitions of the key terms used below.

Impact:

The status of the BVI's forests, and the threatened species and ecosystem services they support, is improved through evidence-based recovery, management and restoration, and more resilient to future natural disasters.

Project Summary	Measurable Indicators	Means of Verification	Important Assumptions
<p>Outcome: BVI's forest habitats resilient to natural disasters and critical for supporting threatened species are well understood and spatially identified; globally threatened species secured ex-situ to mitigate against future disasters.</p>	<p>0.1 Locations of forest habitat critical for globally threatened flora and fauna on four islands identified, mapped and GIS layer produced 0.2 Live plants and/or seeds of at least five globally threatened plant species secured at the J.R. O'Neal Botanic Garden</p>	<p>0.1 Summary report published on ResearchGate 0.2 UKOTs Species and Specimens Database for plant data and GIS layers in BVI NGIS for all taxa and plot data</p>	<p>0.1 Weather conditions allow boat access and fieldwork to be completed 0.2 All target species can be reproduced from cuttings or produce enough seeds during the lifetime of the project to allow safe collection for storage and not impact the future survival of native populations</p>
<p>Output 1: Detailed census of globally threatened species (five plants and 2 animals) and population ecology profiled</p>	<p>1.1 Detailed quantitative surveys of known populations and unsurveyed areas 1.2 Population genetics of BVI populations of <i>Z. thomsonianum</i> researched 1.3 GIS occurrence layers of globally threatened species produced</p>	<p>1.1 Raw field data available to partners and fieldwork reports available on ResearchGate 1.2 Population genetic data summarised in Final report available on ResearchGate 1.3 BVI NGIS</p>	<p>1.1 Team able to visit all sites to collect data unhampered by weather conditions 1.2 NPTVI boat/local ferries operational and able to transport team to field sites 1.3 BVI NGIS continues to be maintained as the national GIS repository</p>

Output 2: Habitat requirements of globally threatened species (five plants and 2 animals) characterised	2.1 Quantitative forest surveys undertaken within and outside of globally threatened species habitat on four islands 2.2 Study of vegetation history on four islands completed 2.3 GIS layers produced of forest plot data and an expert reviewed layer showing locations of forest habitat critical for globally threatened flora and fauna	2.1 Forest survey documented in fieldwork reports available on ResearchGate 2.2 Report on vegetation history of four islands available on ResearchGate 2.3 BVI NGIS	2.1 Team able to visit all sites to collect data unhampered by weather conditions 2.2 NPTVI boat/local ferries operational and able to transport team to field sites 2.3 BVI NGIS continues to be maintained as the national GIS repository
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Output 3: Ex-situ collections of five globally threatened plants enhanced to support conservation	3.1 Seed quality and storage behaviour studies completed for five plant species 3.2 Seed or cuttings from 5 globally threatened plants held at J.R. O'Neal Botanic Gardens for propagation	3.1 Results of study available on ResearchGate 3.2 UKOTs Online Herbarium database and Final report listing accession available on ResearchGate	3.1 Adequate seed can be sourced for germination experiments 3.2 Target species can be reproduced from cuttings or produce sufficient seeds
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Output 4: Capacity building delivered to enable NPTVI to establish new ex-situ collections of globally threatened plant species, identify suitable habitat for those species and implement management to enhance resilience	4.1 Training and Evaluation Plan produced 4.2 Training of four NPTVI staff in germination experiments, plot-based quantitative survey techniques, presence/absence survey and species identification delivered by Kew and FWZ specialists 4.3 Training of four NPTVI staff evaluated by Kew and FWZ specialists and reviewed by Steering Group 4.4 Final report 'Training and Evaluation' section produced	4.1 Training and Evaluation Plan available on ResearchGate 4.2. Training documented in project reports available on ResearchGate 4.3 Minutes circulated to Steering Group 4.4. Final report available on ResearchGate	4.1 ResearchGate website continues to be maintained and available for free public use 4.2 NPTVI staff available to attend training 4.3 Specialists and Steering Group able to agree training successfully delivered and capacity built
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Output 5: Monitoring and Evaluation and project reporting	5.1 Monitoring and Evaluation Plan produced 5.2 Quarterly reports produced 5.3 Steering Group meetings held, and minutes produced 5.4 Final report produced	5.1 M&E Plan circulated to Steering Group 5.2. Reports published on ResearchGate 5.3 Minutes circulated to Steering Group 5.4. Report published on ResearchGate	5.1 ResearchGate website continues to be maintained and available for free public use
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Do you require more Output fields?

It is advised to have less than 6 Outputs since this level of detail can be provided at the Activity level.

No

Activities

Each activity is numbered according to the Output that it will contribute towards, for example 1.1, 1.2 and 1.3 are contributing to Output 1. Each new activity should start on a new line.

- 1.1 Fieldwork to survey globally threatened species
- 1.2 Genetic analysis of *Z. thomasianum* populations
- 1.3 Produce GIS occurrence layers for globally threatened species
- 2.1 Establish experimental design for vegetation survey plots
- 2.2 Field work to gather vegetation and habitat data
- 2.3 Consult archives, historical records for land use history and maps
- 2.4 Produce GIS layers of forest plot data and forest habitat critical for globally threatened flora and fauna
- 3.1 Collect seed material of five globally threatened plant species from wild populations for ex-situ conservation and seed storage behaviour studies
- 3.2 Undertake seed storage behaviour studies
- 3.3 Collect plant material from wild populations for vegetative propagation and ex-situ conservation
- 4.1 Training and Evaluation Plan produced
- 4.2 Training of four NPTVI staff in germination experiments, plot-based quantitative survey techniques, presence/absence survey and species identification delivered by Kew and FWZ specialists
- 4.3 Training of four NPTVI staff evaluated by Kew and FWZ specialists and reviewed by Steering Group
- 4.4 Produce Final report 'Training and Evaluation' section
- 5.1 Produce Monitoring and Evaluation Plan
- 5.2 Produce quarterly reports
- 5.3 Undertake Steering Group meetings and produce minutes
- 5.4 Produce final report

Section 11 - Implementation Timetable

Q27. Provide a project implementation timetable that shows the key milestones in project activities

Please complete the Excel spreadsheet linked below to describe the intended workplan for your project.

Darwin Plus Implementation Timetable

Please add 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 fill/shade only the quarters in which an activity will be carried out.

Once you have completed your implementation timetable please upload it using the file upload tool below.

📄 [DPLUS R7-implementation-timetable_KewB](#)

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Section 12 - Monitoring and Evaluation

Q28. Monitoring and evaluation (M&E) plan

Describe, referring to the Indicators above, how the progress of the project will be monitored and evaluated, making reference to who is responsible for the project's M&E.

Darwin Initiative projects are expected to be adaptive and you should detail how the monitoring and evaluation will feed into the delivery of the project including its management. M&E is expected to be built into the project and not an 'add' on. It is as important to measure for negative impacts as it is for positive impact.

The Co-PIs, Dr Martin Hamilton and Mr Thomas Heller, will develop and circulate a Monitoring and Evaluation Plan during Q1 of Year 1. The project will be delivered as a partnership between Kew, NPTVI and FWZ. Each partner organisation will be a member of the Steering Group which will be co-chaired by Dr Colin Clubbe and Ms Lynda Varlack who both have extensive experience of project management, evaluation and monitoring. The Steering Group will meet quarterly and receive reports from the Co-PI, Mr Thomas Heller, review progress and ensure that reports for Darwin are prepared on time. Quarterly reporting and fieldwork reports will enable the Steering Group to make informed decisions to maximise the impact of the project and ensure value for money. Quarterly updates will be used to evaluate progress against the project log frame and to identify any obstacles to the successful delivery of the outputs and the project overall. Regular communication by email and Skype between partners will be maintained between quarterly meetings. The quarterly Steering Group meetings will be minuted by the Co-PI, Mr Thomas Heller, to provide a means of verification for the monitoring and evaluation plan and circulation to the stakeholders. Grant agreements between Kew and each of the project partners will be established and signed at the start of the project and will articulate the roles and responsibilities of each partner in the delivery of the project. At the end of the project a final report will be published that will include an evaluation of the impact of the project and its successes and failures. This will be submitted to Darwin and disseminated by Kew on the project webpage on the ResearchGate website. Appropriate results will be published in academic journals. Success in publishing the key scientific results in a peer-reviewed journal will be a means of external validation of the quality of the science undertaken; however, this will most likely occur after the project finishes.

Kew will manage the project adaptively, working with partners to respond to circumstances in a strategic manner so that the overall objective is achieved. The logical framework, implementation timetable and activities will be used by the project leader and steering group to regularly evaluate progress against project indicators and targets. Any changes deemed necessary due to lacking progress or unanticipated events/conditions will be implemented.

Number of days planned for M&E 93.00

Total project budget for M&E (this may include Staff and Travel and Subsistence Costs) (£)

Percentage of total project budget set aside for M&E (%) 8.00

Section 13 - Certification

Certification

On behalf of the

trustees

of

Royal Botanic Gardens, Kew

I apply for a grant of

£275,258.00

I certify that, to the best of our knowledge and belief, the statements made by us in this application are true and the information provided is correct. I am aware that this application form will form the basis of the project schedule should this application be successful.

(This form should be signed by an individual authorised by the applicant institution to submit applications and sign contracts on their behalf.)

- I enclose one page CVs for key project personnel and letters of support.**
- I enclose the most recent 2 sets of signed and audited/independently verified accounts.**

Checked


Name PROFESSOR MONIQUE SIMMONDS

Position in the organisation Deputy Director of Science

Signature (please
upload e-signature)

 [DPLUS R7-KewBVI2019-22_certification](#)

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Date

29 August 2018

Section 14 - Submission Checklist

Checklist for submission

	Check
I have read the Guidance documents, including the "Guidance Notes for Applicants" and "Finance Guidance".	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 this proposed project.	Checked
I have provided a budget based on UK government financial years i.e. 1 April - 31 March and in GBP.	Checked
I have checked that the budget is complete, correctly adds up and have included the correct final total at Q7.	Checked
The application has been signed by a suitably authorised individual.	Checked
I have included a 1 page CV for all the Project staff (listed at Q11) on this project, including the Project Leader.	Checked
I have included a letter of support from the applicant organisation, main partner(s) organisations and the relevant OT Government.	Checked
I have uploaded a signed copy of the last 2 years annual report and accounts for the lead organisation, or provided an explanation if not.	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 GOV.UK.	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 the Darwin Initiative, Darwin Plus and our sister grant scheme, the IWT Challenge Fund. We also provide occasional updates on other UK Government activities related to biodiversity conservation and share our quarterly project newsletter. You are free to unsubscribe at any time.

Checked

Data protection and use of personal data

Information supplied in this application form, including personal data, will be used by Defra as set out in the latest copy of the Privacy Notice for Darwin, Darwin Plus and the Illegal Wildlife Trade Challenge Fund available **here**. This Privacy Notice must be provided to all individuals whose personal data is supplied in the application form. Some information, but not personal data, may be used when publicising the Darwin Initiative including project details (usually title, lead organization, location, and total grant value) on the GOV.UK and other websites.

Information relating to the project or its results may also be released on request, including under the 2004 Environmental Information Regulations and the Freedom of Information Act 2000. However, Defra will not permit any unwarranted breach of confidentiality nor will we act in contravention of our obligations under the General Data Protection Regulation (Regulation (EU) 2016/679).