

# **DPLR2\1038**

## **Permanent survey plots for baseline and long-term woodland ecological assessment**

Habitat degradation, invasive species, and climate change are just a few of the threats to the natural world that supports our existence. Large-scale loss of biodiverse forest is easily measured from aerial images but we know a lot less about finer scale changes to forest health over time. The Woodland Preserve in the QEII Botanic Park is an ideal site to base permanent survey plots to allow for long-term comparative assessment of the native vegetation in the Cayman Islands.

# DPLR2\1038

Permanent survey plots for baseline and long-term woodland ecological assessment

## Section 1 - Project Title & Contact Details

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### Q1. Project Title

Permanent survey plots for baseline and long-term woodland ecological assessment

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

Organisation

#### CONTACT DETAILS

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<b>Title</b>	Mr
<b>Name</b>	Stuart
<b>Surname</b>	Mailer
<b>Tel (Work)</b>	[REDACTED]
<b>Email (Work)</b>	[REDACTED]
<b>Address</b>	[REDACTED]
	[REDACTED]
	[REDACTED]
	[REDACTED]
	[REDACTED]
	[REDACTED]

#### GMS ORGANISATION

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Type	Organisation
<b>Name</b>	Queen Elizabeth II Botanic Park
<b>Phone (Work)</b>	[REDACTED]
<b>Email (Work)</b>	[REDACTED]
<b>Website</b>	[REDACTED]
<b>Address</b>	[REDACTED]
	[REDACTED]
	[REDACTED]
	[REDACTED]

## Section 2 - Overseas Territory(ies)

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### Q3. Overseas Territory (Guidance section 1.3):

**Which UK Overseas Territory(ies) will your project be working in? Please note that in case of a non-permanent resident population you need to demonstrate a clear, meaningful, long-term link to the territory.**

Cayman Islands

**\* if you have indicated a territory group with an asterisk, please give detail on which territories you are working on here:**

*No Response*

In addition to the UKOT(s) you have indicated, will your project directly benefit any other UK OT(s) or country(ies)?

No

## **Section 3 - Project Partners**

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### **Q4. Project partners (Guidance section 3.2)**

**In this section, please give details of all the partners involved (including the Lead Partner) and provide a summary of their roles.**

**Project Leader name  
(Guidance section 3.1):**

John Lawrus

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

Queen Elizabeth II Botanic Park

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**Lead Partner Website (if  
applicable):**

www.botanic-park.ky

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**Is the Lead Partner based  
in a UKOT where the  
project is working  
(Guidance section 3.1)?**

Yes

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**List other partners  
involved and where are  
they based (Guidance  
section 3.2):**

Stuart Mailer – Cayman Islands

Nick Johnson, Great British Botanic Ltd. – U.K.

National Trust for the Cayman Islands – Cayman Islands

Department of Environment – Cayman Islands

Royal Botanic Gardens, Kew – U.K.

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Queen Elizabeth II Botanic Park – Lead Partner, site of the project, logistical support and administrative responsibility for the grant. QEIBP is a member of Botanic Gardens Conservation International (BCGI) and is guided by its Conservation Practitioner Accreditation framework of targets for accession data.

Stuart Mailer – Lead Applicant, co-designed the 2021 Woodland Survey and executed the 2021 temporary plot installation and survey. Leads execution of the project.

Nick Johnson – Instigated the 2021 project; will provide data management and analysis, report preparation, liaison with RGBKew.

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

National Trust for the Cayman Islands – Co-owner of QEIBP with the Cayman Islands government, will provide publicity, hosting stakeholder meetings.

Department of Environment CI – National Tropical Important Plant Area (TIPA) constituency convenor, mapping assistance.

Royal Botanic Gardens, Kew – Royal Botanic Gardens, Kew (RGBK) spearheads the international TIPA project. A network of 18 TIPAs in the British Virgin Islands has recently been designated (Dani Sanchez et al. 2021).

The UKOT Team works closely with OTs to provide data management, access to BRAHMS, plant identification and herbarium support.

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**I confirm that all listed partners are aware of this application and have indicated support:**

Checked

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**Attach a Cover Letter for your application (Guidance section 4.2).**

- [DPLR2\\_1038 Cover letter](#)
- 26/06/2023
- 22:05:22
- pdf 409.06 KB

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## **Section 4 - Project Summary & Description**

### **Q5. Project Summary (Guidance section 3.8)**

**Please provide a brief summary of your project. This may be used in communication activities and/or published online, if your application is successful.**

Habitat degradation, invasive species, and climate change are just a few of the threats to the natural world that supports our existence. Large-scale loss of biodiverse forest is easily measured from aerial images

but we know a lot less about finer scale changes to forest health over time. The Woodland Preserve in the QEII Botanic Park is an ideal site to base permanent survey plots to allow for long-term comparative assessment of the native vegetation in the Cayman Islands.

## **Q6a. Description (Guidance section 2.1 and 6)**

**Please provide a description of your project, including:**

- **the overall objective**
- **the current situation and the problem the project is trying to address**
- **what success will look like and how you will measure it**

**Please be as specific as possible when describing the project, using quantified data and evidence where available. You may wish to consider: what are the specific threats to the environment that the project will attempt to address, and what should we know about these threats? What does your successful project look like? And how will you demonstrate whether and how your project has been successful?**

Objective

To create 100 permanent survey plots (PSPs) in the QEIIBP Woodland Preserve for baseline and long-term assessment of species composition and vegetation dynamics in response to invasive species, tropical storms and climate change. Related objectives are to update accession records of ex situ conservation species translocated into the plots and to provide data to inform the national Tropical Important Plant Areas (TIPAs) constituency.

Background

The Queen Elizabeth II Botanic Park (QEIIBP) contains 40 acres of land reserved for conservation which ranges from low-lying, primary and secondary forest growth to seasonal wetlands and ponds. It is estimated that 40% of Grand Cayman's native flora occurs in the Park (Dacosta-Cottam et al 2009). QEIIBP contains Lowland Semi-deciduous Forest: *Bursera simaruba* - *Guapira discolor* - *Tabebuia heterophylla* dry forest, and a notable small pocket of *Thrinax radiata* - *Bursera simaruba* saturated forest (Burton 2008).

Botanic gardens play a vital role in long-term conservation by hosting ex situ collections (Clubbe et al. 2020) QEIIBP is home to ex situ populations of some of the islands' most endangered endemic plants, including *Dendrophylax fawcettii* (Orchidaceae) (DarwinPlus Local 00005), *Wittmackia caymanensis* (Bromeliaceae) and *Consolea millspaughii* (Cactaceae). At the same time, detrimental impacts of non-native pests have been observed, in particular the scale insects, *Gymnaspis aechmeae* on *Wittmackia* and *Philephedra tuberculosa* and *Paratachardina pseudolobata* on *Bursera* (Malumphy and Reid 2018). Since opening in 1994 the Park has sustained storm impacts, particularly from Hurricane Ivan (2004).

Permanent plots have been used in ecology for over 100 years and remain highly relevant as a means of developing accurate time series of plant community dynamics (de Bello et al. 2020). In 2021 Nick Johnson, the then horticultural manager at QEIIBP, proposed a plot based survey, and he and Stuart Mailer commenced laying out the framework for 10x10 meter plots adjacent to the Woodland Trail. They surveyed 95 plots, collecting species abundance data for all adult angiosperms and size and phenology details for trees => 10 cm DBH. More than 120 species have been recorded. Some of the raw data has been uploaded to the Botanical Research and Herbarium Management System (BRAHMS).

The survey revealed that the plots contain a number of yet-to-be accessioned translocated species. Consideration of a network of TIPAs in the Cayman Islands remains in its early stages.

## Proposal

The specific outputs needed to ensure the outcome of a long-term benefit of the 2021 survey, are:

1. Permanent, trail-side survey beacons on 100 natural vegetation PSPs in the Woodland Preserve, plus secondary magnetic nails and discs marking interior corners of the plots.
2. Permanent tags on each of the trees marked in 2021 and recording significant changes to any of the population.
3. Complete database of the PSPs in BRAHMS database, clean and analyse data.
4. Report to the partners on the 2021 baseline vegetation survey.
5. Engaging with national TIPA constituency.
6. Local and international awareness raised - public seminar at QEIBP, prepare updates for QEIBP and NTCI websites and press releases to local media. Install interpretive signage for the Woodland Trail.

## Measuring Success

1. 1 000 meters of zero-maintenance professional grade survey infrastructure installed for future resurvey and research.
2. Baseline vegetation survey quantifies QEIBP's potential as a candidate location in a prospective national TIPA network according to the Darbyshire (2017) criteria, threatened species and species richness.
3. Updated accessions of ex situ conservation species of concern in the plots data meets Targets 5, 8, and 9, of the BGCI accreditation.
4. Four members of staff of QEIBP and NTCI are familiarised with the PSP system and the survey methodology.

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

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

Permanent marking ensures that the survey plots will be respected during routine maintenance and when any improvements might be made to the Woodland Trail (e.g. paving for wheelchair accessibility). The use of professional grade survey beacons should ensure that the marking will endure for decades to come.

The permanent survey plots and the published report will enable the 2021 survey to be repeated at future intervals. Re-survey will provide quantitative data to test hypotheses on mortality of *Bursera simaruba*. The addition of dataloggers to record temperature and humidity to the survey will supply data to quantify the recognised but unmeasured seasonality in habitat microclimates.

Development is rapidly increasing in the eastern districts of Grand Cayman. Quantitative data on species richness will provide the best possible evidence to persuade planning and development agencies of conservation needs.

The co-ownership of the Botanic Park by the conservation-mandated NTCI ensures the long-term future of the Woodland Preserve. Capacity building by and among the QEIBP and NTCI staff, prepares for resurveying in future years.

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

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- [DPLR2\\_1038 Supplemental](#)
  - 26/06/2023
  - 22:22:20
  - pdf 491.68 KB

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## Section 5 - Project Outcome(s)

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

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

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

- |           |   |
|-----------|---|
| Checked   | <b>Biodiversity: improving and conserving biodiversity, and slowing or reversing biodiversity loss and degradation;</b>   |
| Unchecked | <b>Climate change: responding to, mitigating and adapting to climate change and its effects on the natural environment and local communities;</b>   |
| Unchecked | <b>Environmental quality: improving the condition and protection of the natural environment</b>   |
| Checked   | <b>Capability and capacity building: enhancing the capacity within OTs, including through community engagement and awareness, to support the environment in the short- and long-term.</b> |

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

Biodiversity

Provides quantitative baseline data from 10,000 square meters of plots to measure survival and adaptation by the native flora to inform policy, management, and practice. Identifies and quantifies species composition and diversity in a candidate TIPA site, including 125 native taxa and four endemic or nationally endangered orchid species in the ex situ collection and two in situ species.

Capability and capacity building

Promotes QEIBP as a centre for conservation excellence and influence in the Cayman Islands and regionally. Interpretative signage for the Permanent Survey Plots will be seen by thousands of visitors to the QEIBP annually.

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## Section 6 - Workplan

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### Q8. Workplan (Guidance section 2.2)

**Please provide anticipated dates for the start and end of your planned project here. Please use the Darwin Plus Local Project Workplan (available at: <https://darwinplus.org.uk/apply>) to provide a list of**

**the individual activities you have planned for this project, a brief description of what each activity entails, and the months in which the activities will be carried out. If the project involves only one activity (e.g. a purchase), please still provide project start and end dates (noting estimated times for procurement). Please note that your project must be completed by 31 March 2024.**

<b>Start date:</b>	<b>End date:</b>	<b>Duration (e.g. 3 months):</b>
02 October 2023	31 March 2024	6 months

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

- [DPLR2\\_1038-Workplan-v2](#)
- 26/06/2023
- 19:55:52
- pdf 566.78 KB

## **Section 7 - Costs**

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

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

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

Yes

**How much matched funding are you seeking and where from?**

Matched funds have been confirmed for:

- Mr. Johnson’s accommodation and transportation while in Grand Cayman in the first half of December. Equivalent hotel accommodation cost would be not less than GBP [REDACTED]
- Activity 5.1 meeting room equivalent to GBP [REDACTED] per meeting, provided by the NTCI.

<b>Budget line</b>	<b>Explanation</b>	<b>Cost in GBP</b>
<b>Staff costs:</b>	[REDACTED]	
<b>Consultancy costs:</b>		
<b>Overhead costs:</b>		
<b>Travel &amp; subsistence costs:</b>		



<b>Operating costs:</b>	
<b>Capital equipment:</b>	
<b>Other Costs</b>	
<b>Total:</b>	

**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)**

Stuart Mailer, Lead Project Officer, time for 53 days to manage the delivery of the project’s activities, liaise with partners and stakeholders for attendance of their staff for familiarisation and training opportunities when installing secondary set of survey markers and tree tags, install and service data loggers, perform data input, cleaning and analysis and lead on writing of project report. - [REDACTED]

Nick Johnson, Great British Botanics Ltd. Project Officer, time for 26.5 days to contribute the delivery of the project’s activities, liaise with RGBKew, perform data input, cleaning and analysis and writing of project report. - [REDACTED]

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

QEIBP is the site of the project, provides logistical support and administrative responsibility for the grant, including purchasing, customs duty waivers and clearance, accounting services, banking fees, provides utilities supply, golf cart use, and performs monitoring and evaluation.

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

Airfare - British Airways, economy, December season - [REDACTED] estimated.

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

Licensed Cayman Islands surveyor quotation for installation of 100 beacons - GBP [REDACTED]

Aluminium survey caps and tree tags (including shipping and handling) - GBP [REDACTED]

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

Main capital item is a cordless hammer drill and accessories, budgeted at [REDACTED]

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

N/A

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

N/A

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**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:**

<b>Other currency:</b>	<b>Exchange rate:</b>	<b>Source of this exchange rate:</b>	<b>Date exchange rate accessed:</b>
CI\$	GBP 1.0388 : CI\$1.00	Bank of Butterfield - Cayman	23 June 2023

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**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?** ■

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

Contract for services with Great British Botanics Ltd. for Mr. Johnson - ■ is justified on the grounds of his close relationship to the project both in initiation and to complete it.

Airfare is unavoidable as British Airways is the only direct connection between the UK and the Cayman Islands - ■

Aluminium survey caps and tree tags - GBP ■ and two dataloggers - ■ There are no manufacturers or suppliers of these materials/equipment in the Cayman Islands.

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## **Section 8 - Local and National Priorities**

### **Q10. Local and national priorities**

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

The project being conducted in the Woodland Preserve aligns closely with objectives and actions defined in Habitat Action Plan for Forest and Woodland in the National Biodiversity Action Plan (DaCosta-Cotton et al 2009).

Objective 2. Maintain forest and woodland in a natural state, by allowing the natural processes which lead to their formation to continue.

The Woodland Reserve contains both primary and reverting secondary growth.

Research and Monitoring

RM1. Update and refine existing maps of forest and woodland.

RM3. Incorporate all pre-existing and forthcoming research and monitoring data, habitat mapping and

imagery into a spatially-referenced database.

RM4. Develop and expand research programmes, to incorporate and target indicators of climate change.

RM6. Expand studies into the biodiversity of forest and woodland species.

The Natural Heritage Protection Strategy 2021-2030 (NHPS) of the National Trust for the Cayman Islands is applicable to the Woodland Preserve due to the NTCI's part ownership in the QEIIBP.

The project contributes to NHPS Goal 3 - protect adequate land for the needs of endemic species and Action 6.3 - assess habitats vital for sustaining threatened species.

**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.**

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[DPLR2\\_1038 CINAA Support letter](#)

26/06/2023

19:51:16

pdf 226.94 KB

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[DPLR2\\_1038 DOE QEIIBP TIPA Support letter](#)

June 2023

26/06/2023

19:51:16

pdf 137.11 KB

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## Section 9 - Project Risks

### Q11. Project Risks

**Please demonstrate your consideration of any risks involved in this project and how you intend to manage them. Please note the importance of health and safety and environmental risk assessment in the design of your project. If there is any possibility that your project may have negative impacts on the environment or human health, it is important that you provide a comprehensive analysis of potential environmental and human health risks, and the prevention measures you will take to ensure the work does not cause harm.**

**Depending on your project, you may wish to consider:**

- **Biosecurity risks** – particularly for projects involving external equipment.
- **Safeguarding risks** – particularly for projects involving vulnerable groups such as children, older people or people with disabilities.

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**Risk**

**Mitigation**

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Negative environmental impact	Numbers of persons active in the plots will be limited to avoid trampling. Installation of the rear plot markers will not involve any vegetation clearing.
There is a security risk to the ex situ populations of critically endangered plants through exposure to more activity in the PSPs and through publicity.	Whilst plant locations are shared with partners for verification purposes and continuity of the project, details are obscured in reporting that is made publicly available.
	Published images should not include geolocations and visitors to plots will be warned accordingly. It is an offence under the National Conservation Act to take protected species.
Hurricane season June - December	Grand Cayman infrastructure is good, such that any disruptions to field work are likely to be minimal.
	Field work is front loaded, providing a cushion for extending into the second quarter of the workplan.
Field safety	Field work takes place within the QEIBP during normal working hours. The woodland Trail is emergency vehicle accessible. The Park is within cell phone coverage. Protective clothing and gloves are used.

**Do you require more fields?**

No

**Section 10 - Terms & Conditions**

**Q12. Terms and conditions (Guidance section 3.10)**

**By applying for Darwin Plus Local you are adhering in full to the grant Terms and Conditions in full (available at: <https://dplus.darwininitiative.org.uk/apply> and as referenced in the Guidance at section 3.10). For information, the Terms and Conditions include requirements for all applicants to (amongst other requirements as per the full Terms and Conditions):**

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

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

Checked

**Supporting documents list (please have these ready to attach with application)**

- **Cover Letter of no more than two A4 pages. (Guidance section: 4.2 has information on what this cover letter should include).**
- **If the project takes place on public land or water or is addressing invasive alien species, a Letter of support from OT Government.**
- **Project Workplan in the template provided for Darwin Plus Local (available at: <https://darwinplus.org.uk/apply>).**
- **Map and additional information (optional) maximum five additional pages.**

**If your application is successful**

If your project application is successful, the Fund Administrator (NIRAS) will ask you to provide some financial evidence for due diligence checks before you receive your project grant. (Please see section 3.3 of the Darwin Plus Local Finance Guidance). Please be ready to provide this evidence promptly.

- **Financial evidence for organisations: Year-end financial statements, the latest management accounts or audited accounts (if you have these).**
- **Financial evidence for individuals: Proof of identity such as a passport, ID card or driving licence and solvency (such as bank statements) and a police check.**

**Section 11 - Certification**

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**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:** John Lawrus

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**Position in the organisation: (if applicable)** General Manager, Queen Elizabeth II Botanic Park

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**Signature (please upload e-signature)**  [DPLR2\\_1038 Signature page](#)  
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 20:03:32  
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**Date:** 26 June 2023

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**Section 12 - Submission Checklist**

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**Checklist for submission**

	<b>Check</b>
<b>I have read the Guidance documents, including the “Darwin Plus Local Guidance” and the “Darwin Plus Local Finance Guidance”.</b>	Checked
<b>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.</b>	Checked
<b>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).</b>	Checked
<b>I have read, and can meet, the current Terms and Conditions for this fund.</b>	Checked
<b>I have provided actual start and end dates for my project that fit this Round.</b>	Checked
<b>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.</b>	Checked
<b>I have uploaded my project workplan using the specific template provided.</b>	Checked
<b>(If copying and pasting into Flexi-Grant) I have checked that all my responses have been successfully copied into the online application form.</b>	Checked
<b>The application has been signed by a suitably authorised individual (clear electronic or scanned signatures are acceptable).</b>	Checked
<b>I have checked the Darwin Plus website immediately prior to submission to ensure there are no late updates.</b>	Checked
<b>I have read and understood the Privacy Notice on the Darwin Plus website.</b>	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 [Forms and Guidance Portal](#).

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

**Project Title: DPLR2\1038 Permanent survey plots for baseline and long-term woodland ecological assessment**

Activity #	Description (max 25 words – edit once activities clarified)	No. of months	UK Financial Years 2023/24					
			Calendar Year 2023			Calendar Year 2024		
			Oct	Nov	Dec	Jan	Feb	Mar
Output 1.	100 permanent survey beacons installed on 4 corners of 100 natural vegetation plots established adjacent to the QEIBP Woodland Trail.							
1.1	Existing 95 plots + 5 additional reviewed and missing stakes re-established in preparation for professional installation of 100 trailside beacons. Order caps and tags.	0.25	xxxx					
1.2	Licensed surveyors install 100 beacons made of rebar in concrete/PVC sleeves with 2 inch aluminium survey caps, with table of accurate GPS positions.	0.2		xxxx				
1.3	Project staff add secondary survey beacons magnetic nails to the interior corners of plots.	0.5		xxxx	xxxx			
Output 2.	Permanent tags installed on each of the trees marked in 2021, assessment of significant changes any of the population.							
2.1	Previously surveyed trees retagged with permanent, consecutively numbered tree tags and changes since 2021 recorded.	0.5		xxxx	xxxx			
2.2	Purchase and Install 2 dataloggers.	0.1	x		x			
Output 3.	A completed database of the permanent survey plots in the Botanical Research and Herbarium Management System (BRAHMS)							

Project Title: DPLR2\1038 Permanent survey plots for baseline and long-term woodland ecological assessment

Activity #	Description (max 25 words – edit once activities clarified)	No. of months	UK Financial Years 2023/24					
			Calendar Year 2023			Calendar Year 2024		
			Oct	Nov	Dec	Jan	Feb	Mar
3.1	Consult with RBGKew partner on data management and refresher on BRAHMS.	0.1	xxx					
3.2	Consult with RGBKew. Plant ID, plant collection, pressing, export.	0.5		xx	xx	xx		
3.3	Complete remainder of 2021 data input and perform data cleaning in BRAHMS	0.5	xxxxx	xxxxx	xx			
Output 4.	Report to the partners of the 2021 baseline vegetation survey.							
4.1	Data analysis, including extracting data to populate QEIBP Ex Situ Conservation Accessions database; and drafting report.	2.0		xxxxx	xxxxxxx	xxxxxxxxx		
4.2	Meeting of partners in Cayman to review progress, ground-truthing data and drafting report.	0.25			xxxxxx			
4.3	Report review, revisions, formatting and publishing to partners and stakeholders.	2.0					xxxxxxxxxxxxx	xxxxxx
Output 5.	Progress debate among National TIPA constituency.							
5.1	Three x 2-3 hour meetings of national TIPA constituency (Department of Environment,	0.1	x		x		x	



