Applicant: Pascoe, Nancy Organisation: National Parks Trust of the Virgin Islands

Funding Sought: £25,574.00

DPLR1\1058

Caribbean flamingos as a flagship species for wetlands conservation

The objective is to learn more about the Caribbean flamingo population in the BVI and utilise this information as a strong argument for protecting the natural ecology of the entire network of wetlands and coastal flats across the BVI, as flamingos need functioning wetlands to satisfy their dietary needs.

The Anegada salt ponds are the most extensive wetland habitats within the BVI and are known to be an important stopover site for many species of migratory birds, as confirmed by NPTVI's annual bird counts. A captive population of 18 Caribbean flamingos were reintroduced to Anegada and Guana Island in 1991, sourced from the Bermuda Aquarium Museum and Zoo, following historical extirpation. This reintroduction was coordinated by a private donor, NPTVI and the Virgin Islands Government. Since then, NPTVI has monitored the population annually to track population growth and to identify potential threats to the flamingos and their habitat.

The population has grown slowly on Anegada and is now approximately 400, although there is inter-island movement with observations on Tortola, Prickly Pear Island and Guana Island. There was a second reintroduction of Caribbean flamingos to privately owned Necker Island in 2006. Wildlife managers at Necker Island reported a population that fluctuates around 400 flamingos, with seasonal variability. In 2021 successful flamingo nesting was observed at Josiah's Bay, Tortola for the first time ever.

Caribbean flamingos are an iconic species that attract visitors to Anegada and have become an important part of the island's economy. However, this attention has also had negative impacts as inappropriate human interaction has caused disturbance to the resident flamingo population, this includes helicopters flying too low, the use of drones and tour groups getting too close to the flock. The population is also threatened by feral cats, who venture out to the small cays across the salt ponds in search of food.

In 2022 the Necker Island flamingos laid 68 eggs of which 60 juveniles survived, compared to the Anegada flamingos that laid 55 eggs and less than 10 juveniles survived due to feral cat predation, which was documented using game cameras.

The BVI flamingo population are known to visit the USVI and Puerto Rico, as neither country have resident flamingo populations and boaters have reported sightings of flamingos in flight.

Little is known about the population dynamics of BVI flamingos and this impacts the ability of NPTVI and the BVI Government to manage the wild population and the habitats that support them. The project partners want to understand how genetics are moved between breeding colonies and raise local awareness of the importance of protecting the Caribbean flamingo population as a whole, the wetland habitats that support them and other bird species that utilise them. The banding program will reveal the longevity of individual flamingos in the wild as part of a long-term monitoring project, whilst the use of GSM-GPS tags will provide easily accessible bird tracking data that causes little disturbance to the birds and stores data in a virtual data cloud. Bird strikes have been recorded in main flight pathways and mitigation methods will be trialled.

Success will be the acquisition of data that answers questions about flamingo predation, national and regional dispersal, recruitment, distances travelled and preferred wetland habitats within the BVI. This project will provide answers to these questions which will allow NPTVI and the BVI Government to make more informed

Darwin Plus Local Round 1

decisions regarding predator control, anthropogenic impacts on chick survival and protected area designation. This information can lead to better species management that is driven by science to protect a flagship species, whilst benefiting many more wetland bird species.

PRIMARY APPLICANT DETAILS



DPLR1\1058

Caribbean flamingos as a flagship species for wetlands conservation

Section 1 - Project Title & Contact Details

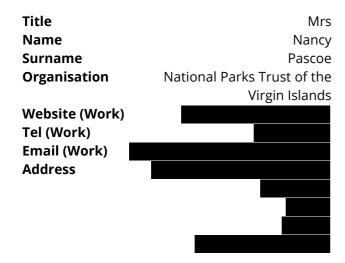
Q1. Project Title

Caribbean flamingos as a flagship species for wetlands conservation

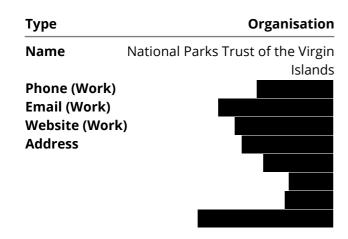
Q2. Please select whether you are applying as an organisation or as an individual (Guidance section 3 and Guidance Glossary)

Organisation

PRIMARY APPLICANT DETAILS



GMS ORGANISATION



Section 2 - Overseas Territory(ies)

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.

☑ 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)?

O No

Section 3 - Project Partners

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):	Nancy Pascoe, National Parks Trust of the Virgin Islands						
Lead Partner name (if applying as an organisation; Guidance section 3.1):	National Parks Trust of the Virgin Islands						
Lead Partner Website (if applicable):	www.bvinpt.org						
Is the Lead Partner based in a UKOT where the project is working (Guidance section 3.1)?	⊙ Yes						
List other partners involved and where are	Susan Zaluski, H. Lavity Stoutt Community College, Tortola, British Virgin Islands						
they based (Guidance section 3.2):	Brad Hazelton, Mike Fouraker, Kelly Bradley, John Griffioen, Fort Worth Zoo, Texas, United States of America						

Dr. Cassander Titley-O'Neal, Director, NPTVI: DPLUS contract signatory, project steering committee member, Virgin Gorda flamingo monitoring

Nancy Pascoe, Deputy Director, NPTVI: project management, BVI wide flamingo monitoring, GIS mapping, flamingo banding trainee, community outreach and education, Puerto Rico flamingo monitoring liaison

Huberta Hamlet, Financial Controller, NPTVI: financial oversight of project funds

Rondel Smith, Terrestrial Warden, NPTVI: Anegada flamingo and threat monitoring, game camera management, flamingo banding trainee

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

Susan Zaluski, H. Lavity Stoutt Community College: GSM – GPS tag specialist and trainer, GSM-GPS tag data management, BVI wide flamingo monitoring, United States Virgin Islands (USVI) flamingo monitoring liaison, Caribbean Waterbird Census trainer

Brad Hazelton, Fort Worth Zoo: flamingo banding specialist and trainer, banding activity coordinator

Kelly Bradley, Fort Worth Zoo: flamingo banding logistical support, banding activity assistant coordinator

Mike Fouraker, Fort Worth Zoo: flamingo banding logistical support, banding activity assistant

John Griffioen, Associate Veterinarian DVM, Fort Worth Zoo: bird health monitoring during banding activity

Two zookeepers, Avian department, Fort Worth Zoo: banding activity assistants

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).

- ① 19:55:09
- pdf 220.29 KB

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.

This pilot project will inform future conservation management activities of BVI wetland habitats using Caribbean flamingos (Phoenicopterus ruber) as a flagship species for wetland birds.

The movement of Caribbean flamingos from Anegada, BVI will be tracked to provide critical data to BVI conservation managers on the slowly expanding population that were reintroduced to the BVI in 1992. Threats to wetland birds on Anegada will be monitoring and mitigation methods trialled, with local community participation.

Q6. Description (Guidance section 2.1)

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?

The objective is to learn more about the Caribbean flamingo population in the BVI and utilise this information as a strong argument for protecting the natural ecology of the entire network of wetlands and coastal flats across the BVI, as flamingos need functioning wetlands to satisfy their dietary needs.

The Anegada salt ponds are the most extensive wetland habitats within the BVI and are known to be an important stopover site for many species of migratory birds, as confirmed by NPTVI's annual bird counts. A captive population of 18 Caribbean flamingos were reintroduced to Anegada and Guana Island in 1991, sourced from the Bermuda Aquarium Museum and Zoo, following historical extirpation. This reintroduction was coordinated by a private donor, NPTVI and the Virgin Islands Government. Since then, NPTVI has monitored the population annually to track population growth and to identify potential threats to the flamingos and their habitat.

The population has grown slowly on Anegada and is now approximately 400, although there is inter-island movement with observations on Tortola, Prickly Pear Island and Guana Island. There was a second re-introduction of Caribbean flamingos to privately owned Necker Island in 2006. Wildlife managers at Necker Island reported a population that fluctuates around 400 flamingos, with seasonal variability. In 2021 successful flamingo nesting was observed at Josiah's Bay, Tortola for the first time ever. Caribbean flamingos are an iconic species that attract visitors to Anegada and have become an important part of the island's economy. However, this attention has also had negative impacts as inappropriate human interaction has caused disturbance to the resident flamingo population, this includes helicopters flying too low, the use of drones and tour groups getting too close to the flock. The population is also threatened by feral cats, who venture out to the small cays across the salt ponds in search of food.

In 2022 the Necker Island flamingos laid 68 eggs of which 60 juveniles survived, compared to the Anegada flamingos that laid 55 eggs and less than 10 juveniles survived due to feral cat predation, which was documented using game cameras.

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Little is known about the population dynamics of BVI flamingos and this impacts the ability of NPTVI and the BVI Government to manage the wild population and the habitats that support them. The project partners want to understand how genetics are moved between breeding colonies and raise local awareness of the importance of protecting the Caribbean flamingo population as a whole, the wetland habitats that support them and other bird species that utilise them. The banding program will reveal the longevity of individual flamingos in the wild as part of a long-term monitoring project, whilst the use of GSM-GPS tags will provide easily accessible bird tracking data that causes little disturbance to the birds and stores data in a virtual data cloud. Bird strikes have been recorded in main flight pathways and mitigation methods will be trialled.

Success will be the acquisition of data that answers questions about flamingo predation, national and regional dispersal, recruitment, distances travelled and preferred wetland habitats within the BVI. This project will provide answers to these questions which will allow NPTVI and the BVI Government to make more informed decisions regarding predator control, anthropogenic impacts on chick survival and protected area designation. This information can lead to better species management that is driven by science to protect a flagship species, whilst benefiting many more wetland bird species.

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

- ♣ Flamingo NPTVI
- ① 19:57:38
- **□** jpg 4.19 MB

Section 5 - Project Outcome(s)

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

Successful Darwin Plus Local projects must demonstrate measurable outcomes in <u>at least one of the themes</u> 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 underpins:

Checked	Biodiversity: improving and conserving biodiversity, and slowing or reversing biodiversity loss and degradation;
Unchecked	Climate change: responding to, mitigating and adapting to climate change and its effects on the natural environment and local communities;
Unchecked	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.

Biodiversity threats will be identified using game cameras at key locations within Anegada's pond network. Tracking flamingos will assist NPTVI and the BVI Government to understand key habitats utilised and will inform management interventions to conserve biodiversity.

Capacity will be built as NPTVI staff will be trained using bird bands and GSM-GPS technology for bird monitoring. This skill can be applied to other bird species for conservation management.

The local community on Anegada will be involved in this project as they have a great sense of local ownership of the flamingos and what they mean to their identity and economy.

Section 6 - Project Timeline

Q8. Project timeline (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 Implementation Timetable Template (which can be downloaded below) 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 will need to be completed by 31 March 2024.

Start date:	End date:	Duration (e.g. 3 months):
25 April 2023	31 March 2024	11 months

Please upload the completed Darwin Plus Local Project Implementation Timetable template with your proposed project activities below.

- <u>R1-DPlus-Local-Implementation-Timetable-NP</u>
 <u>TVI.flamingos</u>
- © 23:23:50

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 funding will be provided by the following partner organisations:

NPTVI - Staff time for NPascoe(15%), HHamlet (5%) and CO'Neal (5%): GBP

HLSCC – Staff time for SZaluski GBP



Fort Worth Zoo – Staff time for 6 people: GBP



TOTAL: GBP

Budget line	Explanation	Cost in GBP
Staff costs:	NPTVI Terrestrial Warden Rondel Smith – currently a part-time worker on Anegada, he will be responsible for weekly monitoring of the flamingo population on Anegada and will be trained during the banding activity. This represents 3 full days and 48 half days for the project period.	
Overhead costs:	To cover fees associated with project management, such as bank fees.	
Travel & subsistence costs:	All T&S will be spent within the BVI except for the airfares for the team of 6 people from the Fort Worth Zoo, USA. Cost includes local ferry, overnight accommodation for Tortola and Jost Van Dyke based project partners on Anegada, meals and car hire.	
Operating costs:	OTHER COSTS (no box for this category?) Consumable equipment required for bird tracking, including customised bird bands and GSM-GPS tags; materials for corral when banding birds; equipment for threat mitigation including cat traps and bird strike devices to be trialed	
Capital equipment:	n/a	
Consultancy costs:	n/a	
Total:		

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)

NPTVI Terrestrial Warden Rondel Smith – currently a part-time worker on Anegada, he will be responsible for weekly monitoring of the flamingo population on Anegada and will be trained during the banding activity. This represents 3 full days and 48 half days for the project period.

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

No Response

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

The Fort Worth Zoo team are experienced in banding flamingos and will travel from Texas to Anegada, BVI for a period of 7 days to allow enough time to prepare for the activity and train local participants. NPTVI (2 people) and HLSCC (1 person) will travel from Tortola to Anegada quarterly during the project to monitor the flamingos and engage with the local community. Due to the limited ferry service this team must overnight for 3 days during the banding activity.

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

No Response

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

No Response

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

No Response

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

All specialist equipment for bird banding, GSM-GPS tags, bird strike mitigation and remote threat assessment must be purchased from the USA and UK and shipped to the BVI.

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:
US Dollar	1 USD = 0.829194 GBP	https://www.xe.com /currencyconverter/	11 February 2023

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.

The equipment required for bird banding and GSM-GPS tracking must be imported from either the USA or UK, so the remaining of the project budget will be spent on consumables and shipping and will be spent on travel for 6 banding specialists and an avian veterinarian from Fort Worth Zoo, USA to travel to the BVI. This team of experts will train the local partners in banding techniques and monitoring, and ensure that risks are mitigated to safeguard the birds being banded and the local participants.

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.

This project fits in with the conservation priorities of NPTVI and will help the BVI meet obligations under multilateral environmental agreements such as the Convention on Biological Diversity.

The island of Anegada was identified as a Key Biodiversity Area (KBA) and an Important Bird Area (IBA) in national assessments.

Birds can be valuable indicators of ecosystem health. Data collected under this project will provide an improved understanding of the ecological connectivity of wetland sites through the behaviour of the Caribbean flamingos being tracked. The project will provide updates to the BVI Government Wetlands Management Plan in terms of priority areas for protection. The data will also inform the implementation of the National Physical Development Plan (2019) where it pertains to environmental protection of sensitive sites.

Will the project take place on Government owned land or water?

Yes

Please attach evidence that you have Government support i.e. Letter of Support.

- & Letter of Support-Dawrwin PLUS MNRL
- © 20:13:09
- pdf 404.48 KB

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. 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

Bird mortality during banding or GSM-GPS tagging	Zoo staff experienced with flamingo banding will lead a thorough orientation meeting the day prior to the banding event. A detailed schedule of events will be provided to clarify the activities taking place during banding. Participants will be instructed on proper bird handling and banding techniques using stuffed/dummy birds. Once the birds are shifted to the banding coral, a timer will be set for two hours, after which time, banding activities will cease, and all birds will be released outside the coral. An experienced zoo veterinarian will be present to deal with any medical emergencies that might arise during banding.
Injuries to volunteers during banding activity	As stated above, there will be a detailed orientation for volunteers the day before the banding event and people will be assigned roles so that risk is mitigated and there is no confusion on the day. A supervisor for volunteers will be assigned and a first aid responder will be present with medical supplies. Injured persons would be transported to the medical clinic on Anegada if further treatment is needed.
Flamingos not accessible on Anegada	Flamingo movement will be monitored weekly during the entire project by an Anegada based NPTVI Warden, so the banding activity will be scheduled for the most accessible period and will utilise this local knowledge to adapt plans as needed.

Do you require more fields?

⊙ Yes

supplier and will be specially de project. Close communication with manufacturer in the case of issues. Only 6 tags will be on tright groject and contact has been madevelopment with a researcher who has also used GSM tags or willing to advise us on lessons be	Mitigation
No Response No Response	development with a researcher in Mumbai, India who has also used GSM tags on flamingos and is willing to advise us on lessons learnt. The benefit of these tags is data is stored in a web-based
	No Response

No Response	No Response
No Response	No Response
No Response	No Response

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

<u>If your application is successful:</u> 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:	Dr. Cassander Titley O'Neal
Position in the organisation: (if applicable)	Director
Signature (please upload e-signature)	 Signature 1 - Copy 12/02/2023 00:47:57 ipg 183.63 KB
Date:	11 February 2023

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, 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.	Checked
I have provided actual start and end dates for the project.	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 implementation timetable using the specific template provided.	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: Caribbean flamingos as a flagship species for wetlands conservation

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. Projects are based on UK Financial Years (**1 April – 31 March** - therefore starts April 2023).

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.

		No. of					UK F	nancial \	/ear 2023	3/24				
Activity #	Description (max 25 words)	months		Calendar Year 2023 Calendar Year 2024							2024			
			Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
1	NPTVI conduct a monthly bird count of the flamingo colony and monitor for nesting activity	12	x	x	х	x	x	х	x	х	x	х	x	х
2	NPTVI monitor threats at flamingo nesting locations on Anegada using game cameras	11		x	х	x	x	х	х	X	x	X	x	х
3	NPTVI set at least 5 Tomahawk traps at flamingo nesting locations on Anegada to catch feral cats prior to and during flamingo nesting and hatching	5	x	x	x	x	x							
4	Partners attach bird bands to 60-100 flamingos (subject to age/size) on Anegada	3				x	х	х						
5	Partners attach GSM-GPS trackers to 6 flamingos on Anegada	3				х	х	х						

		No. of					UK F	inancial \	/ear 202	3/24					
Activity #	Description (max 25 words)	months				Calen	dar Year	2023				Caler	ndar Year	2024	
			Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	
6	Engage at least 15 Anegada community members as volunteers to assist with banding and bird monitoring through personal communication and school visits			x	x	x									
7	Conduct Caribbean Waterbird Census training with at least 4 Anegada residents and 2 NPTVI staff											x	×		
8	Monitor bird strike incidents near the Fisherman's Dock, Anegada and pilot test bird deterrent 'flapper' devices on utility lines at this site	12	х	х	x	х	х	х	х	х	x	х	х	х	
9	NPTVI and HLSCC report monthly flamingo observations and Caribbean Waterbird Census data to E-Bird	12	х	x	x	х	x	х	x	x	x	x	x	x	
10	HLSCC analyse GSM GPS data of flamingo movement and share with NPTVI for GIS mapping	8					х	х	х	х	х	х	х	х	
11	NPTVI engage Department of Agriculture on euthanasia protocols for control of feral cats		х	х	х										