Applicant: **Green, Jonathan**
Organisation: **University of Liverpool**
Funding Sought: **£305,882.32**

DPR7P\100068

Regional-scale marine conservation through multi-territory tracking of frigatebirds

PRIMARY APPLICANT DETAILS

Name	Jonathan
Surname	Green
Tel (Work)	
Email (Work)	
Address	

Section 1 - Contact Details

PRIMARY APPLICANT DETAILS

Name	Jonathan
Surname	Green
Tel (Work)	
Email (Work)	
Address	

GMS ORGANISATION

Type	**Organisation**
Name	University of Liverpool
Phone (Work)	
Email (Work)	
Website	
Address	

Q3. Lead organisation type

Please select one of the below options.

⊙ Other (e.g. Academic)

Section 2 - Title, Dates & Budget Summary

Q4. Project title

Regional-scale marine conservation through multi-territory tracking of frigatebirds

Q5. Project dates

Start date:	End date:	Duration (e.g. 2 years, 3 months):
01 April 2019	30 September 2021	2 years, 6 months

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.

- ☑ Anguilla
- ☑ Bermuda
- ☑ British Virgin Islands (BVI)
- ☑ Cayman Islands
- ☑ Montserrat
- ☑ Turks & Caicos Islands (TCI)

*** 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.

ABC Islands, Antigua and Barbuda, Bahamas, Barbados, Belize, Colombia, Cuba, Dominican Republic, Grenada, Guadeloupe, Haiti, Jamaica, Martinique, Mexico, Puerto Rico, Saba, Saint Barthelemy, Saint Eustatius, Saint Kitts and Nevis, Sint Maarten/Saint Martin, St Vincent and the Grenadines, Trinidad and Tobago, USA, US Virgin Islands

Q7. Budget summary

Year:	2019/20	2020/21	2021/22	Total request
Q7a. Request from Darwin:	£140,232.59	£100,760.70	£64,889.03	**£** 305,882.32

Q7b. Proposed (confirmed and unconfirmed) co-financing as % of total project cost	38

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?	1881
What is the legal status of your organisation?	⊙ University
How is your organisation currently funded?	The University of Liverpool is funded through a number of streams. Grants for teaching and research come from the Higher Education Funding Council for England, as well as the main UK Research Councils (AHRC, BBSRC, EPSRC, ESRC, MRC, NERC and STCF). Other research funders include charities, industry and commence, government departments, the European Commission ad other grants and contracts. Endowments and investments represent another source of funding, and undergraduate and postgraduate students largely pay tuition fees.
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.	⊙ Yes

Please attach the requested signed audited/independently examined accounts.

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.

Annual,Accounts,2015-2016.compressed.Part1
31/08/2018
15:07:14
pdf 4.94 MB

Annual,Accounts,2015-2016.compressed.Part2
31/08/2018
15:06:34
pdf 3.07 MB

Annual,Accounts,2016-2017.compressed
31/08/2018
15:06:30
pdf 3.37 MB

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
DPLUS007	Dr Jonathan Green	Using seabirds to inform Caribbean marine planning
64906	Edward Maltby	The Darwin Southeast Asian Wetland Restoration Initiative
No Response	*No Response*	*No Response*
No Response	*No Response*	*No Response*
No Response	*No Response*	*No Response*
No Response	*No Response*	*No Response*

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:	University of Liverpool

Details (including roles and responsibilities and capacity to engage with the project):	The University of Liverpool (UoL) led the development of this collaborative project with the various partner organisations. UoL will assume overall responsibility for leading the project and ensuring delivery of the planned outcomes. Dr Austin will coordinate the project activities, ensure communication between project partners, manage fieldwork on the Cayman Islands where she has worked with the DoE, and lead on the production of project outputs (e.g. reports, draft management documents, scientific publications). Dr Green will provide additional support for these tasks and will assume responsibility for project monitoring and evaluation tasks, including chairing the independent steering committee. Dr Green will take responsibility for ensuring that the financial obligations of the project are met. The finance team at the School of Environmental Sciences, overseen by the Research Support Office, will manage project finances and send monthly reports to Drs Green and Austin. The University of Liverpool holds a wealth of experience managing grants such as this (including previous DPLUS projects: 007 and 044), and thus has the capacity to ensure that project objectives are fully met in a timely and efficient manner.
Have you included a Letter of Support from this organisation?	⊙ Yes

Do you have partners involved in the Project?

⊙ Yes

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.

1. Partner Name:	Anguilla National Trust
Website address:	www.axanationaltrust.com
Details (including roles and responsibilities and capacity to engage with the project):	The Anguilla National Trust (ANT) has been involved in all stages of the development of this proposal. Through previous collaborative work (e.g. DPLUS007), ANT and UoL have built effective mutually-beneficial working relationships. This project will utilize local capacity in Anguilla that has been built up in previous Darwin projects (DPLUS007, DPLUS035). Partner staff in this UKOT will manage field phases to collect required data with support from UoL. They will receive training in the use of magnificent frigatebirds as indicator species for marine hotspot identification, to build capacity in this OT for translating research into management outputs. They will also participate in activities including the regional workshop that will be hosted by the ANT and supporting activities. ANT staff will also be involved in monitoring and evaluation processes and will input into project outputs (i.e. editing reports, management documents and manuscripts).

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:	Cayman Islands' Government Department of Environment
Website address:	http://doe.ky
Details (including roles and responsibilities and capacity to engage with the project):	The Cayman Islands Government Department of Environment (DoE) has also been instrumental in the development of this proposal from the outset. The DoE and Dr Austin built a close working relationship during the recently completed DPLUS044 project, during which considerable in-country capacity in seabird monitoring and research techniques was built. This effective collaboration between the UoL and DoE has allowed both in-country and regional data and expertise gaps relevant to the DoE and Cayman Islands ecosystems to be identified, which will be met with the current proposal. The DoE will participate in field phases, with support from Dr Austin, and will receive training in how data from magnificent frigatebird movement research can be used in marine management, to build capacity in the OT for translating research into management outputs. They will also participate in activities including the regional workshop, development of management strategies and supporting activities. DoE staff will also be involved in monitoring and evaluation processes and will input into project outputs (i.e. editing reports, management documents and manuscripts).
Have you included a Letter of Support from this organisation?	⊙ Yes

3. Partner Name:	Jost van Dykes Preservation Society
Website address:	http://jvdps.org

Details (including roles and responsibilities and capacity to engage with the project):	The Jost van Dykes Preservation Society (JVDPS) is a not-for-profit organisation of the British Virgin Islands (BVI). JVDPS has a solid working relationship with UoL and has been engaged in this proposal's development. This proposal will provide one of the BVI's identified conservation management priorities i.e. their need for regional co-operation within its conservation management strategies. JVDPS will use existing capacity for seabird tracking and monitoring (built during DPLUS007 and subsequent in-country project work) to manage and undertake fieldwork tasks during the project in the BVIs, with support as necessary from the team at the UoL. As with other partner territories, partner staff from BVI will receive training in the use of magnificent frigatebirds as indicators for identifying marine hotspots, and will thus benefit from increased capacity for translating research into management outputs. Representatives from JVDPS and other BVI agencies will participate in activities including the regional workshop, development of management strategies and supporting activities. JVDPS staff will also be involved in monitoring and evaluation processes and will input into project outputs (e.g. editing reports, management documents and manuscripts).
Have you included a Letter of Support from this organisation?	⊙ Yes

4. Partner Name:	Turks and Caicos Government Department of Environment and Coastal Resources
Website address:	www.gov.tc/dema/
Details (including roles and responsibilities and capacity to engage with the project):	The Turks and Caicos (T&C) Department of Environment and Coastal Resources (DECR) have been engaged actively with the development of this project proposal since its early stages. They are very keen to be involved in the proposed regional work, as a precursor to future territory-specific projects that will build capacity for both monitoring and managing mobile marine vertebrates, as well as protected areas designation. The Turks and Caicos are the fourth Caribbean UKOT that hosts breeding populations of magnificent frigatebird colonies. Representatives from DECR will attend the regional workshop and input into the development of regional management strategies. Following identification of training and data needs in the T&C, Seabird experts from the UoL will work alongside DECR to undertake site visits and scoping activities in this territory, in order to assess ways forwards for future work. It is anticipated that this will lead to the development of future funding proposals by this collaborative team. The T&C will thus represent an excellent case study for the application of methods developed during this project.
Have you included a Letter of Support from this organisation?	⊙ Yes

5. Partner Name:	BirdsCaribbean
Website address:	www.birdscaribbean.org
Details (including roles and responsibilities and capacity to engage with the project):	BirdsCaribbean has been engaged with this project idea as it has developed and was involved in early discussions about its feasibility and potential for long-term impact. As one of the largest conservation organisations in the Caribbean, BirdsCaribbean will utilise its extensive network and capacity for public engagement to promote the use of methods and frameworks developed during tracking and marine hotspot identification stages to all of their partners. BirdsCaribbean will also be the main partner facilitating and leading the regional workshop later in the project, and will work to engage non-UK states and territories, and facilitate their participation in the workshop. By ensuring that the project and its outputs are widely disseminated to local practitioners, and to management and conservation bodies operating at the regional scale (e.g. CamPAM), BirdsCaribbean will encourage continuation and future strengthening of coordinated approaches to management in the entire Caribbean region over the long-term.
Have you included a Letter of Support from this organisation?	⊙ Yes

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.

As well as the formal partners listed above, our project is also supported by governments from the UKOTs of Montserrat and Bermuda (see Letters of Support). Thus organisations from all six Caribbean UKOTs are involved in and supportive of this application.

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

LettersOfSupport
03/09/2018
12:35:04
pdf 2.54 MB

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?
Jonathan Green	**Project Leader**	7.5	Checked
Rhiannon Austin	Project Co-Leader	100	Checked
Farah Mukhida	Project Partner	2	Checked
Louise Soanes	Project Partner	3	Checked

Do you require more fields?

Yes

Name (First name, Surname)	Role	% time on project	CV attached below?
Timothy Austin	Project Partner	2	Checked
Susan Zaluski	Project Partner	3	Checked
Bryan Manco	Project Partner	3	Checked
Jennifer Wheeler	Project Partner	4	Checked
No Response	*No Response*	*No Response*	Unchecked
No Response	*No Response*	*No Response*	Unchecked

No Response	*No Response*	*No Response*	Unchecked
No Response	*No Response*	*No Response*	Unchecked

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.

CVs
01/09/2018
22:48:09
pdf 1.32 MB

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.

Seabirds are effective indicators of marine biodiversity hotspots and ocean health, and our preliminary work demonstrates the unique ability of magnificent frigatebirds to connect productive foraging zones offshore and nearshore to coastal onshore roosts. Here we will track adult and juvenile magnificent frigatebirds from multiple populations in the Caribbean UKOTs, to inform regional-scale marine and coastal zone management. Our legacy will be an approach to define, designate and zone vulnerable wetlands and marine habitats, applicable throughout the Caribbean.

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?

UKOT marine and coastal ecosystems face multiple anthropogenic pressures including fisheries, pollution, habitat loss and climate change. The ecosystem-based management approach is recognised as the optimal way for sustainable management of these ecosystems for maximum benefit of biodiversity and all stakeholders. Essential to this is the identification of biodiversity hotspots, which may be designated and managed as protected areas. For example, the UK Government's 'Blue Belt' programme is creating large, highly-regulated zones in the EEZs of several isolated UKOTs. However, this approach is unlikely to work in the Caribbean UKOTs, which require additional understanding of both the interactions and connections between different states and territories, and the diverse range of stakeholders in these densely populated areas.

Seabirds are highly mobile marine top-predators that are potentially powerful management tools for identifying biodiversity hotspots, relevant to a diverse range of fauna. We know from previous territory-specific Darwin+ projects that in the Caribbean, magnificent frigatebirds are an exemplar indicator species, because they traverse onshore sites (mangrove wetland roosts), nearshore habitats and offshore areas while moving across multiple states and territories. Their use will enable development of regional-scale trans-boundary management strategies, using an approach uniquely suitable to the challenges faced by the Caribbean UKOTs.

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.

Stage 1. Tracking: Magnificent frigatebird movements will be tracked from three Caribbean UKOT breeding populations (see Table), using innovative solar-powered GPS-GSM loggers. These devices (~15-20 g), send location data via the mobile phone network, and will remain on birds until attachments fail (~8 months). We will use 'best practice' methods informed by our previous work, to minimise disturbance to birds and ensure high ethical standards. Approximately 20 adult and 20 juvenile birds per site will be caught on the nest, using a net or noose/pole, and loggers attached to the base of central tail feathers using waterproof tape. Analyses of our existing data indicate that frigatebirds uniquely link onshore, nearshore and offshore habitats and these sample sizes will identify hotspots using standardized methods (Birdlife IBA toolkits). Recent BTO research indicates maximal spatial coverage is gained from these long-term deployments.

Colony Estimated population size Population Importance
Booby Pond, Cayman Islands 627 (2017) Regional
Dog Islands, Anguilla 467 (2016) Regional
Great Tobago, BVI 925 (2015) Global

Stage 2: Identifying habitat preferences and hotspots: New and existing (from previous projects and collaborators) tracking data will be analysed using spatial statistics (e.g. kernel density estimation) and Birdlife IBA toolkits. Statistical models (e.g. GEE-GAM models) will be used to determine the relationship between frigatebird distributions and environmental variables. These fitted models will then be used to predict bird presence at a regional scale based on habitat characteristics throughout unsampled areas. Identified high-density areas of frigatebirds are indicators of valuable mangrove wetland habitats onshore and both nearshore and offshore marine productivity hotspots. These outputs will be suitable for integration with any available data on anthropogenic activities (e.g. fisheries, mangrove clearance) for incorporation into future risk-sensitivity analyses.

Stage 3. Developing regional management strategies: Representatives from Caribbean UKOTs and regional management and conservation bodies will come together for a regional workshop, hosted by the ANT on Anguilla, and facilitated by BirdsCaribbean. The workshop will focus on reviewing and sharing outputs and methods developed in Stages 1 and 2, and fostering discussions amongst representatives from territories from across the Caribbean to develop cooperative, multilateral, wetland coastal and marine management strategies.

Stage 4. Identifying training, data and management needs: Through the regional workshop, gaps in these areas will be identified for each participant UKOT.

Stage 5. Support, development and capacity building: Identified supporting activities will be conducted in participant territories (all six Caribbean UKOTs), to implement on-the-ground action and assess the potential of future project work. Projected activities may include site visits and population assessments in T&C and Montserrat, habitat restoration in Anguilla and BVI, further cat eradication in the Cayman Islands and seabird questionnaires/surveys in Bermuda.

Project management: The project will be managed by the UoL. Dr Austin will assume overall responsibility for project coordination, oversee Cayman Island fieldwork, analyse data, present at the regional workshop and lead the production of reports, scientific publications and other outputs, with support from Dr Green. Listed project personnel will manage fieldwork in their respective territories, and BirdsCaribbean will facilitate the regional workshop.

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)**

a) Priority issues:
This project will improve the designation and management of networks of wetland and marine habitats around all six Caribbean UKOTs. This will be achieved by providing spatial information based on movements of a unique indicator species that will aid development of coordinated multilateral conservation strategies. This project will help deliver a network of marine protection for the Caribbean UKOTs complementary to the Blue Belt programme in other UKOTs. It will also aid in the conservation of mangroves, recently identified by JNCC as key natural capital assets for storm protection in the Caribbean UKOTs. Together these will enhance the capacity of local and regional management bodies to assess the impact of future environmental change on Caribbean ecosystems, and thus anticipate long-term conservation needs within adaptive management frameworks. Since seabirds play important roles in multiple ecosystems and are valuable indicators of ecosystem health, their use promotes development of novel ecosystem-based initiatives for the conservation and sustainable use of wetland and marine environments. This project fits in with local management commitments (e.g. UKOT Environmental Charters, National Biodiversity Action Plans), environmental legislation (e.g. National Conservation Law of the Cayman Islands), and will help partner UKOTs meet obligations under wider multilateral environmental agreements (e.g. Ramsar Convention, SPAW protocol to the Cartagena Convention).

b) Technical expertise:
The project brings together diverse collaborators with expertise in conservation science, environmental policy and capacity building, and proven track records in delivery of high-quality outputs from international projects. The project has been developed jointly by all project partners and builds on strong established

working relationships of Caribbean and UK partners, and a wealth of experience gained from previous projects in the Caribbean UKOTs (DPLUS007, 035, 044). This experience will ensure efficient running and execution of activities in multiple UKOTs, as well as adaptive responses to on-the-ground conditions.
We will use innovative approaches and state-of-the-art tracking technologies and analytical methods that can be applied in the future by all UKOTs and other states in the region. It will draw on knowledge and expertise of project partners, much of it gained during previous Darwin Plus-funded projects, thus ensuring technical excellence. The project demonstrates excellent value for money via existing data, previous local training, and in-kind contributions by project partners.

c) Impact:
UoL staff have a demonstrated capacity for partnership working through delivering high-quality applied science outputs from international grants both within the Caribbean (UKOT partners) and further afield. The collaborative nature of this project reflects its development in direct response to regional management needs to ensure a maximum sustained contribution and impact in the UKOTs. All partners bring technical expertise to the project, which will ensure effectiveness and efficiency. Project outputs will enable measureable priority actions for species and habitat protection to be identified and implemented in response to commitments made under local and international environmental conventions. Local people will benefit through an improved understanding of marine ecosystems, and from the enduring contribution that project outputs will make to ecosystem health and the economy.

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.

All six Caribbean UKOT Governments, managers in non-UK territories and states, and conservation organisations operating on a regional scale, including local (Caribbean) and global bodies: Our letters of support indicate engagement and involvement in project development, at both local and regional scales, through involvement with organizations tasked with spatial planning, local stakeholder involvement, and development of conservation strategies. Use of seabird data in these processes is well established, and the contribution that our project will offer is welcomed amongst our enthusiastic partners and supporters. These stakeholders will drive regional collaboration and cooperation on marine and coastal management both within and outside the UKOTs.

The people of the Caribbean UKOTs and non-UK territories and states: Healthy and sustainably managed wetland and marine ecosystems underpin a range of economic activities in the Caribbean UKOTs and contribute to wellbeing and natural hazard protection. Local people will therefore benefit through development of sustainable management strategies for marine and coastal resources, especially for those engaged in relevant industries such as fisheries and tourism. Most importantly, a coordinated and regional approach has been identified as a priority for the Caribbean and so these stakeholders will benefit directly. Partners will engage local stakeholders in the project, through school talks, community meetings, cross-agency presentations, social media and news outlets throughout the project, to educate about the role of seabirds in ecosystems, and their value as management tools. BirdsCaribbean are particularly important in disseminating the project deliverables in partner territories and beyond, using their existing promotional strategies and materials.

Q17. Institutional Capacity

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

The University of Liverpool (UoL) is a leading centre for conservation science and applied ecology. The 'Ecology & Marine Biology' group has expertise in translating science into policy in areas including marine protected areas, fisheries and ecosystem-based management. The Seabird Ecology Group (SEGUL) focuses on the behaviour, ecology and physiology of seabirds, and has experience of similar projects in the Caribbean UKOTs. Drs Austin and Green conduct research in seabird ecology and conservation, and have relevant experience running similar projects involving international partners (including previous Darwin Plus projects in the Caribbean region: DPLUS007, DPLUS044). Thus, they have strong ties with local and regional Caribbean Governments and conservation organisations such as RSPB and Birdlife International.

The Anguilla National Trust (ANT) is a statutory body that has been involved in national environmental conservation for over 30 years. ANT has seven full-time paid staff, over 100 members, and 25 active volunteers. The organisation is Anguilla's largest and most active environmental and cultural organisation and has a mandate to assess, restore, and conserve Anguilla's natural and cultural heritage. ANT was the national lead partner on the DPLUS007 project and through training provided in that project continues to be engaged in collaborative seabird research.

The Cayman Island's Department of Environment (DoE) is responsible for facilitating management and sustainable use of the natural environment in the Cayman Islands, through environmental protection and conservation programmes. DoE has a proven track record of delivering successful Darwin+ projects, a strong background in marine conservation science, and an excellent record of community involvement and outreach. Staff trained during DPLUS044 will be available to assist during fieldwork of this project.

The Jost Van Dykes Preservation Society (JVDPS) is a locally based NGO in the British Virgin Islands (BVI). JVDPS has previously worked on collaborative research and protected area management activities with UoL. Past activities have focused on bird monitoring and tracking, the control of Alien Invasive Species, bio-security monitoring, public education and outreach. Our team will support tracking work in BVI using techniques developed previously through Darwin plus projects.

The Department of Environment and Coastal Resources (DECR) of the Turks and Caicos (T&C) Government is mandated to effectively manage the terrestrial and marine resources, including the wildlife, of T&C. The DECR actively cooperates with other relevant TCI government departments and units, and attached agencies, to ensure proper management of the Islands' natural resources towards environmental sustainability.

BirdsCaribbean is the largest regional organization dedicated to the conservation of wild birds and their habitats in the insular Caribbean. The organization builds international capacity for conservation and management through innovative programs of training, monitoring, advocacy, outreach and education. BirdsCaribbean will promote and encourage support for the project through its extensive network of members and partners in the region. They will make use of existing promotional materials (books, posters, ID cards) in both English and Spanish, proven to engage successfully with stakeholders.

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?

This project will contribute to long-term protection of marine biodiversity through development of regional co-operative management strategies complimenting the UK Government's 'Blue Belt' commitments. Project outputs will pass directly to local and regional management and conservation bodies, to assist spatial planning processes, benefitting biodiversity conservation in the Caribbean long after the project ends. BirdsCaribbean are involved actively in these activities and will adopt and advocate the approaches developed to ensure that support and enthusiasm for regional approaches will continue long-term. This will

use their extensive network, including biannual conferences, newsletters and links to regional bodies (e.g. CamPAM). All Caribbean UKOTs have existing obligations in marine spatial planning as part of ongoing work programmes. This project's outputs will feed directly into these and thus may replace less efficient approaches to marine biodiversity hotspot identification. Supporting activities funded through this project may identify priorities for future funding applications to Darwin+ or other similar programmes (e.g. EU BEST). The outputs of our project meet the long-term goals of conservation organisations operating in the region (e.g. RSPB, JNCC), and they will attend the workshop to facilitate this. Our letters of support demonstrate wide engagement with this project, and its potential for a lasting contribution.

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.

Budget Form
02/09/2018
15:26:02
xls 126 KB

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)

This project benefits from considerable confirmed in-kind contributions from partner organisations, without which this project would not be viable. The primary contribution comes from the University of Liverpool who are contributing the entire cost of staff overheads for Project Co-Leaders Green & Austin (£X). This covers back-office support for the project such as finance, purchasing, travel, computing and HR, all of which are necessary for a successful project. Some partner organisations have also been able to provide in-kind support for the project. DoE Cayman Islands are providing their staff time (£X) and a vehicle

and accommodation essential for fieldwork (£X). DECR TCI and Birds Caribbean are providing staff time in-kind (£X & X respectively) and ANT are providing camping equipment (£X). In addition non-partner supporters of the project from Monserrat Bermuda and the RSPB will contribute time for the regional workshop (Y2) and supporting activities (Y3) which are not part of the budget but are estimated to be worth £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.

No unconfirmed funding

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?

Drs Austin and Green will be responsible for team managing the project funds. Both have been heavily involved in this task in similar projects (Darwin Plus: DPLUS007, DPLUS044). They will be supported by the finance team in the School of Environmental Sciences, University of Liverpool, who also have extensive experience managing finances of research projects such as this. The University's Research Support Office, who holds overall responsibility for financial management of research grants and contracts, in turn oversees the finance team at the School of Environmental Sciences. Should this project be funded, the finance team will provide Drs Austin and Green with monthly statements of expenditure to ensure that spending is within the assigned budget for each Darwin+ cost category. Quarterly expenditure will also be reviewed periodically by the independent project steering group. An independent audit will be conducted at

the end of the project.

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.

Our project comes with very low levels of financial management risk. The largest share of the budget will go to salaries at the University of Liverpool (~47%) with a considerable portion on equipment, specifically electronic data loggers and tagging equipment (~19%). The University of Liverpool has an unblemished record of financial management, and the data loggers are supplied at low cost from a supplier that we have used previously. The majority of the remaining budget covers expenses for fieldwork (~9%) and the costs of the regional workshop (~12%) split between lead and partner. For both of these, we are working with costings supplied by our local partners, verified as accurate for the UKOTs that we will work in during our previous projects. With regards to bribery, our project does not contain any activities where bribery is likely to produce any favourable outcomes, and the project will draw on an existing network of collaborators and colleagues who work together effectively without financial inducement. Independent advisors working in the region (e.g. RSPB) have not indicated that fraud, bribery or corruption are relevant to our work. In summary there is almost no scope for financial irregularities in this project.

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.

Networking and collaboration underpin our budget. The largest component is salary costs for researchers from UoL. Experience from previous projects tells us that this level of expertise is required to deliver the technical aspects of this project, complimented by expert local knowledge from our network of partners and collaborators.

Fieldwork will be overseen by Dr Austin, the coordinating scientist and project manager on DPLUS044, providing value for money. Staff on Anguilla, BVI and the Cayman Islands are already fully-trained in tracking methods via DPLUS007 and DPLUS044. Thus, they have extensive knowledge of local seabird colonies, and have developed cost-effect methods of working in local communities and environments. Furthermore some of the data previously generated in these projects will be used in Stage 2 of the current project. We will therefore put to use the previous investment of Darwin Plus in this regional project.

Field workers will camp at sites on Anguilla and BVI to minimize T&S costs, and field accommodation on the Cayman Islands is being provided in-kind. The project benefits from considerable in-kind contributions in the form of overheads, staff time, subsidized accommodation and vehicle access, which equate to 38% of the total project budget.

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.

All project partners support data sharing and open access policies. Project outputs, including maps, spatial data and final reports to managers and policy makers, will be made publically available on contributing

partner websites (e.g www.birdscaribbean.org, www.axanationaltrust.com; http://jvdps.org; www.doe.ky). Tracking data will also be publicised regularly on our established Caribbean seabird website (www.caribbeanseabirds.org.uk), through territory-specific project websites (e.g. www.caymanseabirds.weebly.com) and on dedicated social-media outlets such as Twitter and Facebook.

All generated tracking datasets will be made publically available to stakeholders and the wider research community at the end of the project, through online databases such as MoveBank (www.movebank.org) and the BirdLife International Seabird Tracking database (www.seabirdtracking.org). Results will also be disseminated widely in the form of peer-reviewed scientific journal articles. The University of Liverpool supports Open Access publication, and will provide dedicated funds to cover the OA publication of outputs from this project (as it has done in previous projects: DPLUS007 and DPLUS044). Project outputs will also be presented and disseminated at BirdsCaribbean conferences, scientific conference(s) such as the International Marine Conservation Congress (https://conbio.org), and a practitioners conference such as Coastal Futures (http://coastal-futures.net). A small amount of funds (£X) have been requested to cover costs associated with conferences.

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:

This project will improve the ability of managers and policy makers in all six Caribbean UKOTs, and more widely, to recognize, designate and protect vulnerable ecosystems onshore, nearshore and offshore.

Project Summary	Measurable Indicators	Means of Verification	Important Assumptions

Outcome: Use movement data from Caribbean magnificent frigatebirds to develop an approach for protected area definition onshore, nearshore and offshore that can be applied for conservation management at a regional scale.	0.1 Marine IBAs for magnificent frigatebirds identified in nearshore and offshore zones using Birdlife International criteria. 0.2 Key roosting and breeding sites for magnificent frigatebirds in onshore wetlands (usually vulnerable mangroves) identified. 0.3 Local and regional conservation management agencies made aware of the broader importance of key habitats indicated by magnificent frigatebirds. 0.4 Regional-scale management strategy for use of magnificent frigatebirds as hotspot indicators agreed. 0.5 All project participants agree future goals to fill gaps in data, expertise, understanding and applicability of our approach.	0.1. Marine IBAs listed on Birdlife International online database. 0.2. Onshore IBAs (coastal wetlands/mangroves) listed on Birdlife International online database. 0.3 Non-technical reports produced, uploaded to partner and project websites and disseminated to relevant government agencies responsible for marine environmental management. Agencies acknowledge receipt of project findings. 0.4 Memorandum of understanding (MOU) agreed by all project participants held on project website and distributed to all involved. 0.5 Workshop report and if appropriate future funding applications logged on project website.	Sufficient data collected to represent the range of at-sea movements seen in the focal populations. Local and regional conservation management agencies amenable to incorporating information provided into management strategies.

Output 1: Outputs: 1. At-sea and onshore distributions and movements of adult and juvenile magnificent frigatebirds from globally and regionally important populations on Anguilla, BVI and the Cayman Islands identified during breeding and/or non-breeding periods.	1.1 Distribution maps and GIS layers produced from tracking data, highlighting core onshore, nearshore and offshore areas of adult magnificent frigatebirds 1.2 Distribution maps and GIS layers produced from tracking data, highlighting core onshore, nearshore and offshore areas of juvenile magnificent frigatebirds. 1.3 Maps and GIS layers of onshore, nearshore and offshore areas IBAs for adult and juvenile magnificent frigatebirds produced using Birdlife International criteria.	1.1 Links to tracking data on www.movebank.org and/or the Birdlife International Seabird Tracking database 1.2 Map layers of tracking data and marine IBAs held by, and available from, local partners and relevant government agencies. 1.3 Links to updates on project website.	Both adult and juvenile magnificent frigatebirds will be available at colonies during scheduled fieldwork in the three UKOTs, and accessible for capture, to allow sufficient data that represent the range of at-sea movements seen in the focal populations to be collected (mitigation: plan for flexible fieldwork periods and multiple field seasons). Tracking devices will operate effectively and remain attached to birds for a long enough duration to collect intended data (mitigation: use of tried and tested devices and allowance for some device losses). Environmental conditions will be favourable for tracking work (mitigation: plan for flexible fieldwork periods).

Output 2: 2. Habitat preferences of adult and juvenile magnificent frigatebirds identified, and repeatable methods for identifying and defining marine and coastal productivity hotspots developed.	2.1 The relationship between magnificent frigatebird distributions and environmental features determined, through the development of habitat suitability models based on exisiting (DPLUS007/044) and new tracking data (Y1), which will incorporate habitat preferences of different life stages and populations. 2.2 Habitat suitability models applied to predict the location of important mangrove wetlands and marine hotspots throughout the region. 2.3 Non-technical report for local government agencies and regional conservation bodies / working groups produced and disseminated to 20 relevant states and territories in the region. 2.4 Powerpoint presentation produced and disseminated at conservation practitioners conference(s). 2.5 Peer-reviewed scientific manuscript(s) produced for publication, to disseminate developed methods to wider scientific community.	2.1 Habitat preference maps and GIS map layers held by, and available from, local partners and relevant government agencies. 2.2 Regional-scale marine and wetland hotspot maps and GIS map layers held by, and available from, local partners and relevant government agencies. 2.3 Reports containing spatial data and analyses held by, and available from, local partners, government agencies and project websites. 2.4 Copy of powerpoint presentation from conference talk(s) available on project websites. 2.5 Peer-reviewed scientific article(s) openly available online.	Quantity and quality of data collected sufficient for habitat suitability modeling to encapsulate environmental-animal interactions from different life history stages (mitigation: plan for flexible fieldwork periods). Environmental data (e.g. SST, bathymetry) will be available for periods over which tracking data are collected (mitigation: project team are familiar with suitable environmental datasets and data depositories e.g. NOAA).

Output 3: 3. Local and regional conservation management agencies informed of how magnificent frigatebirds can be used to indicate marine and coastal biodiversity hotspots, and agree that this approach can be used to improve trans-boundary regional-scale marine and coastal management strategies.	3.1 Through the regional workshop, 12x representatives from the UKOTs, at least 4x from non-UK states and territories, at least 3x from conservation bodies active in the region will gain an understanding of tracking and hotspot identification methods. 3.2 An MOU produced during the regional workshop, outlining regional cooperative marine and coastal management strategies, and agreed by all workshop participants (6x Caribbean UKOTs, at least 2x regional conservation organisations, and at least 4x non-UK states or territories).	3.1 Workshop presentations and minutes held by partner organisations and relevant agencies, and uploaded to partner and government websites. 3.2 MOU held by contributing organisations and agencies, and uploaded to their websites and the project website.	Management agencies are amenable to receiving recommendations from project (mitigation: managers were approached at early stage to gain support for project and instrumental in project development – see attached letters of support). Sufficient data / evidence collected to inform development of management strategy.
Output 4: 4. Training, data and management needs relevant to future implementation of the MOU in the Caribbean UKOTs identified, and plans developed to fill them.	4.1 A workshop report outlining the training, data and management needs in participant UKOTs produced.	4.1 Workshop report held by partner organisations and relevant agencies, and uploaded to partner and government websites.	Management agencies actively engage in identification of training needs (mitigation: managers were approached at early stage to gain support for project and instrumental in project development – see attached letters of support).

Output 5: 5. Initial steps made to address territory-identified gaps in training, data and management and, based on lessons learned during these supporting activities, feasibility of future project development in each of the UKOTs assessed.	5.1 Supporting activities undertaken in UKOTs to address gaps in training, data and management and (e.g. site visits and seabird population assessments in the Turks and Caicos – see Q14). 5.2 Future appropriate project work in individual territories identified.	5.1 Non-technical reports on supporting activities held by partner organisations and relevant agencies, and uploaded to partner and government websites. 5.2 Draft funding applications to address identified territory-specific requirements held by and available from partner organisations and agencies as appropriate.	Management agencies are amenable to in-territory supporting activities (mitigation: managers were approached at early stage to gain support for project and instrumental in project development – see attached letters of support). Supporting activities can be completed within the £5,000 budget within each territory (mitigation: preliminary discussions with project partners have already identified potential activities that fit within the project scope and budget).

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.

Output 1) At-sea and onshore distribuitions of magnificent frigatebirds
1.1 Track adult magnificent frigatebirds from globally and regionally important colonies in Anguilla, the Cayman Islands and the British Virgin Islands using GPS-GSM loggers
1.2 Track juvenile magnificent frigatebirds from globally and regionally important colonies in Anguilla, the Cayman Islands and the British Virgin Islands using GPS-GSM loggers
1.3 Identify onshore, nearshore and offshore IBAs for adult and juvenile magnificent frigatebirds from the three UKOTs and produce distribution maps and GIS layers

Output 2) Magnificent frigatebird habitat preferences and hotspot identification
2.1 Develop habitat suitability models using generated tracking data, to identify key features of preferred habitats of different life stages and populations, and produce habitat preference maps
2.2 Apply habitat suitability models to predict and identify marine and wetland hotspots at a regional scale, and produce hotspot maps
2.3 Produce non-technical report outlining methods and results and disseminate to local and regional conservation and management agencies
2.4 Present project findings to conservation practitioners community at a conservation conference(s)
2.5 Produce peer-reviewed scientific manuscript(s) for publication to disseminate developed approach to wider scientific community

Output 3) Development of regional management strategies
3.1 Run regional workshop to present tracking and hotspot identification methods, and plan cooperative management strategies
3.2 Produce an MOU, agreed by workshop participants and outlining regional management strategies

Output 4) Identifying training, data and management needs
4.1 Produce a report outlining the training, data and management needs in participant UKOTs identified during the workshop

Output 5) Support, development and capacity building
5.1 Undertake supporting activities in participant UKOTs (e.g. site visits seabird population assessments in Turks and Caicos – see Q14)
5.2 Produce and disseminate non-technical reports on activities in individual territories and future plans for addressing gaps in skills and expertise
5.3 Identify future funding streams and prepare draft funding applications as appropriate

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.

Timetable
01/09/2018
23:27:29
xlsx 12.7 KB

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 project will be led and managed by the University of Liverpool, UK, who will assume overall responsibility for project delivery, and monitoring of project progress against the outputs described in this application. Dr Austin will be responsible for project organization and overall coordination of fieldwork, and will lead on the production of outputs. Listed project partners and supporters in all six Carbbean UKOTs will be responsible for in-country fieldwork in their respective territories, with coordinated support from University of Liverpool staff as needed.

Field staff in the partner UKOTs will maintain regular contact during tracking periods, either via skype and/or email, to discuss progress and share information on successes/difficulties relating to tracking work, and will refine field methods as needed to ensure maximum data recovery. Drawing on experience gained during previous projects (DPLUS007, DPLUS044), partners will follow adaptive and flexible approaches to fieldwork, allowing rapid and effective responses to unpredictable behaviour of wild birds. Progress during the field phase will be regularly monitored by project leads and relayed to project partners for discussion via email and/or skype. In cases where it becomes apparent that the planned data cannot be obtained in sufficient quantities to represent at-sea movements of populations, the project lead will confer with Darwin+ to discuss a way forward.

Following models adopted during previous successful projects (e.g. DPLUS007), a project steering group comprising the principles from each project partner will oversee the project, and evaluate progress against measurable objectives (i.e. collection of tracking data, analysis of spatial data to identify habitat preferences, preparation of non-technical reports and dissemination to managers). Representatives from relevant independent organisations such as JNCC will also be invited to sit on the steering group, to objectively assess and evaluate progress in relation to the specified output indicators, timelines and budget. The group will meet remotely via skype at the start of the project, and then at six-monthly intervals, and a report will be circulated following each meeting.

Project reports and manuscripts will be circulated and reviewed by all project partners before submission, and also sent to conservation scientists with a background in the fields of seabird ecology and conservation management for independent review/comments. This will ensure that scientific outputs are rigorously assessed before publication. Results will also be presented at international conferences and practitioners meetings, thereby undergoing additional review from experts in the fields of conservation science and spatial ecology. Any conservation plans drafted during the project lifespan will be assessed independently by the steering group and/or other external experts, and will be subject to public consultation in accordance with National legislation.

Since our M&E activities are comprised of time invested by project staff in meetings and document preparation and review (including in-kind contributions) all costs are a portion of overall staff costs and % cost based on the total project budget.

Number of days planned for M&E	37.00
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 (%)	3.30

Section 13 - Certification

Certification

On behalf of the

trustees

of

University of Liverpool

I apply for a grant of

£305,882.00

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	Jonathan Green
Position in the organisation	Senior Lecturer in Marine Biology
Signature (please upload e-signature)	**Signature** 31/08/2018 15:23:55 pdf 173.53 KB
Date	31 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.

Unchecked

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).