Darwin Plus:
Overseas Territories Environment and Climate Fund

Final Report

Important note *To be completed with reference to the Reporting Guidance Notes for Project Leaders:*

it is expected that this report will be a maximum of 20 pages in length, excluding annexes

Darwin Project Information

Project Ref Number	DPLUS007
Project Title	Using seabirds to inform Caribbean marine planning
Territory(ies)	Anguilla and British Virgin Islands
Contract Holder Institution	University of Liverpool
Partner Institutions	Anguilla National Trust (ANT), Jost Van Dykes Preservation Society (JVDPS), National Parks Trust of the Virgin Islands (NPTVI), Royal Society for the Protection of Birds (RSPB)
Grant Value	£226 367
Start/end date of project	April 2013-March 2015
Project Leader	Dr Jonathan Green
Project website	www.caribbeanseabirds.org.uk
Report author and date	Dr Louise Soanes

1 Project Overview

This project was based in the UK Overseas Territories (UKOTs) of Anguilla and the British Virgin Islands (BVI) (Figure 1), with the overall aim to make an important contribution to ecosystem-based sustainable marine planning within these territories.

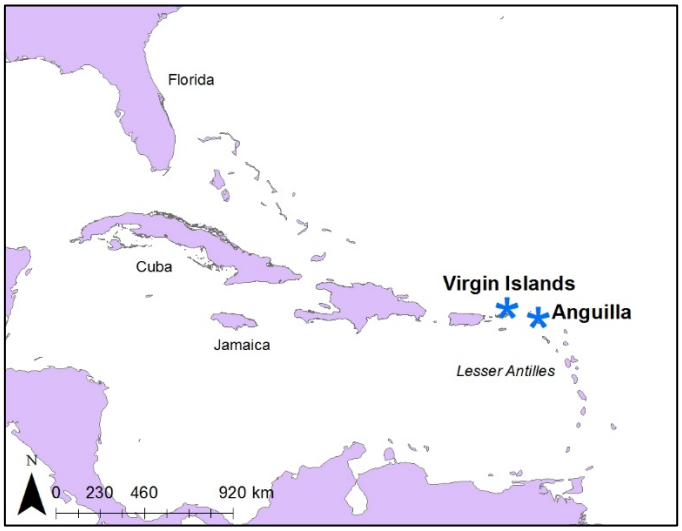

Figure 1. Map showing location of the Virgin Islands and Anguilla.

The 1992 UN Rio Convention requires the development of holistic ecosystem-based management regimes. In the Caribbean UKOTs, two initiatives are underway. The British Virgin Islands (BVI) aim to designate 20% of their territorial waters as Marine Protected Areas (MPAs) by 2020 as part of the cross-territorial 'Caribbean Challenge' initiative. Meanwhile, in 2012 Anguilla was negotiating an MOU with Greenland to increase fishery capacity, placing sustainable marine planning high on its biodiversity agenda.

Based on a pilot seabird monitoring and tracking project undertaken in Anguilla in 2013 (funded by the RSPB and ANT), and the reporting of significant numbers of dead Magnificent frigatebirds found entangled in fishing line in the BVI colony in 2012, this project aimed to identify important foraging areas of globally and regionally important seabird populations breeding in Anguilla and BVI using GPS tracking technology. Further aims were to produce reviews identifying threats to key seabird populations, and to establish locally run long-term seabird monitoring programmes. In the long-term, the project aimed to enhance strategic sustainable management of marine resources for the benefit of the people of Anguilla and BVI.

2 Project Achievements

2.1 Outcome

The overall project outcome was to provide information to assist in informing marine planning around Anguilla and BVI using the ecosystem-based approach, based on spatial data of seabirds as important parts of, and health of, the marine ecosystem.

Over 200 seabirds were tracked within Anguilla and BVI, comprehensive seabird surveys were undertaken, local staff were trained in survey techniques and long-term monitoring programmes have been established. These data have been used to increase the awareness of Government agencies and local NGOs of the role that seabirds play in the marine ecosystem. We have shown that seabirds are important indicators of the health of the marine ecosystem and demonstrated the importance of sustainable marine spatial planning into the future. This has been achieved by:

Activity	Indicator
Presentations given to Government, NGOs & school group within each Territory throughout the project	Presentation powerpoints available to view on Dropbox (1.1.1, 1.1.2, 1.1.3, 1.2.1, 1.2.2)
End of project presentations to local Governments and NGOs of seabird tracking data, which highlights important marine areas	Presentation powerpoints and list of attendees available to view on Dropbox

within each Territory:	(1.1.1, 1.1.5, 1.2.3, 1.2.4)
GIS shapefiles of all tracks available on Dropbox/ and handed to all project partners), meeting powerpoints available on Dropbox.	Shapefiles to view on Dropbox (2.1, 2.2) All data has been submitted and can be viewed freely on the following data repositories: www.seabirdtracking.org www.movebank.org http://seamap.env.duke.edu/
A monitoring workshop facilitated in the BVI (Birds of Paradise Monitoring Programme workshop):	See powerpoint in Dropbox (1.2.2) & previous comments on first year annual report. This led to partnership with the BVI Government in a further Darwin+ funded project "BVI seabird recovery planning" (DPLU035). (powerpoints available on Dropbox)
Marine IBAs identified in Anguilla internationally recognised by BirdLife International:	Presented in peer reviewed paper co-authored by BirdLife International. (see draft manuscript Dropbox 4.1) Data submitted to BirdLife international
Awareness raised on the importance of Dog Island, Anguilla as a globally important breeding site for seabirds.	Governor of Anguilla accompanied us on field trip to Dog Island, and in discussions with local Government and UK NGOs on appropriate development/protection of Dog Island.
Data fed into the identification of marine corridors in the region: GIS shapefiles of foraging tracks distributed to BEST (Biodiversity and Ecosystem scheme for European Overseas Territories).	Supplied shapefiles to BEST Caribbean Coordinator amandine.vaslet@rnsm.org Réserve Naturelle Nationale de Saint-Martin
Data fed into identifying BEST "Key Biodiversity species and sites" in Anguilla:	Document to view (Dropbox 3.1.1)
Wider regional awareness of the role of seabirds: Foraging data shapefiles are being used by the neighbouring islands of Saint Martin and Puerto Rico as examples of seabirds using already identified marine protected areas.	http://ebird.org/content/pr/news/british-virgin-islands-magnificent-frigatebirds-forage-in-puerto-rico-waters/?lang=en Shapefiles sent to Puerto Rico's Para la Naturaleza: y & Saint Martin's Réserve Naturelle Nationaleto be used for marine spatial planning purposes

Whilst no changes in policy have been made related to the work of the project, both territories are only just beginning to recognise and consider policy related to Marine Protected Areas. Anguilla has five established marine parks, but there is currently no enforcement of activities taking place in them, and little support from the local community in changing/restricting their use. As a result, these parks are 'paper parks' existing only as boundaries on maps. Findings from our project will allow the Anguillan Department of Fisheries and Marine Resources to highlight the importance of existing Marine Parks, and to seek further funding to support their protection, regulation and enforcement. In the British Virgin Islands data from our project has and will be useful in highlighting the movements of seabirds and in targeting education

campaigns to reduce seabird by-catch my fishermen in the BVI and neighbouring USVI and Puerto Rico. BVI had already defined areas for MPAs before our data collection was complete, however BVI authorities are interested in overlaying foraging tracks to assess suitability of already defined sites for seabirds and as a public awareness tool.

The presence of a Postdoctoral researcher in Anguilla year-round has enabled additional assistance to be given to both the ANT and JVDPS in related work programmes. This includes sea turtle monitoring and tracking in Anguilla (assisted with a successful application to Flora & Fauna International to support this work), and further seabird work in the BVI, particularly regarding the important but severely declining population of Roseate tern on the islands. This latter work has led directly to a further Darwin+ funded project due to begin April 2015 (DPLUS035). Furthermore, staff from both local NGO partners have benefitted from informal training and mentoring. This presence has also allowed for multiple meetings with project partners and Government agencies in both BVI and Anguilla. This represents excellent value for money and has ensured the long term-stability of marine ecosystem monitoring in the UKOTs.

2.2 Outputs

1) Foraging areas of globally and regionally important seabird populations identified

Over 200 seabirds were successfully tracked from four cays (three in Anguilla and one in BVI) representing five globally and regionally important populations across BVI and Anguilla.
Our expected output was 50 Brown boobies from Dog Island, Anguilla (per year), 50 from Prickly Pear West, Anguilla (one year) an 50 from Sombrero Island, Anguilla (one year); 30 Sooty terns from Dog Island, Anguilla (per year) and 30 Magnificent frigatebirds from each Dog Island, Anguilla and Great Tobago, BVI (one year). Brown booby tracking met our expectations with us being able to track this species at different times of the year across the three Anguilla cays in the proposal, as well as on Great Tobago, BVI. In addition, 57 Masked boobies representing regionally important populations on were tracked on Dog Island and Sombrero Island, Anguilla.

Sooty terns and Magnificent frigatebirds proved more difficult to track. In the case of Sooty terns the original tracking devices were found not to be suitable, as the dense vegetation in the habitat that this species nests in led to signal failure, which exhausted the battery life, and made birds very hard to retrieve once tracking devices had been deployed. Therefore, in year two we trialled some newly developed micro loggers which worked well and allowed us to successfully track 11 individuals. Problems encountered with Magnificent frigatebirds included disturbance to nesting birds when we attempted to track during the daytime, as such we moved all of our fieldwork to night-time. However, the behaviour of this species meant that loggers were extremely difficult to retrieve as adults do not seem to spend much time at the nesting site. In the face of this problem we were able to secure two remote download GPS tags for testing at the Anguilla breeding colony and were able to purchase four GSM-GPS tags that were attached to birds breeding in the BVI – these provided more data than we were able to collected from the IgotU archival loggers, with four loggers being deployed on birds in February 2015. In addition, with our assistance, JVDPS was able to secure the support and funding for 4 satellite loggers provided by Dr Pat Jodice, Clemson University, USA (http://www.atlanticseabirds.org/mafr-maps). We have two manuscripts, currently in review, detailing the foraging tracks of Sooty tern and Magnificent frigatebirds (Dropbox 4.2 & 4.3). A further three papers detailing the results from this study are currently in draft (4.1, 4.6 & 4.7)

The foraging data has been analysed using BirdLife International's marine IBA script, which uses foraging thresholds of globally important populations to identify key foraging areas. These were provided as shapefiles to local agencies. This script also assesses representativeness of datasets. This information is available to read in more detail in a draft manuscript, that will be submitted to a peer-reviewed journal before the end of July 2015 (Dropbox 4.1).

2) Potential at-sea threats to seabird populations on Anguilla and BVI identified along with possible mitigation strategies

Through our seabird tracking data, seabird population monitoring and work with local agencies we were able to identify possible threats facing seabird populations in both territories along with mitigation measures. These are detailed in two reports: (1) Conserving Anguilla's seabirds (Dropbox 3.1.2) and (2) Conserving the British Virgin Islands seabirds (Dropbox 4.6), which are available to download from the project website and have been distributed to project partners and local stakeholders.

In the British Virgin Islands the identification of foraging areas of Magnificent frigatebirds in nearby Puerto Rico and USVI has allowed local partner JVDPS to target an education campaign informing fishermen what to do if they catch a bird in fishing line, to reduce the number of mortalities from this cause. In addition, summer seabird surveys of the BVI and a review of historical data highlighted the decline in the US red-listed Roseate tern, and a manuscript has been submitted to Journal of Caribbean Ornithology detailing our findings (Dropbox 3.2.2). This led directly to the new Darwin+ funded project 'BVI seabird recovery project planning" (DPLUS035).

3) Local partner NGOs in Anguilla and BVI operate self-sustaining seabird monitoring programmes

The Anguilla National Trust (ANT) are the local agency with a remit to monitor seabirds in Anguilla. Eight staff and regular volunteers from ANT are now competent in surveying for seabirds (out of a total of seven staff and four regular volunteers), and are aware of the breeding cycles, stages of breeding and appropriate survey methods. Data have been input into a seabird database hosted by ANT, set up during the project, and has been submitted to BirdLife International. Fifty waterproof field monitoring guides were produced and distributed to all project partners (available to view on the project website & Dropbox 5.1). A long-term monitoring plan was for Anguilla was compiled by project partners (Dropbox 3.1.4).

In BVI, a long-term monitoring programme has been established for the Important Bird Area (IBA) of Great Tobago, led by JVDPS (Dropbox 3.2.3). A peer-reviewed paper was also produced detailing results of summer breeding seabird surveys in BVI, with Susan Zaluski from JVDPS as lead author. Fifty waterproof field monitoring guides were produced and distributed to all project partners (available to view on project website & Dropbox 5.2). A long-term monitoring plan for BVI was included in the BVI threat report (Dropbox 3.2.1)

Please see Appendix 1 for more detailed list of activities undertaken to support each output.

2.3 Sustainability and Legacy

The project achievements most likely to endure are the long-term seabird monitoring programmes in Anguilla and BVI. ANT have committed to seabird monitoring, which will be run alongside their six-weekly rat poison replenishment trips to Dog Island until 2016. In addition, Dr Louise Soanes (LS) was awarded further funding for seabird monitoring in Anguilla in the form of a Leverhulme Early Career Fellowship which will fund eight survey trips each year for the next three years (2015-2018). Furthermore ANT, LS and RSPB are all partners for a project proposal submitted by the Cambridge Conservation Initiative to fund additional boat trips between 2016 and 2019. Project partners RSPB and ANT are currently also working together to try to encourage the Anguilla Government to designate Dog Island as a National Park. Dog Island is privately owned and its current lack of protection means that its biodiversity faces threats from development.

The BVI Government, through the efforts of JVDPS and NPTVI, have now become more interested in the role of seabird conservation and monitoring, and have committed to establishing long-term bird monitoring in the territory. This will be supported by a further Darwin+ grant (DPLUS035).

Project staff from ANT will continue to be employed by ANT, aided by funds to assist in LS' Leverhulme Trust funded Fellowship which will be based in Anguilla over the next three years. If successful, the Cambridge Conservation Initiative Grant will also part-fund the salary of field

assistants engaged in seabird monitoring. A proportion of JVDPS staff salary will be funded by DPLUS035.

Given LS' continued involvement on projects in both Anguilla and BVI over the next 3 years, she has committed to continue to work with local partners to help ensure that seabird tracking and monitoring datasets are referred to/highlighted in any major planning decisions/developments.

Project capital items:

Remaining GPS loggers: The 44 remaining small IGOTU loggers will remain in Anguilla and be used for further Brown booby tracking as part of LS' research fellowship in partnership with ANT and University of Roehampton. The 12 remaining large IGOTU loggers will remain in Anguilla and be used by the ANT in a turtle tracking project in partnership with the Department of Fisheries & Conservation. The four remaining Pathtrack nanologgers will be used by JVDPS in DPLUS035 for the tracking of Roseate terns. Project laptop: will be used by a PhD student at the University of Liverpool.

3 Project Stakeholders

The key stakeholders for this project were the local NGOs/statutory bodies: ANT, JVDPS, and NPTVI and Governmental Departments: Department of Environment, Anguilla; Department of Fisheries and Marine Resources, Anguilla and the Department of Conservation and Fisheries, BVI, as well as local landowners.

With LS being based at the ANT office in Anguilla, engagement with, and support from, ANT staff was high, with all members getting involved in the project. In the BVI, staff from NPTVI and the Department of Conservation & Fisheries made time to accompany LS and Susan Zaluski (SZ) (JVDPS) for monitoring fieldwork and tracking work. LS was also invited to facilitate the BVI Birds of Paradise Monitoring programme in November 2013, with Governmental representation from BVI's Department of Conservation & Fisheries, JVDPS and NPTVI.

ANT, with support from this project and RSPB has been attempting to raise the profile of Dog Island, Anguilla both locally and internationally. SZ has done a good job talking to local landowners of BVI cays where seabirds breed or used to breed, and has been using tracking maps to raise the profile of seabirds in the local community. Press releases, newspaper articles and radios shows have engaged the public over the course of the project (see Appendix 1 for details).

Stakeholder support and involvement had been reflected in the fact that a further Darwin+ funded project focusing on seabird recovery (DPLUS035) will begin in 2015 in partnership with JVDPS, NPTVI, Department of Conservation & Fisheries and LS (through University of Roehampton) and in Anguilla LS' fellowship position which is in partnership with ANT.

4 Lessons learned

The management structure for this project worked well, with Dr Jonathan Green, (UoL) overseeing the project objectives and budget, but with day to day running of the project led by LS and local project partners (ANT & JVDPS). The full-time member of staff on the project (LS, UoL) was based in Anguilla to allow fieldwork and training to be conducted more easily in both Territories. Regular Skype meetings (every 4-6 weeks) were held between Dr Green, LS and Dr Bright (RSPB). Basing the main employee of the project in one of the partner organisations worked well in terms of collecting data and saving project funds but also allowed training and knowledge exchange to occur more efficiently. While this was not our original plan, we would recommend this approach to any Darwin project, as the local project partners also have a greater feel of being part of the project.

We based this project on a pilot study of Brown booby tracking on Dog Island in 2012. This pilot allowed us to predict the success of the practical elements of the project while building working

relationships with the local partners. As a result it was much easier to out the objectives and outcomes of the current project to the satisfaction of all, with a clear understanding of what should be possible and increased likelihood of success.

Due to the variety of locations that project partners were based, it was sometimes not very easy to organise Skype calls for the bi-annual project meetings (e.g. poor internet connections/delays, time differences). It has since been recommended to us that a project "virtual workspace" (e.g. Blackboard) would be useful for all project partners to share/comment on work and to ask specific questions to the group. Thus project partners could review project progress in their own time. We will be initiating this for our new BVI based seabird project. This will also prove a useful tool for Darwin to review the progress of the project and to assess local stakeholder/partner engagement.

4.1 Monitoring and evaluation

Monitoring and evaluation of the project was undertaken by regular steering group meetings (every 6 months), where project progress was evaluated against objectives and budget issues. Notes from these meetings were distributed not only to all stakeholders, but to other interested individuals and organisations (e.g. Birdlife International Caribbean representative). The required half year and annual reports were useful to keep us on track and remind us what planned, as well as keeping stakeholders informed (Dropbox 8 and 9).

Major changes to the project:

1) LS was originally going to spend 3 months in the Anguilla for each year of the project, whilst SZ (JVDPS) was going to lead the tagging of birds in BVI with assistance from an American researcher (Dr Pat Jodice). However, it became apparent that due to the asynchronous and unpredictable nature of breeding in our study species that this would not be sensible or feasible. As such, LS based herself in Anguilla for the full two years to allow flexibility in fieldwork. This change in operation also saved finances for the project which were used to make extra trips to the BVI during the course of the project and to conduct more face-to-face meetings with partners in both Anguilla and BVI. It also allowed LS to conduct all of the fieldwork with assistance from project partners to allow consistency in data collection. LS built such strong relationships with all local partners that in the end there was no need for project leader JG to visit the Caribbean.

2) The project design incorporated already tried and tested loggers for Brown boobies and Magnificent frigatebirds. Different kinds untested, newly developed loggers were used for Magnificent frigatebirds and the smaller Sooty terns. A pilot study tracking of Brown boobies in Anguilla had already been conducted in 2012, whilst for the Sooty tern this study represented the first GPS tracking study. Our first trial of Sooty tern tracking resulted in no successful foraging trips being recorded, this was due to the loggers not being able to record a signal in the thick vegetation that the birds nested under, as such we researched alternatives to this logger and were able to purchase newly developed micro loggers for the second year of fieldwork which worked more successfully than the initial loggers we purchased. Magnificent frigatebirds on both Anguilla and BVI also proved difficult to track as were every easily disturbed and were difficult to recapture to retrieve loggers. As such we started doing all of our fieldwork with this species during the night. We also investigated new ways of recording data through two remote download tags donated to the project (Pathtrack, UK), and through the hard work of SZ (JVDPS) were able to collaborate with Dr Patrick Jodice, Clemson University who supplied four satellite tags to aid in the tracking of Magnificent frigatebirds in the BVI. With remaining funds in year two we also purchased four GPS-GSM loggers for use in BVI.

3) Training of two ANT staff in BVI

   We were able to make financial savings on accommodation for LS and by combining planned and budgeted boat trips with other work. As a result we were able to divert funds towards additional training. We were able to send two members of the ANT staff (Tashim Fleming and Giovanni Hughes) to BVI to assist with seabird tracking, and to receive training from SZ. This was extremely valuable for these two new young members of the ANT team.

4.2 Actions taken in response to annual report reviews

1) ***Comment:*** *"The Seabird Monitoring Guide for Anguilla is available for free download from the project website, but in appears to only be downloadable in .pub format (although the Annual Report says it is available in .pdf format). If there is a .pdf version available, it was not easy to find on the website when this review was carried out. If it is not available for download in .pdf format at present, is there any scope for it to be made available and thus make it more accessible to those without Microsoft Publisher?"*

Answer: This is now available to download from our newly updated project website.

2) ***Comment*** *"Local stakeholders are said to have expressed an interest in the maps produced using the project's data. Could more detail be provided of the nature of these expressions of interest/how this information will be useful to local stakeholders"*

Answer: The GIS officer from BVI Department of Conservation and Fisheries and NPTVI have the shapefiles of bird tracks, which they plan to overlay with fishing zones and potential Marine Protected Areas. Kafi Gumbs (KG), Director of Fisheries & Marine Resources, Anguilla, is planning to use the maps in future funding applications, KG feels the maps will help relate the importance of certain areas around Anguilla to fish abundance and distribution.

3) Comment *"With the project's post-doctoral researcher now based in Anguilla, has capacity building of staff in Anguilla been prioritised, and if so, has this been at the expense of capacity building of project staff in BVI? Further details on the training of staff in BVI would be welcome"*

Answer: The capacity-building of staff in Anguilla has certainly increased with LS now being based there. But her presence year round in Anguilla has also benefited BVI partners. In the original project proposal there was budget and time for LS to visit BVI twice during the course of the project, and for an American scientist to conduct the tracking work, but with LS based in Anguilla she was able to visit the BVI twice in year one of the project and three times in year two, including being able to facilitate the BVI Government's Birds of Paradise Monitoring Programme so this actually increased the capacity building of staff in the BVI as well as in Anguilla. In addition, in May 2014 the RSPB hosted a bio-security workshop in Anguilla with LS facilitating the bird monitoring components. Representatives from the ANT, JVDPS and NPTVI attended this workshop, thus providing an additional opportunity for project partners to meet and discuss the project progress and outputs.

4) ***Comment:*** *The number of activities under Output 2 has decreased from four to three. Has the development of a threat mitigation strategy been removed as one of the activities to be conducted or is this simply assumed to fit under Activity 2.3? Clarification of the reasoning behind this would be useful.*

Answer: Output 2.3 "Identify specific immediate threats" was completed by consulting with both local, and international project partners. The outcome of these discussions was inclusion of potential and immediate threats in the "Conserving Anguilla's seabirds" and "Conserving the BVIs' seabirds" reports (available on our project website to download)

5) ***Comment:*** *Has a structure been defined for the fortnightly Skype meetings to monitor progress towards the expected outputs? It may be useful to ensure progress towards key outputs is discussed at regular intervals if the format of the Skype discussions is variable. Is there any scope for engaging local partners in these meetings, even if less often than fortnightly?*

There was no set structure for the skype meetings, rather on-going work was reported on, and suggestions for further work were discussed informally, following the objectives set out in the project application. LS attended weekly Monday morning meetings with the ANT staff to report

on project progress and to plan fieldwork. This gave ANT staff the opportunity to suggest new activities and comment on the work/project which LS could report back to Dr Green. These regular weekly updates with ANT also allowed the project to become more integral to ANT's regular work programme. LS' visited BVI five times over the course of the two year project and representatives from JVDPS and NPTVI attended a bio-security workshop in Anguilla, thus six face to face opportunities for discussion on the project were possible with BVI project partners. Being based in the region also allowed frequent telephone contact between SZ and LS. A good working relationship was established between LS and SZ, allowing emails to be exchanged on an almost weekly basis. All project partners were invited to attend the bi-annual skype meetings held to discuss the project, and were set on dates that suited the majority of partners, an agenda was circulated prior to the meetings and the group always reviewed progress against project outputs.

6) ***Comment:*** *Has provision for the hosting of the project's website been made after the Darwin funding period has ended?*

The project website has been re-developed by LS and a local Anguillan ANT volunteer. The website now reflects this Darwin project and also now DPLU035 as well as LS' fellowship research project, which will be based in Anguilla. This website will be updated and maintained for at least the next three years and will act as a repository for similar studies in the region.

5 Darwin Identity

This project had its own clear identity. Although, in addition and through the hard work of project partners, further work related to the project has been made possible: (1) the addition of a satellite tracking of Magnificent frigatebirds, funded and in collaboration with Clemson University, USA and the ARCI Institute (2) funding from the BVI Governor's fund to conduct summer breeding seabird surveys of the BVI.

In both BVI and Anguilla the local government departments, statutory bodies and NGOs are all aware of the Darwin funding mechanism, as a result of these organisations receiving or applying for Darwin funding. There seems to always be publicity (press releases in local newspapers and radio) related to the Darwin projects in both territories when a Darwin funding project is successful or when certain activities are being conducted/results reported, so the local community will have a general idea that a UK body is funding this work.

This project had been publicised frequently both locally in Anguilla and the BVI and by UK-based project partners, including the following:

Publications/press releases etc.

- Four radio shows discussing the project on Kool FM, Anguilla (presented by LS & ANT staff & JB)
- One article in the BVI Welcome magazine (distributed widely at airports, hotels and tourism spots), September edition 2014.(Dropbox 7.1)
- One article in the BVI local newspaper "The Beacon", March 2015, http://www.bvibeacon.com/1/index.php/news-articles-2/1547-featured-articles/6604-following-the-frigates-photo-gallery
- One article published by Nature Explorers in "The Salty Wing" magazine, Anguilla March 2015 (Dropbox 7.4)
- One Darwin+ newsletter article (Feb 2014) (Dropbox 7.3)
- Front cover photo and project description on Anguilla's Yellow Pages 2014 (Dropbox 7.5)
- One news article on BirdLife International's website (http://www.birdlife.org/americas/news/caribbean-seabird-conservation-new-study-begins)

- One news article reported in Birdwatch magazine http://www.birdwatch.co.uk/channel/newsitem.asp?cate=__14609
- One news article on the Puerto Rico ebird website: http://ebird.org/content/pr/noticias/tijeretas-de-las-islas-virgenes-britanicas-forrajean-en-las-aguas-de-puerto-rico/ (Dropbox 8.2)
- One article in RSPB Birds magazine (2013)

In all publications we clearly state the Darwin+ funding source. In addition to these publications the following talks/presentation have been made at regional and International Conferences:

- August 2013: Powerpoint presentation at BirdsCaribbean conference, Grenada (FM, ANT)
- March 2014: Poster presentation at International Seabird Conference, Oxford (JG, UoL)
- 2014 Powerpoint presentation to Royal Society for the Protection of Birds (JB, RSPB)
- March 2015: Powerpoint presentation of project at the WIDECAST regional meeting in Puerto Rico (LS, UoL) (Dropbox 2.1.7)
- July 2015: BirdsCaribbean, Jamaica, expected to present on the project (LS, UoL)
- October 2015, poster accepted at the World Seabird Conference, Cape Town.

The Darwin logo has been used on all presentations and will be used on all future presentations/posters. All reports produced for this project show the Darwin logo and acknowledge the Darwin funding, and all scientific publications state that the project was funded by Darwin+.

6 Finance and administration

6.1 Project expenditure

Project spend (indicative) since last annual report	2014/15 Grant (£)	2014/15 Total actual Darwin Costs (£)	Variance %	Comments (please explain significant variances)
Staff costs				
Consultancy costs				
Overhead Costs				
Travel and subsistence				
Operating Costs				
Capital items				
Others				
Audit Costs				
TOTAL				

Staff employed (Name and position)	Cost (£)
Dr Louise Soanes, Research associate	
Dr Jenny Bright – RSPB	
Local Field Worker – Anguila National Trust	
Jost Van Dyke Preservation Society	
TOTAL	

Consultancy – description of breakdown of costs	Other items – cost (£)
TOTAL	£0

Capital items – description	Capital items – cost (£)
TOTAL	£0

Other items – description	Other items – cost (£)
TOTAL	£0

6.2 Additional funds or in-kind contributions secured

Source of funding for project lifetime	Total (£)
4 x micro loggers donated by Pathtrack Ltd. for testing on sooty terns	
2 x remote download loggers and remote download station donated by Pathtrack Ltd. for testing on Magnificent frigatebirds	
Additional funding secured during the course of the project to support project work:	
BES small grant to establish live-streaming video link at Magnificent frigatebird colony (lead applicant JVDPS) 2013	
BVI Governor's fund – Summer seabird surveys BVI (lead applicant JVDPS 2014	
4 x satellite tags donated by Dr Pat Jodice, Clemson University, USA (lead applicant JVDPS. project also in partnership with ARCI Institute	
TOTAL	

Source of funding for additional work after project lifetime	Total (£)
Darwin+ funded (DPLUS035) - BVI seabird restoration & recovery planning 2015-2017	
Leverhulme Early Career Fellowship – University of Roehampton and ANT. 2015-2018	
TOTAL	

6.3 Value for Money

We believe that we achieved the best that we could with the budget that we set ourselves. The added value of Dr Jonathan Green and James Millett (RSPB) in-kind time to the project was essential for the achieving the project outputs. In addition, with assistance from UoL and RSPB the local partners worked hard to source extra funding for additional work to support the main objectives of this project and to continue the legacy of this work into the long-term future. A close working relationship with ANT allowed boat sharing for fieldwork, thus enabling this project to make more field visits than we budgeted for, and enabling ANT to perform additional work on the fieldtrips paid for by the Darwin project (e.g. turtle nest monitoring, and rat

eradication monitoring). Dr Jenny Bright also personally paid for a flight to visit both Anguilla and BVI in April 2014 to meet with the project partners and assist with achieving the outputs of the project. Everybody involved in the project went out of their way (at personal time, and even financial expense) to ensure the project was a success and that a long-term impact was made.

Annex 1 Standard Measures

Code	Description	Totals (plus additional detail as required)
Training Measures		
1	Number of (i) students from the UKOTs; and (ii) other students to receive training (including PhD, masters and other training and receiving a qualification or certificate)	0
2	Number of (i) people in UKOTs; and (ii) other people receiving other forms of long-term (>1yr) training not leading to formal qualification	0
3a	Number of (i) people in UKOTs; and (ii) other people receiving other forms of short-term education/training (i.e. not categories 1-5 above)	46 – Birds of Paradise Workshop (15), GIS workshop for ANT staff (10), Database training for Department of Fisheries staff member (1), Biosecurity workshop Anguilla (20).
3b	Number of training weeks (i) in UKOTs; (ii) outside UKOTs not leading to formal qualification	2 weeks: (i) 3 days Birds of Paradise Workshop, BVI, & 3 2 day Biosecurity workshop, Anguilla. (ii) 2 ANT staff attended week of training in BVI
4	Number of types of training materials produced. Were these materials made available for use by UKOTs?	2 (seabird monitoring guides for BVI & Anguilla)
5	Number of UKOT citizens who have increased capacity to manage natural resources as a result of the project	10
Research Measures		
6	Number of species/habitat management plans/ strategies (or action plans) produced for/by Governments, public authorities or other implementing agencies in the UKOTs	2 (long-term monitoring plans for BVI & Anguilla)
7	Number of formal documents produced to assist work in UKOTs related to species identification, classification and recording.	2 (seabird monitoring manuals for BVI & Anguilla)
8a	Number of papers published or accepted for publication in peer reviewed	6 (3 currently in draft but will be submitted before end of

Code	Description	Totals (plus additional detail as required)
	journals written by (i) UKOT authors; and (ii) other authors	July 2015)
8b	Number of papers published or accepted for publication elsewhere written by (i) UKOT authors; and (ii) other authors	0
9b	Number of computer-based databases enhanced (containing species/genetic information). Were these databases made available for use by UKOTs?	4 – free to view data repositories www.seabirdtracking.org www.movebank.org http://seamap.env.duke.edu/ Anguilla National Trust Biodiversity Database
9a	Number of species reference collections established. Were these collections handed over to UKOTs?	0
9b	Number of species reference collections enhanced. Were these collections handed over to UKOTs?	0
Dissemination Measures		
14a	Number of conferences/seminars/workshops/stakeholder meetings organised to present/disseminate findings from UKOT's Darwin project work	7
14b	Number of conferences/seminars/ workshops/stakeholder meetings attended at which findings from the Darwin+ project work will be presented/ disseminated	5
Physical Measures		
20	Estimated value (£s) of physical assets handed over to UKOT(s)	
21	Number of permanent educational/training/research facilities or organisation established in UKOTs	
22	Number of permanent field plots established in UKOTs	
23	Value of resources raised from other sources (e.g., in addition to Darwin funding) for project work	

Annex 2 Publications

Type * (e.g. journals, manual, CDs)	Detail (title, author, year)	Nationality of lead author	Nationality of institution of lead author	Gender of lead author	Publishers (name, city)	Available from (e.g. contact address, website)
Report	Conserving Anguilla's seabirds	UK	UK	F	Anguilla National Trust	www.caribbeanseabirds.org.uk Anguilla National Trust
Report	Long-term seabird monitoring Anguilla	UK	UK	F	Anguilla National Trust	www.caribbeanseabirds.org.uk Anguilla National Trust
Report	Conserving BVIs seabirds	UK	UK	F	JVDPS	www.caribbeanseabirds.org.uk Jost Van Dykes Preservation Society
Field guide	Seabird field guide for Anguilla	UK	UK	F	Anguilla National Trust	www.caribbeanseabirds.org.uk Anguilla National Trust
Field guide	Seabird field guide for BVI	UK	UK	F	JVDPS	www.caribbeanseabirds.org.uk Jost Van Dykes Preservation Society
Journal article	**Foraging behaviour of Brown Boobies *Sula leucogaster* in Anguilla, Lesser Antilles: Preliminary identification of at sea distribution using a time-in-area approach** *SOANES et al 2014 Bird Conservation International. 25(1) pg 87-96*	UK	UK	F	Bird Conservation International, Cambridge	http://journals.cambridge.org/action/displayFulltext?type=1&fid=9553659&jid=BCI&volumeId=25&issueId=01&aid=9553654 (Dropbox 4.4)

Journal article	**Seabird surveys on Dog Island, Anguilla, following eradication of black rats find a globally important population of Red-billed Tropicbirds (Phaethon aethereus)** *Bright et al 2014 Journal of Caribbean Ornithology 27:1-3*	UK	UK	F	Journal of Caribbean Ornithology	http://www.birdscaribbean.org/jco/index.php/jco (Dropbox 4.5)
Journal article	Tracking a small seabird: first recorded of foraging behaviour in the Sooty Tern *Onychoprion fuscatus* - ***In review***	UK	UK	F	Submitted to Marine Ornithology April 2015	Dropbox 4.2
Journal article	Seabird surveys of globally important populations in the British Virgin Islands	BVI/USA	BVI	F	Submitted to Journal of Caribbean Ornithology Dec 2014	Dropbox 4.6
Journal article	Important foraging areas of seabirds in Anguilla, Caribbean: Implications for marine spatial planning	UK	UK	F	In draft	Dropbox 4.1
Journal article	Data logging helps identify threats facing globally Important Population of Magnificent frigatebird *Fregata magnificens*	BVI/USA	BVI	F	In draft	Dropbox 4.3
Foraging range paper	Testing the foraging radius approach.	UK	UK	F	In draft	Dropbox 4.7

Annex 3 Darwin Contacts

Ref No	DPLUS007
Project Title	Using seabirds to inform Caribbean marine planning
Project Leader Details	
Name	Dr Jonathan Green
Role within Darwin Project	Lead
Address	
Phone	
Fax/Skype	
Email	
Name	Dr Louise Soanes
Organisation	University of Liverpool
Role within Darwin Project	Postdoctoral researcher
Address	
Fax/Skype	
Email	
Partner 2 etc.	
Name	Dr Jenny Bright
Organisation	Royal Society for the Protection of Birds
Role within Darwin Project	Project partner
Address	
Fax/Skype	
Email	
Partner 1	
Name	Ms Farah Mukhida
Organisation	Anguilla National Trust
Role within Darwin Project	Project partner
Address	
Fax/Skype	
Email	
Partner 1	
Name	Ms Susan Zaluski
Organisation	Jost Van Dykes Preservation Society
Role within Darwin Project	Project partner/locally based project lead in BVI
Address	

Fax/Skype	
Email	
Partner 1	
Name	Nancy Woodfield-Pascoe
Organisation	National Parks Trust of the Virgin Islands
Role within Darwin Project	Project partner
Address	
Fax/Skype	
Email	