Applicant: **Hart, Tom**
Organisation: **University of Oxford - Department of Zoology**
Funding Sought: **£397,756.00**

DPR10S2\1020

A cross-UKOT camera network to enhance marine predator conservation

Overseas Territories' ability to collect the evidence needed for the conservation of marine species is limited by resources constraints. Recent technology applications of drones and timelapse cameras to seabird and seal monitoring have huge potential to provide such evidence at modest cost. We will train OTs and help them test new methods to collect evidence on their priority taxa and protected areas and develop a reporting system that will enable policymakers from all OTs to rapidly interpret it.

PRIMARY APPLICANT DETAILS

Title	Dr
Name	Tom
Surname	Hart
Tel (Work)	[redacted]
Email (Work)	[redacted]
Address	[redacted]

Section 1 - Contact Details

PRIMARY APPLICANT DETAILS

Title	Dr
Name	Tom
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Tel (Work)	[redacted]
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Address	[redacted]

GMS ORGANISATION

Type	**Organisation**
Name	University of Oxford - Department of Zoology
Phone (Work)	[redacted]
Email (Work)	[redacted]
Address	[redacted]

Section 2 - Title, Dates & Budget Summary

Q3. Project title

A cross-UKOT camera network to enhance marine predator conservation

What was your Stage 1 reference number? e.g. DPR10S1\1123

DPR10S1_1019

Q4. UKOT(s)

Which UK Overseas Territory(ies) will your project be working in?

- ☑ British Antarctic Territory (BAT)
- ☑ Falkland Islands (FI)
- ☑ Gibraltar
- ☑ Montserrat
- ☑ St Helena, Ascension and Tristan da Cunha*
- ☑ South Georgia and The South Sandwich Islands (SGSSI)

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

Ascension

Q4b. In addition to the UKOTs you have indicated, will your project directly benefit any other Territories or country(ies)?

⦿ Yes

Please list below.

Have expressed interest for future years: Anguilla, BIOT, BVI, Turks and Caicos, UK, Canada, Faroe Islands, Greenland, Norway.

Q5. Project dates

Start date:	End date:	Duration (e.g. 2 years, 3 months):
01 May 2022	30 March 2025	2 years, 11 months

Q6. Budget summary

Year:	2022/23	2023/24	2024/25	Total request
Darwin funding request (Apr - Mar)	£172,019.00	£117,957.00	£107,780.00	**£** 397,756.00

Q6a. Do you have proposed matched funding arrangements?

⦿ Yes

What matched funding arrangements are proposed?

Confirmed
- Ascension Island Government [redacted] in staff costs and [redacted] in travel/subsistence.
- Monserrat Government to provide [redacted] in staff costs.
- John Ellerman Foundation (JEF) co-funding [redacted] of PL and PC salaries on Y1.
- [redacted] from Save Our Seas Foundation for Antarctic fieldwork.
- [redacted] (anonymous private donation) for Antarctic research expedition.

Unconfirmed
- JEF - OTs knowledge exchange workshop.
- Raised [redacted] in donations/year (for field costs) with one tour operator since 2012. Five tours pledged to fundraise from 2022-23.
- [redacted] from the John Fell Fund (Oxford based) used for opportunities in interdisciplinary research.

Q6b. Proposed matched funding as % of total project cost (total cost is the Darwin request plus other funding required to run the project). [redacted]

Q6c. If you have a significant amount of unconfirmed matched funding, please clarify how you fund the project if you don't manage to secure this?

We raise more than the matched funding proposed above per year, but this is what we have allocated to this project. If the matched funding is not all secured, we will reallocate further funding (currently allocated to penguin immunological research) to the project until more funding is secured or until the end of the project, whichever comes first.

The John Fell Fund can only be applied to once a project grant is secured, as match funding. We will apply as soon as we hear the result of this application to buy additional equipment to further support collaborators.

Section 3 - Project Summary and Conventions

Q7. Summary of Project

Please provide a brief summary of your project, its aims, and the key activities you plan to undertake. Please note that if you are successful, this wording may be used by Defra in communications.

Please write this summary for a non-technical audience.

Overseas Territories' ability to collect the evidence needed for the conservation of marine species is limited by resources constraints. Recent technology applications of drones and timelapse cameras to seabird and seal monitoring have huge potential to provide such evidence at modest cost. We will train OTs and help them test new methods to collect evidence on their priority taxa and protected areas and develop a reporting system that will enable policymakers from all OTs to rapidly interpret it.

Q8. Environmental Conventions, Treaties and Agreements

Please detail how your project will contribute to the aims of the agreement(s) your project is targeting. What key OT Government priorities and themes will it address and how? You should refer to Articles or Programmes of Work here. You should also consider local, territory specific agreements and action plans here.

Letters of support from UKOT Government partners/stakeholders should also make clear reference to the agreements/action plans your project is contributing towards.

This proposal links to two of the Darwin Plus round 10 priority areas:
- to increase the area of coverage, effectiveness and condition of protected areas in pursuit of global targets;
This will be achieved through local protection of Brown Boobies and Masked Frigatebirds in Monserrat and to ensure that local protection is in the correct place. Secondly, through protection of terns in Ascension and investigating whether rats are impacting on Sooty Terns in South Georgia and Ascension.
- and the implementation of National Biodiversity or Environment Action Plans.
All of the UKOTs partnering on this project have identified key components of their relevant national plans that will be addressed by this project. The strength we see in addressing them together is that we will develop cross-OT exchange and expertise, particularly in ground and burrow-breeding animals. This, we hope, will further ensure the durability of the network. It will also help develop and test new monitoring approach like for burrowing birds and sea turtles which can then be shared with other OTs.
Locally
Each of the OTs, in collaboration with the Project Leader and other partners, have developed targets that can be achieved using cameras, drones and combined reporting. These are reported in the UKOT wish list (see supporting material).

- Ascension National Biodiversity Action Plan, Ascension Marine Protected Area Management Plan – namely for Green Turtles, Sooty Terns, Ascension frigatebird and Masked booby.
- Monserrat conservation and environmental management act
Key breeding areas of seabirds on Monserrat are inaccessible or extremely dangerous to access using conventional methods, but that could be monitored using a combination of thermal drones and cameras.
- Gibraltar Nature Protection Act 1991, Gibraltar Biodiversity Action Plan
In particular to determine whether the European shag is self-sustaining on Gibraltar
- SGSSI Biodiversity Action Plan, Albatross Action Plans.
Two strategic priorities will be addressed by this project; firstly burrow -nesting petrels to understand reproductive success post rat-eradication. Secondly, moving from monitoring of seals and penguins to demographic models that predict change.
- Convention for the Conservation of Antarctic Marine Living Resources
For GSGSSI and BAT, it is an essential component of the management of fisheries and dependent species.
- Falklands Conservation of Wildlife & Nature Ordinance 1999, the Marine Mammals Protection Ordinance 1992, Falkland Islands Biodiversity Strategy.

In particular understanding changes in the Rockhopper penguin in relation to local fishing effort.
Regional
- 2014 UK Overseas Territories Biodiversity Strategy
- Agreement on the Conservation of Albatrosses and Petrels United Nations Framework Convention on Climate Change
- Convention on Migratory Species
Global
- Convention on Biological Diversity 7b on monitoring and 5a on conservation status review.
- Darwin Plus Round 10 priorities - "to increase the area of coverage, effectiveness and condition of protected areas in pursuit of global targets", "other climate change mitigation adaptation" and "the implementation of National Biodiversity or Environment Action Plans".

Section 4 - Project Partners

Q9. Project Partners

Please list all the partners involved (including the Lead Partner) 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. Please provide Letters of Support for the lead partner and each partner or explain why this has not been included.

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

Lead Partner name:	University of Oxford
Website address:	https://www.ox.ac.uk/
Details (including roles and responsibilities and capacity to engage with the project):	Oxford will produce and ship the needed equipment, and tech for each of the local partner and provide the appropriate training. In particular, this means devising tripods and buying all the equipment and shipping to or visiting the partners. Researching and developing a drone training plan with local partners that takes account of local legislations and the practicalities of local terrain. Oxford will also host data and produce artificial intelligence (AI) tools for the species. The data will be used in aggregated form by Oxford to produce an OT-wide marine species index assessing the health of the marine environment.
Have you included a Letter of Support from this organisation?	⦿ Yes

Have you provided a cover letter to address your Stage 1 feedback?	⦿ Yes

Do you have partners involved in the Project?

⦿ Yes

1. Partner Name:	Ascension Island Government
Website address:	https://www.ascension.gov.ac/
Details (including roles and responsibilities and capacity to engage with the project):	Each of the local UKOT partners (Ascension – Diane Baum) is responsible for identifying key species and sites that would benefit consistent monitoring using timelapse cameras and drones. They will also oversee the installation and servicing of the local monitoring network once appropriately trained.
Have you included a Letter of Support from this organisation?	⦿ Yes

2. Partner Name:	Antarctic Research Trust (Falklands)
Website address:	http://www.antarctic-research.de/?lang=en
Details (including roles and responsibilities and capacity to engage with the project):	Each of the local UKOT partners (Falkland Islands – Klemens Putz) is responsible for identifying key species and sites that would benefit consistent monitoring using timelapse cameras and drones. They will also oversee the installation and servicing of the local monitoring network once appropriately trained.

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

3. Partner Name:	Gibraltar Botanic Gardens
Website address:	http://gibraltargardens.gi/
Details (including roles and responsibilities and capacity to engage with the project):	Each of the local UKOT partners (Gibraltar – Keith Bensusan) is responsible for identifying key species and sites that would benefit consistent monitoring using timelapse cameras and drones. They will also oversee the installation and servicing of the local monitoring network once appropriately trained.
Have you included a Letter of Support from this organisation?	⊙ Yes

4. Partner Name:	Montserrat National Trust
Website address:	http://montserratnationaltrust.ms/
Details (including roles and responsibilities and capacity to engage with the project):	Each of the local UKOT partners (Monserrat – Eulyn Silcott-Greaves) is responsible for identifying key species and sites that would benefit consistent monitoring using timelapse cameras and drones. They will also oversee the installation and servicing of the local monitoring network once appropriately trained.

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

5. Partner Name:	SGSSI Government
Website address:	https://www.gov.gs/
Details (including roles and responsibilities and capacity to engage with the project):	Each of the local UKOT partners (GSGSSI – Jennifer Black) is responsible for identifying key species and sites that would benefit consistent monitoring using timelapse cameras and drones. They will also oversee the installation and servicing of the local monitoring network once appropriately trained.
Have you included a Letter of Support from this organisation?	⊙ Yes

6. Partner Name:	British Antarctic Survey (Antarctica)
Website address:	https://www.bas.ac.uk/
Details (including roles and responsibilities and capacity to engage with the project):	Each of the local UKOT partners (Antarctica – Philip Hollyman) is responsible for identifying key species and sites that would benefit consistent monitoring using timelapse cameras and drones. They will also oversee the installation and servicing of the local monitoring network once appropriately trained.

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

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

We have also included a letter of support from the Marine Conservation Officer, Emma Harte, at Falkland Conservation, the Falkland Islands Government, and our industry partners to develop and test new time lapse cameras, Time-Lapse Systems. We will also partner with Stony Brook University and Blackbawks Data to replicate MAPPPD (Mapping Application for Penguin Populations and Projected Dynamics, www.penguinmap.org) for UKOTs with a phenology and survivorship embedded to the existing model so that changes in population can be assessed against changes in reproductive success. Grant Humphries from Blackbawks Data will consult to replicate the platform while Heather Lynch and Christian Che-Castaldo will add productivity to models of penguin demographic change based on their own research. Letters of support also attached.

Please provide a cover letter responding to feedback received at Stage 1 if applicable and a combined PDF of all Letters of Support.

12 FINAL Letters of Support
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5 Darwin Plus cover letter Round 2 2022
06/01/2022
09:35:14
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Section 5 - Project Staff

Q10. Project Staff

Please identify the key staff on this project, their role and what % of their time they will be working on the project. Further information on who should be classified as key project staff can be found in the guidance.

Please provide 1 page CVs for these staff, or a 1 page job description or Terms of Reference for roles yet to be filled. These should match the names and roles in the budget spreadsheet. If your team is larger than 12 people please review if they are key project staff, or whether you can merge roles (e.g. 'admin and finance support') below, but provide a full table based on this template in the PDF of CVs you provide.

Name (First name, Surname)	Role	Organisation	% time on project	1 page CV or job description attached?
Tom Hart	**Project Leader**	University of Oxford	35	Checked
Laure Cugniere	Project Coordinator 40% and M&E Lead 10%	University of Oxford	50	Checked
Philip Hollyman	Seal Monitoring (Antarctica)	British Antarctic Survey	5	Checked

S. Ajhermae White	Seabird Monitoring (Montserrat)	Government of Montserrat	5	Checked

Do you require more fields?

⦿ Yes

Name (First name, Surname)	Role	Organisation	% time on project	1 page CV or job description attached?
Eulyn J. Silcott-Greaves	Seabird Monitoring (Montserrat)	Government of Montserrat	5	Checked
Ernestine Angeller Corbett	Seabird Monitoring (Montserrat)	Government of Montserrat	5	Checked
No Response	*No Response*	*No Response*	0	Unchecked
No Response	*No Response*	*No Response*	0	Unchecked
No Response	*No Response*	*No Response*	0	Unchecked
No Response	*No Response*	*No Response*	0	Unchecked
No Response	*No Response*	*No Response*	0	Unchecked
No Response	*No Response*	*No Response*	0	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 the file is named clearly, consistent with the named individual and role above.

Eulyn Silcott-Greaves CV
07/01/2022
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pdf 550.52 KB

Ernestine Corbett CV
07/01/2022
09:07:52
pdf 236.63 KB

Ajhermae White CV
07/01/2022
09:07:52
pdf 126.39 KB

8 Philip R Hollyman CV
06/01/2022
09:43:22
pdf 166.99 KB

7 Laure Cugniere CV
06/01/2022
09:43:17
pdf 161.07 KB

6 Tom Hart CV
06/01/2022
09:43:12
pdf 255.76 KB

Have you attached all Project staff CVs?

⦿ Yes

Section 6 - Background & Methodology

Q11. Problems the project is trying to address

Please describe the problem your project is trying to address in terms of environment and climate issues in the UKOTs.

For example, what are the specific threats to the environment that the project will attempt to address? Why are they relevant, for whom? How did you identify these problems? How will your proposed project help?

Please cite the evidence you are using to support your assessment of the problem (references can be listed in your additional attached PDF document which can be uploaded at the bottom of the page).

Seabird and other marine species are threatened globally by anthropogenic pressures like pollution, bycatch, and climate change. Seabird numbers, our primary taxa, have declined by nearly 70% over the past 50 years. While there are many local efforts to protect marine species, access to evidence is hampered by logistical constraints and lack of reporting tools. We aim to produce tools to be applied across UKOTs to lower the barrier to entry of modern techniques to spatially map and monitor key marine species.

Why this, why now and why together?
Many of the threats to marine biodiversity and monitor constraints are similar across OTs regardless of the local conservation context. Monitoring technologies are not being used by due to the perceived risk and start-up costs of new technologies. However, we have demonstrated the feasibility of this novel approach and successfully trained numerous partners in the polar regions and the UK. If we can set up a collaborative approach and a reporting structure across a range of UKOTs, this can serve as a proof of concept to expand to all UKOTs and significantly boost UK marine conservation.

This approach would allow region-wide comparisons for threatened species such as frigatebirds, boobies, terns, and sea turtles. The ability of UKOTs to collect and analyse evidence at the scale required to inform the conservation of marine species remains significantly limited by resources. Current monitoring efforts are opportunistic, expensive, and inconsistent and data processing techniques, like AI or distributed citizen science require specific expertise, hence many marine colonies being data deficient and their conservation inadequate. Local conservation strategy and treaties listed in the consultation process (see cover letter) call for increased monitoring that fit within the aim of informed conservation. A previous Darwin Plus project (DPR9S2\1016) also noted that financial and logistical hurdles limited the feasibility of automation for territories, an issue that we can now address.

Collaborative citizen science programmes, like Zooniverse Penguin Watch, Seal Watch and Seabird Watch, have highlighted solutions with over one million images processed each year and can be replicated to other taxa and territories and reduce implementation cost. Those programmes will also boost the awareness of the UKOTs biodiversity to a wider audience via the citizen science platform (Aichi Biodiversity Target 1). We aim to harness timelapse and thermal drone monitoring to design the infrastructure needed to enable an evidence-based management of marine species at a low cost (in term of staff time and budget) and surveys marine species that have yet been possible to monitor such as Brown boobies in foliage on Monserrat. This will significantly enhance UKOTs' conservation capacity by boosting their ability to collect, process and interpret evidence and rapidly translate it for policy. The online and open access decision making support tool developed as part of the project will be made accessible to policymakers and local industries (e.g., fishing, tourism) to foster sustainability strategies.

See list of references and UKOT monitoring wish list attached.

Q12. Methodology

Describe the methods and approach you will use to achieve your intended Outcome and contribute towards your Impact. Provide information on:

- **How you have analysed historical and existing initiatives and are building on or taking work already done into account in project design. Please cite evidence where appropriate.**
- **The rationale for carrying out this work and a justification of your proposed methodology.**
- **How you will undertake the work (materials and methods).**
- **How you will manage the work (role and responsibilities, project management tools etc.)**

(This may be a repeat from Stage 1 but you may update or refine as necessary)

Seabirds can be described as indicator species. They are long-lived and integrate signals of marine resource quality over time such as prey abundance, oceanographic conditions, and weather patterns. However, to interpret the proximate cause of change in population trends, particularly where stressors are confounded in space and time, we need spatially replicated sites with variation in the hypothesised stressors to be statistically disentangled. With advances in remote monitoring techniques, we can collect and analyse data in a quantity and at a speed such that we can develop better predictive models of change. We aim to integrate camera technology, drone surveys, and a citizen science/AI processing tool into a hybrid monitoring system to enable a step-change in our ability to test hypotheses of what drives colony structure and population size. This will permit to model population growth and identify causal drivers of change in seabird, seal and possibly turtle populations to inform conservation legislations.

This is built on a wealth of experience from the PL in timelapse monitoring, drone surveys, citizen science and AI, particularly building on DPLUS002, DPLUS132 and on a need assessment conducted with partner OTs. Much of the automation and remote monitoring funded by Darwin Plus has taken place in the Antarctic, sub-Antarctic, due to the logistical difficulties in maintaining a presence in such regions. We have since received huge interest in adapting these from a range of partners. The project will build on the University of Liverpool's successful work in the Caribbean UKOTs "Assessment and Conservation Actions for Cayman Islands Seabird Populations (DPLUS044)" and "Regional-scale Marine Conservation through multi-territory tracking of Frigatebirds (DPLUS097)". Previous cross OT collaborations will be harnessed for consultation and training (e.g., DPR7P\100068, DPR9S2\1023, DPR9S2\1032). The data will be analysed in our processing tool before being incorporated into a health index and made available on an open access portal targeted at decision makers including policymakers and stakeholders from the fishing and tourism industries. It will be mirrored from the successful MAPPPD, an online evidence portal for Antarctic penguins, run by Heather Lynch at Stony Brook University, USA. We will be working with her and Grant Humphries to replicate it. This process will include a data agreement with all partners stating that they retain full data ownership.

The PC under the leadership of the PL will coordinate with local partners and stakeholders (i.e., governments, researchers and NGOs involved in marine monitoring and coastal management) and organise a yearly virtual workshop. The aim of these workshops will be to (1) finalise and adapt the project strategy and implementation including the selection of the sites and species, and (2) provide the field staff with the protocols and training required for the implementation phase.

The PL will manage the research aspect of the project by visiting each partner once and exploiting the evidence collected for local and regional study. The field staff will create monitoring stations using a mixture of commercially available and bespoke cameras, a technique validated on DPLUS002 (Jones et al. 2018, 2020, Hart et al. unpublished). These stations will be placed overlooking seabird cliffs to record timing of breeding and overall breeding success - both known to vary in responses to localized threats and food availability. Measures of breeding phenology, breeding success and abundance will be generated by following individual bird nests through time (Youngflesh et al., 2020; Hart et al., unpublished). We will also test high-frequency cameras to record chicks' feeding rate on nests to compare colony size, breeding success and effort required to successfully raise chicks (linked to environmental quality). Cameras provide details on the timing of breeding failures, and causative factors (e.g., predation, abandonment, infrequent meal provisioning), while drone surveys provide future-proof measures numbers and the exact locations of each nest year on year. This method has also been used for seal colonies by the PL around Antarctica and will be tested for the first time on sea turtles and burrowing seabirds.
We will then use human annotations (i.e., citizen science) coupled with machine learning (i.e., AI) via the Zooniverse platform (world's largest platform for people powered research at Oxford University, https://www.zooniverse.org) to process the data collected. The algorithms will pre-sort which images are seen by citizen scientists and thereby retrain the algorithm considering human-annotated difficult cases. Metrics from colonies will be analysed against local oceanographic conditions, distance from adjacent colonies and fishing pressure using mixed models and time series analyses. This data will then be turned into easy to interpret evidence for key decision-makers.

See list of references and figure attached.

If necessary, please provide supporting documentation e.g. maps, diagrams, and references etc., as a PDF using the File Upload below.

11 List of references
06/01/2022
11:51:28
pdf 159.77 KB

10 UKOT monitoring wishlist
06/01/2022
09:50:29
pdf 62.25 KB

9 Figure seabird monitoring technique Hart
06/01/2022
09:50:02
pdf 323.35 KB

Section 7 - Stakeholders and Beneficiaries

Q13. Project Stakeholders

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

The primary stakeholders, the governments as well as our research collaborators at Stony Brook University and Blackbawks Data have been consulted and will join the development and implementation phases. All OTs are in the process of providing us with target species and sites, conservation priorities as well as local stakeholders for training and field work. All governments are formal partners and consider this project as their priority. They will drive the implementation phase and local/regional marine and coastal management collaborations (except for BAT which does not have a formal government structure and is represented by Oxford and the British Antarctic Survey, see letters of support). Our partners have also provided us with a rough estimate of cost and logistical needs. Several additional OTs are interested but already committed for this Darwin Plus round (e.g., Turks and Caicos, Anguilla, St Helena). We have also discussed long-term support for this network with each territory. Assuming it demonstrates its use, all have committed to embedding these techniques within their marine monitoring programmes and decision-making processes.

Considering their commensurate experience in OTs, we are also in contact with Blue Belt to discuss the best data management strategy and how they could support us moving forward. We have also been in touch with the John Ellerman Foundation who has expressed strong interest in hosting an OT wide workshop fostering stakeholder consultation and knowledge exchange. Finally, this project will benefit from our existing network of experts, policymakers, and industry collaborators within OTs and the palearctic region.

Q14. Institutional Capacity

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

The University of Oxford is a world leading organisation for conservation research and applied ecology. The Polar Conservation and Ecology group led by the Project Leader within the Department of Zoology has strong expertise in translating marine monitoring and applied ecology into conservation management and policy. The group has developed a strong network within the overseas territories through its work with seabirds, particularly penguins, and seals, and currently have projects running in the Falklands, South Georgia and the South Sandwich Islands and the British Antarctic Territory. Its research focuses on the study of marine predators' phenology and immunology, harnessing technology to understand competition and adaptation of the marine environment in a changing environment. The Project Lead has also successfully led to completion a previous Darwin project (DPLUS002) which will be the proof of concept for this project.

The Ascension Island Government and the South Georgia and South Sandwich Islands Government, The British Antarctic Survey and the Monserrat National Trust have all previously led successful DPLUS projects. The Antarctic Research Trust (Falklands), Gibraltar Botanic Gardens, Stony Brook University and Blackbawks Data are new to this program but have specific components of data delivery or modelling that they have several examples of successful previous delivery.

Q15. Project beneficiaries

Who will your project benefit? You should consider the direct benefits as a result of your project as well as the broader indirect benefits which may come about as a result of your project achieving its Outputs and Outcome. The measurement of any benefits should be included in your project logframe.

The primary beneficiaries are the OTs' governments in taking ownership of the monitoring of their coastal ecosystem with limited added staff effort. In short to medium term, the governments will benefit from the creation of this cost-effective evidence gathering tool by reducing the financial and logistical burden linked to the monitoring of the coastal and marine environment, particularly seabirds, but also turtles and seals, as we test the system on these marine taxa.

Local researchers will benefit from more data on their key species and in the case of local populations, there will be more engagement with local species via the workshops on Monserrat.

In the longer term, they will benefit further by gathering the evidence needed for informed conservation management decisions. It will enhance the conservation and sustainable use of their unique marine environment, one of their main economic advantages. The OTs involved in the project will be leaders in marine sustainable management and conservation.

Regional conventions and treaties like the CCAMLR, ACAP, CMS, who have the responsibility to manage this fragile marine environment at a broader scale will benefit from the creation of a large-scale, long-term data set to feed into their decision process and risk assessment.

Section 8 - Gender and Change Expected

Q16. Gender (optional)

How is your project working to reduce inequality between persons of different gender? At the very least, you should be able to provide reassurance that your proposed work is not increasing inequality. Have you analysed the context in which you are working to see how gender and other aspects of social inclusion might interact with the work you are proposing?

The Project Lead does not anticipate the study proposed to increase gender inequality. The project leader's research group is a mixed team. The project is also spread across inhabited and uninhabited OTs and the method will not have an adverse impact on local populations. All local citizens would benefit from increased sustainable management of OTs marine resources and empowerment of local governments and NGOs in monitoring the status of their resources.

The PL will, whenever possible, work towards gender equity when planning training and collaborations opportunities prioritising female researchers (mostly depending on availability) and any possible adverse impact will be considered during the launch workshop. The PL will also encourage gender equity and minority representation in the citizen science project with both local OT engagement (e.g., promotion in local school by mixed group of researchers) and international engagement (promotion on platforms encouraging minority representation - e.g., women in STEM or Polar Impact). We will also consider gender sensitivity when communicating with stakeholders and our citizen scientists. Zooniverse platform is also designed to limit barrier to use by allowing use without the need for account creation.

Q17. Change expected

Detail the expected changed this work will deliver. You should identify what will change and who will benefit a) in short-term (i.e. during the life of the project) and b) in the long-term (after the project has ended). Please describe the changes for the environment and, where relevant, for people in the OTs, and how they are linked.

To produce a field to policymaker evidence pipeline for UKOT governments and local NGOs to exchange knowledge and obtain cost-effective evidence for marine conservation (without relying on consultants). Once the expertise exists, it can be applied to a range of important conservation challenges related to the evaluation of breeding habitats and protected areas and tools to project population viability. For the Falklands/South Georgia albatrosses and Caribbean islands, this will allow regional assessment of key taxa, particularly flying seabirds but also potentially seals and turtles.

Ascension
-Provide evidence on abundance and trends of sooty terns – unknown impact of rats on breeding success to date;
-Provide evidence on abundance and trends of green turtles, endemic Ascension frigatebirds and masked boobies –

currently unsustainable monitoring methods;
-Identify productivity predictors to inform government biodiversity action plan.
Falkland Islands
-Provide evidence of changes in threatened rockhopper penguin breeding behaviour (Hummock Island, New Island, Saunders Island and Bleaker) – add to Seabird Monitoring Programme.
Gibraltar
-Provide evidence of population size and breeding trends of yellow-legged gulls and European shags – species status review prioritised in their Nature Protection Act 1991 and Biodiversity Action Plan.
Montserrat
-Provide evidence on abundance and confirm nesting of understudied least terns, magnificent frigatebirds and brown boobies;
-Inform conservation measures related to urban reconstruction post-eruption and Conservation and Environmental Management Act. Currently no management plan for seabirds so aiming to establish benchmark for Caribbean seabird conservation;
-Online and face to face engagement with local communities, schools and citizen scientists on Audubon shearwaters.
SGSSI
-Add white-chinned petrels and black browed albatross to understand the recovery of burrow-nesting seabirds post-rat eradication;
-Ongoing penguin monitoring (launched in DPLUS002) to feed into MAPPPD framework and support ongoing sustainability management effort.
Antarctica
-Provide evidence of Pygoscelid penguins – status review for BAT fishery risk assessment (DP\100031).

Q18. Pathway to change

Detail the expected changes this work will deliver. You should identify what will change and who will benefit a) in the short-term (i.e. during the life of the project) and b) in the long-term (after the project has ended). Please describe the changes for the environment and, where relevant, for people in the OTs, and how they are linked.

Previous work by the Project Lead on remote and semi-remote monitoring of penguins and seals has informed key policy decisions like protected area design and IUCN Red List review. Following this success, this project will primarily be about knowledge exchange and lowering barriers to entry for new territories to harness these techniques with lower development time and analytical burden.

A government consultation (ongoing) will formalize a gap analysis (i.e., site and species) for the evidence-based conservation of marine species, a priority for all our OT partners. This consultation will inform the design of our training and the infrastructure needed to set up a collaborative framework. The data collected will be run into our citizen science/AI processing system and evidence summaries will be available via a newly designed open access portal.

The network established during the project span will run for at least five years given the longevity of the technology requested. It will lay the foundations for the partners to continue post-funding period at a fraction of the initial cost. The investment in citizen science infrastructure and AI tools will have an indefinite legacy and can easily be made available to all OTs.

Q19. Exit strategy

State how the project will reach a stable and sustainable end point, and explain how the outcomes will be sustained, either through a continuation of activities, funding and support from other sources or because the activities will be mainstreamed in to "business as usual". Where individuals receive advanced training, for example, what will happen should that individual leave?

If successful, the project will see the development of a semi- to fully automated network to monitor seabirds and other marine predators on the OTs. The local teams will be trained and provided protocols (and online support) to implement and service the camera network and conduct drone surveys yearly. Meanwhile the PL's citizen science and AI processing tool will be used to process the data collected and provide summaries at no cost for the OTs. The research team and OTs are working on the assumption that the network and processing tools will be sustainable long-term if successfully implemented. The OTs will benefit from long-term evidence to manage local marine environment and having a support network and evidence baseline in case of sudden change while the PL and the broader research community will benefit

from the aggregated dataset to improve the understanding of broader changes in and the resilience of the UK marine ecosystem.

Q20. Ethics

Outline your approach to meeting Darwin's key principles for ethics as outlined in the guidance note. Additionally, are there any human rights and/or international humanitarian law risks in relation to your project? If there are, have you carried out an assessment of the impact of those risks, and of measures that may be taken in order to mitigate them?

Legal, evidence credibility and ethical obligations
-Developed under the principles followed by Oxford University and the Central University Research Ethics Committee.
-No human rights or international law risks pertaining to the project.

Access, benefit sharing, OT participation/leadership
-Provisions for all publications and dataset coming from public grants and policy ready summaries to be open access.
-OTs to be involved in the development and implementation of the project to maximise relevance as demonstrated in the support letters.
-End goal – give leadership of the network to the OTs. The PL will remain involved for trouble shooting and assistance with data processing and regional/global studies.

Respect the rights, privacy, prior consent, and safety of people
-No direct involvement with the communities of the populated OTs (other than possible outreach and engagement led by collaborators).
-Camera placement (primarily in unpopulated areas, facing a cliff or seaside) reduces the risk of viewing people. In the unlikely event people are capture, those are removed from the dataset prior to being made public.

Health/safety
-Prioritising training in physical and mental health, risk management with Project Leader research group and collaborators considering the isolated nature of field work.
-PL voluntarily complies to the safety British Standard BS 8848: Specification for the provision of visits, fieldwork, expeditions, and adventurous activities outside the United Kingdom.
-Yearly field trainings include mental health, in-depth wilderness medical training, drone use to reduce the risk to people on slopes that are otherwise required for monitoring.

Section 9 - Budget, Risk Management & Funding

Q21. 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 budget templates for grant requests under £100,000 and over £100,000.

- Budget form for projects under £100,000
- Budget form for projects over £100,000

Please refer to the Finance Guidance **for more information.**

Please ensure you include any co-financing figures in the Budget spreadsheet to clarify the full budget required to deliver this project.

NB: Please state all costs by financial year (1 April to 31 March) and in GBP. Darwin Plus cannot agree any increase in grants once awarded.

Budget_over_100K_Aug21_Final_MASTER
10/01/2022
16:38:02
xlsx 78.67 KB

Q22. Financial Risk Management

This question considers the financial risks to the project. Explain how you have considered the risks and threats that may be relevant to the successful financial delivery of this project. This includes risks such as fraud, bribery or corruption, but may also include the risk of fluctuating foreign exchange, delays in procurement or recruitment and internal financial processes such as storage of financial data.

One of the biggest risks is transport and shipping of lithium batteries, which need to be shipped as surface shipment. These need to be insured and sent up to six months ahead of time so that if they do not arrive, there is a chance of replacement. Work over the last 10 years in Antarctica and the Southern Ocean has minimised risks to kit via partner selection and redesign of equipment.

The Project Leader is ultimately responsible for the use of funds with the support of the Department's Finance team and in accordance with the university's checks and balances. The university has published guidance including a Bribery and Fraud toolkit, which is used to assess the risk of either occurring; as well as operating policies and processes that minimise the risk of bribery and fraud and assist the identification of these if they occur. https://www.admin.ox.ac.uk/councilsec/compliance/briberyfraud/

Q23. Funding

Q23a. Is this a new initiative or a development of existing work (funded through any source)?

⦿ New initiative

Please provide details:

While this is a new initiative, a previous proposal (DPR8S1\1079) covered some aspects of this work. The camera monitoring aspect of the work has previously been funded by DPLUS002 specifically within the Southern Ocean. This will be used as proof of concept for the expansion to new territories and taxa. All aspects of the application from Montserrat, Ascension and Gibraltar are novel as well as new species and sites for SGSSI and the Falklands. The testing of the method on sea turtle and burrow-nester will be ground-breaking if successful.

Q23b. Are you aware of any other individuals/organisations/projects carrying out or applying for funding for similar work?

⦿ Yes

If yes, please give details explaining similarities and differences, and explaining how your work will be additional and what attempts have been/will be made to co-operate with and learn lessons from such work for mutual benefits.

Yes, Rhiannon Austin has submitted an application for monitoring of flying seabirds in some Caribbean islands. We collaborated to deconflict these applications as much as possible. The Project Leader Hart has advised her on camera monitoring and will continue to liaise over the course of the projects (if successful) to promote complementary and knowledge exchange. Moreover, any imagery from Project Leader Austin will be hosted on Seabird Watch and may feed into regional/global study. There is no overlap between the UKOTs on our proposals but the similarity in techniques demonstrates the pressing need to get them into the hands of local partners on the ground.

Section 10 - Finance

Q24. Financial Controls

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

The Project Leader is ultimately responsible for the use of funds. His role includes the responsibility to authorise expenditure and review costs charged to the project regularly to ensure eligibility and appropriateness. He is supported by the university's administrative staff who have significant experience of research project management and ensuring effective financial processes are followed. The Zoology department manages over 170 active research projects at any one time across a diverse portfolio of funders. Expenditure is proactively managed, and its management is subject to internal and external audit programmes within the wider university administration. Finally, the project steering committee will be consulted on major expenses and the Project Leader will provide regular budget updates.

Q25. Balance of budget spend

Defra are keen to see as much Darwin Plus funding as possible directly benefiting OT communities and economies. While it is appreciated that this is not always possible every effort should be made for funds to remain in territory.

Explain the thinking behind your budget in terms of where Darwin Plus funds will be spent. What benefits will the Territory/ies see from your budget? What level of the award do you expect will be spent locally? Please explain the decisions behind any Darwin Plus funding that will not be spent locally and how those costs are important for the project.

The main budgetary items not going overseas are budgets for Project Leader Tom Hart, Project Coordinator Laure Cugniere and Field Support Phil Hollyman. These are UK base for two reasons – firstly these represent research time in Falklands, South Georgia and the South Sandwich Islands and Antarctica, the Southern Ocean component of which are uninhabited.

Secondly, a huge proportion of this budget is about knowledge transfer to OTs, which comes from the Project Leader and Project Coordinator's time. While this is spent on UK salaries, this represents a one-time investment in the territories. Once this process has happened, they will be able to implement elsewhere the techniques developed. These are hard-won lessons that are a lot cheaper to teach and troubleshoot with local partners than develop from scratch.

All of the camera consumables and the data base will remain in territory, including drones.

Q26. Capital Items

If you plan to purchase capital items with Darwin Plus funding, please indicate what you anticipate will happen to the items following project end. If you are requesting more than 10% capital costs, please provide your justification here.

Database (see quote) – we have gone to the developer of MAPPPD as he has already developed this and it is much cheaper to refine and redeploy than pay a developer to develop a similar system for UKOTs. This is the only budgetary item above £10k (in consultancy fee). All drones and cameras are below this. The database will remain open access and the cameras and drones will remain in-territory. The providers of capital items were selected by the PL based on the last 10 years of development of a similar project in the polar regions (i.e., Seabird Watch and Penguin Watch).

Q27. Value for Money

Please describe why you consider your application to be good value for money including justification of why the measures you will adopt will secure value for money.

We have developed the techniques proposed in this project to substantially increase capacity above the status quo for marine monitoring while lowering current staff time and cost. Our methodology is now sufficiently stable and cheap that other stakeholders can it take on. The ability to monitor the timing of breeding and reproductive success for marine species in isolated places for approx. £[redacted] per site overall (not including staff time) and approximately £[redacted] per year maintenance, which represents substantial cost savings over human observation the same time as a great increase in scope and spatial range for conservation measures. This project will represent a large-scale increase in conservation capacity over many OTs. The data collected becomes more valuable over time as it provides a baseline and the capacity to OTs to detect change rapidly. Finally, the cost of the method reduces over time as cameras and drones reduce in costs so that partners will be able to carry the replacement cost in future after the end of this project. The data becomes more

valuable over time as it becomes a time series embedded into decision making.

Q28. 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.

Reports and publications will be reviewed by all partners before submission. All publications will be peer-reviewed and open access (whenever possible) to ensure rigorous scientific process and accessible results. We have budgeted £4000 into the budget for open access charges. Every manuscript is also available via Oxford University open access system in draft form even when not published open access. Any conservation regulations drafted during the project will be subject to local review process as well as review by the steering committee.

All data will be made available to the OTs upon completion, in raw, processed, and analysed form. The metadata is deposited into online repositories like the South Atlantic Environmental Research Institute (SAERI) and Mapping Application for Penguin Populations and Projected Dynamics (MAPPPD). R scripts to extract metadata are open to all on Github and Figleaf and can be referenced and publicised within publications. The first computer vision algorithm was presented and published in the Institute of Electrical and Electronics Engineers (IEEE), in October 2016, and all the source code and imagery used are freely available via Data Dryad. We aim to do the same for the seabird algorithm. The penguin counter source code is freely available online and the implemented software available to use, but behind a firewall for security concerns. At present, we require collaborators to send us imagery, which we process, count and send back. Given that most stakeholders want policy ready evidence to interpret, we anticipate more interest in the data portal than raw data.

Section 11 - Safeguarding

Q29. Safeguarding

Projects funded through Darwin Plus must fully protect vulnerable people all of the time, wherever they work. In order to provide assurance of this, projects are required to have appropriate safeguarding polices in place. Please confirm the lead organisation has the following policies in place and that these are available on request:

Please upload the lead partner's Safeguarding Policy as a PDF on the certification page.

We have a safeguarding policy, which includes a statement of our commitment to safeguarding and a zero tolerance statement on bullying, harassment and sexual exploitation and abuse	Checked
We have attached a copy of our safeguarding policy to this application	Checked
We keep a detailed register of safeguarding issues raised and how they were dealt with	Checked
We have clear investigation and disciplinary procedures to use when allegations and complaints are made, and have clear processes in place for when a disclosure is made	Checked
We share our safeguarding policy with downstream partners	Checked
We have a whistle-blowing policy which protects whistle-blowers from reprisals and includes clear processes for dealing with concerns raised	Checked
We have a Code of Conduct in place for staff and volunteers that sets out clear expectations of behaviors - inside and outside of the work place - and make clear what will happen in the event of non-compliance or breach of these standards	Checked

Please outline how you will implement your policies in practice and ensure that downstream partners apply the same standards as the lead organisation.

The University of Oxford policy will be shared with all partners. It will be part of the memorandum of understanding that they have read and acknowledge the need to comply with this code of practice and to reach out to the Project Leader for any needed clarification.
The University of Oxford Safeguarding code of practice: https://www.ox.ac.uk/sites/files/oxford/field/field_document/Safeguarding%20code%20of%20practice.pdf

Section 12 - Logical Framework

Q30. Logical Framework

Darwin Plus projects will be required to monitor (and report against) their progress towards their expected Outputs and Outcome. 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.

- Stage 2 Logframe Template

Please complete your full logframe in the separate Word template and upload as a PDF using the file upload below – **please do not edit the template structure other than adding additional Outputs if needed as a logframe submitted in a different format may make your application ineligible**. Copy your Impact, Outcome and Output statements and your activities below - these should be the same as in your uploaded logframe.

Please upload your logframe as a PDF document.

2 R10-DPlus-St2-Logical-Framework-FINAL
06/01/2022
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pdf 89.58 KB

Impact:

A cost-effective approach to building UKOTs capacity and support network to enhance marine species conservation

Outcome:

Produce a field-to-policymaker evidence pipeline enabling UKOT governments and stakeholders to obtain near-real time evidence (local and regional) on marine population trends and reduce monitoring cost

Project Outputs

Output 1:

Marine species health index guidelines established to support the development of partners conservation priorities and UKOTs conservation policy

Output 2:

Artificial Intelligence (AI) tool development for data processing to speed up access to evidence made accessible in the time frame of the project

Output 3:

Online open access web portal to fill critical knowledge gaps in UKOT and improve policymakers access to marine health research evidence

Output 4:

Establish a cross-UKOTs network aimed at facilitating knowledge exchange, cross-training and lowering barriers to marine predator conservation

Output 5:

No Response

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.

1.1 Sign a memorandum of understanding with all the OTs involved.
1.2 Train field staff to maintain camera network and fly drone safely and legally.
1.3 Run timelapse camera over selected species and sites for at least 2 consecutive years.
1.4 Conduct a drone survey over each species colonies for at least 2 consecutive years.
1.5 Historical records collected and processed.
1.6 Project data processed via citizen science platforms (i.e., Penguin Watch, Seal Watch, Seabird Watch).
1.7 Raw and processed data (including distribution maps) uploaded on data portal and existing repositories.
1.8 Health index guidelines discussed at workshop 1 and revised at workshop 2 following local partner feedback.
1.9 Peer reviewed publications submitted for review (minimum of three publications during the lifespan of the project).
1.10 Research brief sent to key stakeholders for each significant project findings.
1.11 Conduct comprehensive reviews of OT conservation strategy and legislations.
1.12 Conduct interviews with partner organisations.

2.1 Finalise the coding and testing of the AI recognition algorithm on Seabird Watch existing data for shags, cormorants, and boobies.
2.2 Code and start testing a new recognition algorithm for Sooty tern using data collected from Ascension and Montserrat during the first two years of the project.
2.3 Challenging project data processed using the algorithm to refine its training.
2.4 Produce progress reports to steering committee.
2.5 Sign a data agreement with partners.

3.1 Discuss UKOT gaps and evidence needs to agree on portal requirements.
3.2 Write and publish a R package for data access.
3.3 Design a front-end and application mapping tools back-end for data entry tools (i.e., portal).
3.4 Publish and promote online database for UKOT marine monitoring data to key stakeholders (i.e., governments, conservation NGOs, researchers, and relevant fishing and tourism industry stakeholders).
3.5 Conduct user and prospective user survey.

4.1 Host a series of workshops (yearly) to first set up and review the network's strategy and terms of reference, provide the training needed to field staff and partners (e.g., drone use, set up and maintenance of camera network) and definition of mechanism for knowledge exchange between participating partners.
4.2 Make training resources freely available on project portal.
4.3 Designate secondment for steering committee coordinator position.
4.4 Collect updates, success and failures and write a yearly report on the OTs involvement in the project. This report will inform the adaptation of the project strategy from year to year based on lesson learned.
4.5 Host regular steering committee meetings and publish progress reports.
4.6 Draft UKOT marine monitoring strategy by steering committee.

Section 13 - Implementation Timetable

Q31. Provide a project implementation timetable that shows the key milestones in project activities

Provide a project implementation timetable that shows the key milestones in project activities. Complete the Word template as appropriate to describe the intended workplan for your project, and upload as a PDF.

Implementation Timetable Template

Please add/remove columns to reflect the length of your project. For each activity (add/remove rows as appropriate) indicate the number of months it will last, and fill/shade only the quarters in which an activity will be carried out.

- 3 Stage 2 R10-DPlus-Implementation-Timetable-FINAL
- 06/01/2022
- 10:16:48
- pdf 233.74 KB

Section 14 - Monitoring and Evaluation

Q32. Monitoring and evaluation (M&E)

Describe, referring to the Indicators, 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. Additionally, please indicate an approximate budget and level of effort (person days) to be spent on M&E (see Finance Guidance**).**

The project will be led and managed by the Department of Zoology of the University of Oxford and the Project Coordinator (10% of time) under the supervision of the Project Lead will be responsible for the monitoring and evaluation of the project against the outputs, outcome and impact described in the proposal. The Project Coordinator be responsible for partner coordination, output dissemination and reporting (0.2, 0.3, 4.1, 4.2, 4.3) while the Project Lead will be responsible for the research-based outputs (0.1, 0.4, 1.1, 1.2, 2.1, 2.2, 3.1, 3.2, 3.3 and 4.4). This will be done in collaborations with a steering committee composed of the Project Coordinator and Project Lead, alongside a representative from each partner. This committee will be formed at the first project workshop and meet remotely quarterly to review the progress of the project against measurable indicators, timeline, and budget. A summary report will be circulated after each meeting and an annual progress report will be shared after each workshop. These will inform the evolution of our strategy and activities to any unforeseen challenges and early results.

The staff of partners leading the implementation on the ground for Output 1 will be in contact weekly during field season with the Project Coordinator and Project Leader and take an adaptive management approach to effectively respond to any implementation challenge on the ground. The Project Coordinator and Project Leader will report back to the steering committee on their progress.

The impact of the project will be assessed using a theory-based approach. An overall project theory of change will be co-designed by all key stakeholders at the project launch workshop and revised at the second yearly workshop. The Project Coordinator will at the end of the workshop use Process Tracing to establish the extent to which the change described in the previously design Theory of Change took place and whether the project was at its genesis. Process Tracing is a widely case-based approach to causal inference which focuses on the use of diverse evidence types (e.g., interviews and questionnaires described below) to see if results are consistent with a project's theory of change.

The Project Coordinator will design the interview guides and user questionnaire surveys and collaborate with the partners to collect the data needed for the baseline, and the comprehensive reviews of the OTs conservation strategy and legislation. The baseline and project-end interviews, which will be focused on the co-design project Theory of Change, will assess respectively the needs and fulfilment of those needs by the project and its data portal with the partners and key stakeholders (quantitative and qualitative assessments). The qualitative interview data will be analysed using thematic analysis. The comprehensive reviews will look at the direct impact of the project on the governments' actions (represented by shifts in their conservation policies).

Finally, the cost associated with M&E is composed primarily of staff time to coordinate meetings and reporting.

Total project budget for M&E in GBP (this may include Staff, Travel and Subsistence costs)	[redacted]
Number of days planned for M&E	[redacted]
Percentage of total project budget set aside for M&E (%)	[redacted]

Section 15 - Lead Partner Track Record

Q33. Lead Partner track record

Has your organisation been awarded a Darwin Initiative award 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
22-3270	Dr Andrew Loveridge	Alleviating rural poverty through conflict mitigation and improved crop yields
26-016	Prof David Macdonald	Lion carbon: creating biodiversity value and sustainable management through REDD+
DPLUS002	Dr Tom Hart	An autonomous seabird monitoring network for the Southern Ocean
No Response	*No Response*	*No Response*
No Response	*No Response*	*No Response*
No Response	*No Response*	*No Response*

Have you provided the requested signed audited/independently examined accounts?

If yes, please upload these on the certification page. Note that this is not required from Government Agencies.

⦿ Yes

Section 16 - Certification

Certification

On behalf of the

company

of

The University of Oxford

I apply for a grant of

[redacted]

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 have enclosed CVs for project key project personnel, letters of support, budget and project implementation timetable (uploaded at appropriate points in application).**
- **Our last two sets of signed audited/independently verified accounts and annual report are also enclosed.**

Checked

Name	Zoe Lee
Position in the organisation	Research Funding Manager, Research Services
Signature (please upload e-signature)	DPR10S2_1020 countersigned 10/01/2022 13:25:51 pdf 318.59 KB
Date	07 January 2022

Please upload the Lead Partner's Safeguarding Policy as a PDF.

22 University of Oxford_Safeguarding Code of Practice
06/01/2022
11:54:14
pdf 423.75 KB

Please attach the requested signed audited/independently examined accounts.

20 Oxford University, Financial Statement 2019-20_0
06/01/2022
11:54:27
pdf 4.61 MB

21 Oxford University, Financial Statement 2018-19_0
06/01/2022
11:54:27
pdf 2.91 MB

Section 17 - 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 I have included the correct final total at the start of the application.	Checked
The application has been signed by a suitably authorised individual (clear electronic or scanned signatures are acceptable).	Checked
I have attached my completed logframe and timeline as a PDF using the templates provided.	Checked
I have included a 1 page CV or job description for all the Project staff identified at Question 11, including the Project Leader, or provided an explanation of why not.	Checked
I have included a letter of support from the Lead Partner and main partner organisation(s) identified at Question 10, or an explanation of why not.	Checked
I have included a cover letter from the Lead Partner, outlining how any feedback at Stage 1 has been addressed where relevant.	Checked
I have included a signed copy of the last 2 years annual report and accounts for the Lead Partner, 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 the Darwin Plus website**.**	Checked

We would like to keep in touch!

Please check this box if you would be happy for the lead applicant (Flexi-Grant Account Holder) and project leader (if different) to be added to our mailing list. Through our mailing list we share updates on upcoming and current application rounds under the Darwin Initiative, Darwin Plus and our sister grant scheme, the IWT Challenge Fund. We also provide occasional updates on other UK Government activities related to biodiversity conservation and share our quarterly project newsletter. You are free to unsubscribe at any time.

Checked

Data protection and use of personal data

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

Applicant: **Hart, Tom**
Organisation: **University of Oxford - Department of Zoology**
Funding Sought: **£397,756.00**

DPR10S2\1020

A cross-UKOT camera network to enhance marine predator conservation

Overseas Territories' ability to collect the evidence needed for the conservation of marine species is limited by resources constraints. Recent technology applications of drones and timelapse cameras to seabird and seal monitoring have huge potential to provide such evidence at modest cost. We will train OTs and help them test new methods to collect evidence on their priority taxa and protected areas and develop a reporting system that will enable policymakers from all OTs to rapidly interpret it.

PRIMARY APPLICANT DETAILS

Title	Dr
Name	Tom
Surname	Hart
Tel (Work)	[redacted]
Email (Work)	[redacted]
Address	[redacted]

Reference No	Project Leader	Title
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Have you provided the requested signed audited/independently examined accounts?

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⦿ Yes

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On behalf of the

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of

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[redacted]

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- **Our last two sets of signed audited/independently verified accounts and annual report are also enclosed.**

Checked

Name	Tom Hart	Zoë Lee
Position in the organisation	Research Fellow	Research Funding Manager, Research Services

Signature (please upload e-signature)	THsif 06/01/2022 11:55:19 jpg 9.95 KB	
Date	07 January 2022	

Please upload the Lead Partner's Safeguarding Policy as a PDF.

22 University of Oxford_Safeguarding Code of Practice
06/01/2022
11:54:14
pdf 423.75 KB

Please attach the requested signed audited/independently examined accounts.

20 Oxford University, Financial Statement 2019-20_0
06/01/2022
11:54:27
pdf 4.61 MB

21 Oxford University, Financial Statement 2018-19_0
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11:54:27
pdf 2.91 MB

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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 I have included the correct final total at the start of the application.	Checked
The application has been signed by a suitably authorised individual (clear electronic or scanned signatures are acceptable).	Checked
I have attached my completed logframe and timeline as a PDF using the templates provided.	Checked
I have included a 1 page CV or job description for all the Project staff identified at Question 11, including the Project Leader, or provided an explanation of why not.	Checked
I have included a letter of support from the Lead Partner and main partner organisation(s) identified at Question 10, or an explanation of why not.	Checked

I have included a cover letter from the Lead Partner, outlining how any feedback at Stage 1 has been addressed where relevant.	Checked
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I have checked the Darwin Plus website **immediately prior to submission to ensure there are no late updates.**	Checked
I have read and understood the Privacy Notice on the Darwin Plus website**.**	Checked

We would like to keep in touch!

Please check this box if you would be happy for the lead applicant (Flexi-Grant Account Holder) and project leader (if different) to be added to our mailing list. Through our mailing list we share updates on upcoming and current application rounds under the Darwin Initiative, Darwin Plus and our sister grant scheme, the IWT Challenge Fund. We also provide occasional updates on other UK Government activities related to biodiversity conservation and share our quarterly project newsletter. You are free to unsubscribe at any time.

Checked

Data protection and use of personal data

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