Applicant: **Dawson, Terry**
Organisation: **King's College London**
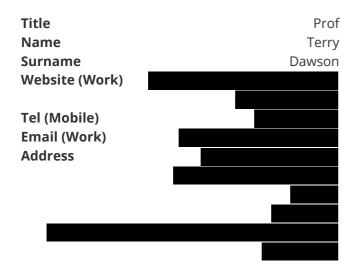Funding Sought: **£99,723.00**

DPR10S2\1008

Humpback Whales of the Pitcairn Islands

This project aims to understand the importance of the Pitcairn Islands MPA for Pitcairn's charismatic but endangered population of humpback whales, documenting their distribution and behaviour, contributing to regional and global knowledge and international conservation commitments for this species. This information will raise awareness of the humpback whales and the marine environment as a whole with visitors to the Pitcairn Islands. In the longer-term, this will help to enhance the islands' profile as a key nature-based tourism destination.
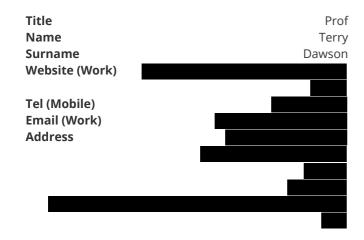
PRIMARY APPLICANT DETAILS

Title   Prof
Name   Terry
Surname   Dawson
Website (Work) ███████████████████

Tel (Mobile)   ████████████
Email (Work)   ██████████████████
Address   ████████████████
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                       ████████████

CONTACT DETAILS

Title   Dr
Name   Emily
Surname   Hardman
Email (Work)
██████████████████████████████

Section 1 - Contact Details

PRIMARY APPLICANT DETAILS

Title	Prof
Name	Terry
Surname	Dawson
Website (Work)	███████████████████
	████
Tel (Mobile)	██████
Email (Work)	████████
Address	████████
	██████████
	████
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	███

CONTACT DETAILS

Title	Dr
Name	Emily
Surname	Hardman
Email (Work)	████████████████████

GMS ORGANISATION

Type	Organisation
Name	King's College London
Phone (Work)	█████
Email (Work)	███████
Website (Work)	█████████
Address	██████████
	████
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Section 2 - Title, Dates & Budget Summary

Q3. Project title

Humpback Whales of the Pitcairn Islands

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

DPR10S1\1034

Q4. UKOT(s)

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

☑ Pitcairn, Henderson, Ducie & Oeno Islands*

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

Pitcairn, Henderson, Ducie & Oeno Islands

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

⊙ Yes

Please list below.

St Helena
Bermuda
Easter Islands (Rapa Nui)
French Polynesia

Q5. Project dates

Start date:	End date:	Duration (e.g. 2 years, 3 months):
01 June 2022	31 May 2024	2 years

Q6. Budget summary

Year:	2022/23	2023/24	2024/25	Total request
Darwin funding request (Apr - Mar)	£41,270.00	£48,506.00	£9,947.00	**£** 99,723.00

Q6a. Do you have proposed matched funding arrangements?

⊙ Yes

What matched funding arrangements are proposed?

The salaries of the MMO partner will be covered. Biopsy sampling equipment will be provided by the Lead Partner, Kings College London. A PhD student will be recruited to undertake the research and data analysis.
Salaries, KCL: ▇▇▇▇
PhD Student, London NERC DTC: ▇▇▇▇▇
Biopsy sampling equipment provision, KCL: ▇▇▇▇
MMO: ▇▇▇
Open Access fees (2 International peer-reviewed publications): ▇▇▇▇

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

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?

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.

This project aims to understand the importance of the Pitcairn Islands MPA for Pitcairn's charismatic but endangered population of humpback whales, documenting their distribution and behaviour, contributing to regional and global knowledge and international conservation commitments for this species. This information will raise awareness of the humpback whales and the marine environment as a whole with visitors to the Pitcairn Islands. In the longer-term, this will help to enhance the islands' profile as a key nature-based tourism destination.

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 project supports the Government of Pitcairn Islands' commitments under the Convention on the Conservation of Migratory Species of Wild Animals and associated Memorandum of Understanding for the Conservation of Cetaceans and their Habitats in the Pacific Islands Region, which aims to conserve all cetaceans and facilitate the exchange of scientific information necessary to coordinate conservation measures.
The project will help towards achievement of indicator K3 'Status of endemic and globally threatened species in the UK Overseas Territories' in the 25 Year Environment Plan through action to recover threatened or iconic species and prevention of human-induced extinction or loss of threatened species.
The project will contribute to Management Strategy 4 'The local community is obtaining economic benefit from the MPA and these benefits are distributed equitably' within the 2021 Pitcairn Islands MPA Management Plan and will address a key evidence gap highlighted in the MPA Monitoring and Research Plan.
The project also directly supports the Government of Pitcairn Islands strategic plan, which includes specific actions to 'Increase revenue from landing fees and increased tourism related private sector development' as well as 'To capitalise on the Pitcairn Islands unique points of difference, its bounty heritage, its endemic flora and fauna, its endemic birds, its pristine marine environment, its prehistoric history and its natural beauty'.

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:	King's College London
Website address:	https://www.kcl.ac.uk/geography
Details (including roles and responsibilities and capacity to engage with the project):	Responsible for overall management of the project, coordination of logistical arrangements, scientific strategy planning, liaise and collaboration with Pitcairn Island Government, international scientists and stakeholders. Lead scientific expeditions, collate and manage data sets, undertake the writing of publications and reports, supervision of the PhD student and undertake dissemination and outreach activities. Professor Dawson is extremely well qualified to lead and manage this project with more than 25 years experience in diving expeditions and surveys on offshore islands, including projects on Pitcairn, Rangiroa (Tuamotu), Galapagos Islands, French Polynesia, Papua New Guinea, Madagascar, Seychelles, Hong Kong and Cuba. He is qualified as a Civil Aviation Authority (CAA) Drone Operator/Flight registered: Operator ID: OP-CBZBZ6J, Flyer ID: FLY-GKPFLH (Examination passed on 20 Dec 2019). and is a Marine Mammal Medic with the British Divers Marine Life Rescue (BDMLR) (Marine Mammal Medic course and examination, Aberdeen, 4 June 2018). Terry attended the CITES (Convention on International Trade in Endangered Species) permit and licencing workshop, Animal and Plant Health Agency, Bristol on 22 Mar 2018 and undertook a Cetacean remote biopsy sampling training workshop with Morigenos – Slovenian Marine Mammal Society in Piran, Slovenia, 3-11 May 2018.
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:	Michele Christian, Government of Pitcairn Islands (GPI) - Environmental, Conservation & Natural Resources Division Manager.
Website address:	https://www.government.pn/

Details (including roles and responsibilities and capacity to engage with the project):	Responsible for the day-to-day administration of Pitcairn island as well as for its economic regeneration. Acts as principal liaison organisation between Pitcairn Island Council, the UK Government and other stakeholders. The Natural Resources Division is responsible for laws, regulations and guidelines that meet compliance with the Pitcairn Environmental Charter, and is working to adopt actions and recommendations as identified in the Pitcairn Islands MPA Management Plan. Will facilitate networks, attend meetings, organise and undertake training activities and develop and lead the drafting of the Pitcairn Government reports with all stakeholders.
Have you included a Letter of Support from this organisation?	⊙ Yes

2. Partner Name:	Emily Hardman, Overseas Territories Blue Belt Programme, Marine Management Organisation (MMO), UK.
Website address:	https://www.gov.uk/guidance/the-blue-belt-programme
Details (including roles and responsibilities and capacity to engage with the project):	The MMO will ensure join-up with Blue Belt Programme activities linked to the MPA Management Plan and will work under the direction of the Pitcairn Islands Tourism Department on the nature-based tourism work. Dr Emily Hardman is Senior Integrated Marine Management Officer for the Blue Belt Programme at Marine Management Organisation and her role and responsibilities will also be to share monitoring and management approaches from other UKOT sites, as well as supporting the delivery of outreach, training and communications objectives.
Have you included a Letter of Support from this organisation?	⊙ Yes

3. Partner Name:	Ellen Garland & Luke Rendall, Sea Mammal Research Unit (SMRU), St Andrews, and member, Executive Committee of the South Pacific Whale Research Consortium (SPWRC).
Website address:	http://www.smru.st-andrews.ac.uk/

Details (including roles and responsibilities and capacity to engage with the project):	St. Andrews University, SMRU will lead on the whale song recordings and collaboration with French Polynesia and the SPWRC on the whale song databases and photo ids.
Have you included a Letter of Support from this organisation?	⊙ Yes

4. Partner Name:	Tilen Genov, President, Marine Mammal Society of Slovenia, Morigenos, Piran, Slovenia.
Website address:	https://www.morigenos.org/en/morigenos/
Details (including roles and responsibilities and capacity to engage with the project):	Morigenos (Tilen Genov) is one of the world's leading experts on cetacean biopsy sampling and a Member of the Scientific Committee of the International Whaling Commission. Tilen will be assisting with DNA sampling activities and photo-identification training and recording.
Have you included a Letter of Support from this organisation?	⊙ Yes

5. Partner Name:	*No Response*
Website address:	*No Response*

Details (including roles and responsibilities and capacity to engage with the project):	*No Response*

Have you included a Letter of Support from this organisation?	○ Yes ○ No

6. Partner Name:	*No Response*

Website address:	*No Response*

Details (including roles and responsibilities and capacity to engage with the project):	*No Response*

Have you included a Letter of Support from this organisation?	○ Yes ○ No

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

No Response

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

⬇ Response_to_AdvisoryLetter_DarwinSt1R10_6Jan22 📅 06/01/2022 🕐 17:11:10 📄 pdf 186.39 KB	⬇ combined_letters_of_support_FINAL 📅 06/01/2022 🕐 16:20:29 📄 pdf 1.23 MB

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?
Terry Dawson	**Project Leader**	King's College London	10	Checked
Michele Christian	Island logistics coordinator	Pitcairn Island Government	10	Checked
Emily Hardman	Blue Belt programme coordinator and tourism lead	Marine Management Organisation	5	Checked
Ellen Garland	Whale song analysis; Research collaborations with International Whaling Commission	Sea Mammal Research Unit, St. Andrews University	5	Checked

Do you require more fields?

⊙ Yes

Name (First name, Surname)	Role	Organisation	% time on project	1 page CV or job description attached?
Tilen Genov	Biopsy sampling, photo IDs and training	Morigenos - Marine Mammal Society of Slovenia	5	Checked
Luke Rendell	Technical support, hydrophone set up and deployment and whale song analysis	Sea Mammal Research Unit, St. Andrews University	3	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.

⤸ <u>CVs_combined</u>
📅 06/01/2022
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📄 pdf 332.03 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).

The humpback whales (Megaptera novaeangliae) found around the Pitcairn Islands are of scientific and conservation interest as they appear to be a satellite group of International Whaling Commission breeding sub-stock F2 from neighbouring French Polynesia. Whilst populations of humpback whales in the rest of the world have recovered well from commercial whaling, the Oceania sub-population, has not recovered so swiftly. It is likely to have declined 70% since 1942 due to intense Soviet whaling in Antarctic feeding grounds and was listed as Endangered on the IUCN Red List in 2008. The exact links between the humpback whales in the Pitcairn Islands and breeding sub-stock F2 are unknown due to the current lack of migratory and connectivity studies.

Understanding key demographic factors is essential in assessing their recovery from this intense exploitation and is a crucial step for their conservation worldwide. The IUCN Marine Mammal Protected Areas Task Force notes that the Pitcairn Islands are considered to be of significant interest for potential marine mammal conservation within the Pacific Island region as an important breeding and calving site and may require enhanced effort for monitoring species of marine mammal. The proposed project will collect photo-identification and genetic data to facilitate an assessment of connectivity to other sites in the Oceania region, improving our understanding of the population's status and enhancing regional conservation efforts. It will directly address a number of actions in the Oceania Humpback Whale Recovery Plan specifically investigating emerging areas of interest with little or no historical records of whales and determining importance as breeding grounds or migratory corridors as well as improving understanding of breeding stock structure. Humpback whales are also threatened by entanglement in fishing gear, marine pollution, collisions with ships and noise. The Pitcairn Islands Marine Protected Area (MPA), which covers almost 842,000 km2 of ocean prohibits all damaging human activities and provides a safe haven for the visiting whales. Improved understanding of site fidelity and importance of the area for breeding will help to assess the significance of the MPA for the conservation of humpback whales within the wider South Pacific region.

Humpback whales are an iconic species for the South Pacific; they also underpin the economic benefits derived from whale watching in many Pacific Island states. In the Pitcairn Islands, a whale watching code of conduct has been developed to prevent disturbance to the humpback whales. The information obtained as part of this project will be used to develop

materials to raise awareness of the importance of the MPA for marine species such as humpback whales amongst tourists and encourage responsible behaviour. It will also provide training to the local community to enable them to act as local tour guides for both land-based and boat-based whale watching. The project will therefore ensure that management measures within the MPA are effective in terms of minimising threats to the humpback whale population and in particular will ensure that current and future tourism activities are well managed and do not cause disturbance to the animals.

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)

This project builds upon an earlier Darwin project 20-006 "A sustainable marine and fisheries management plan for the Pitcairn islands" where the Pitcairn Islands were first identified as an important breeding ground for the endangered Oceania sub-population (Dawson et al., 2017; Irving et al., 2018) and a citizen science whale sightings recording scheme was trialled. However, further training is necessary to enable the islanders to create a photo catalogue of natural marking patterns for individual whale identifications. A follow-up expedition to Pitcairn Island in 2018 by Dawson and Hardman resulted in the collection of two biopsy samples for DNA analysis recorded in the South Pacific Whale Research Consortium database. Through the Blue Belt Programme, Hardman has assisted the GPI to develop a whale watching code of conduct and facilitated practical training for Island-based tour operators in the implementation of this code of conduct. Consultations with GPI and the local community to inform development of the 5-year Pitcairn Islands MPA Management Plan highlighted the humpback whales as one of the key values of the MPA and the Plan includes actions to promote and monitor implementation of the whale watching code of conduct. The associated Monitoring and Research Plan identifies information about the movement and behaviour of humpback whales as a key evidence gap for GPI to enable effective MPA management.

The following activities will be undertaken:

1. Whale distributions
The sea conditions around Pitcairn can make boat access difficult. As an innovative solution, we propose using a quadcopter drone to survey extensive areas of the nearshore and coastal waters, offering a cost-efficient way to sample megafauna that offers clear visual sea-surface cues (Fiori et al. 2017). Humpback whales are known for their nearshore distribution during the breeding season, so we can be confident that this method will provide a complete record of their distribution. Georeferenced video footage will record the exact locations of identified humpback whales.

2. Whale identification
Citizen scientists (islanders, visiting scientists and tourists) will be engaged using established humpback whale visual identification methods through the Pitcairn Island tourism website, in person on arrival and by trained community members. Data comprise video/photographic images of individual whales (underside of tail flukes and flanks) and behaviours. Open-source image-recognition software will identify individuals, comparing them to global datasets.

Hydrophones at Pitcairn, Oeno and Henderson will be deployed to record whale songs. Songs will be analysed and compared to other song types from humpback groups in the central and western Pacific. We will involve Pitcairn school children by building and deploying their own hydrophone. Images and whale song will feed into a new Pitcairn database, relevant international databases, and for communication, marketing and outreach materials.

3. Population identification
We will genetically identify individuals to understand connectivity and relatedness of Pitcairn's whale populations to other breeding stocks. Sampling approaches include:
• traditional skin biopsies;

• environmental DNA sampling sloughed skin in the water column;
• sampled blowhole air plumes using a quadcopter 'SnotBot', a modified drone which flies through the blow of a whale and collects exhaled "snot" on petri dishes. This blow contains a treasure trove of valuable biological information: DNA, stress and pregnancy hormones, microbiomes and potentially many other biological compounds/indicators of the animal's health and ecology. This is a non-invasive tool that is safer for the animals and cheaper and more effective for the user. Genetic sampling will be combined with imagery for interpretation. Collaborators in the South Pacific Whale Research Consortium will conduct genetic analyses (including CITES permits).

4. Nature-based tourism
The scientific data will inform awareness-raising activities to promote nature-based tourism and ensure that current and future activities do not disturb marine wildlife.
Pitcairn Islanders will be provided with training enabling them to act as local tour guides (land- and boat-based tours including expedition cruise ships and Explorers Voyages), raising awareness of the importance of the MPA amongst tourists and encouraging responsible behaviour and compliance with the whale watching code of conduct. Questionnaires will be conducted with visitors to demonstrate enhanced awareness and behaviour change over time.
Videos will be developed in collaboration with GPI/Pitcairn Islands Tourism to publicise the scientific research, and showcase the unique marine environment. These will be used by Pitcairn Islands Tourism to promote the Pitcairn Islands internationally as an important destination for nature-based tourism through media and the GPI websites.
A 'Strategy and Action plan for nature-based tourism in the Pitcairn Islands MPA' will be produced to investigate other opportunities to enhance economic benefits to the island whilst minimising impacts to the marine environment.

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

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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 project will work in partnership with the island community (Pitcairn Tourism and Environment, Conservation and Natural Resources Division, GPI and the local school, museum, fishing and diving groups) and cruise ship operators through presentations, debates and multi-stakeholder discussion forums to review relevant topics relating to the marine protected area management strategies and impacts of tourism, climate change, etc and for the wider dissemination of project findings to visitors and tourism groups. This support has already been firmly established through a 10+ years collaboration with the project leader, Environmental, Conservation & Natural Resources and Tourism Divisions as well as the wider enthusiastic Island community, and is fully endorsed by the Pitcairn Island Council.

Q14. Institutional Capacity

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

King's College London is one of the top universities in the world (ranked 35 in the 2022 QS World University Rankings) and among the oldest in England. King's has an outstanding reputation for world-class teaching and cutting-edge research. In the 2014 Research Excellence Framework (REF) King's was ranked 6th nationally in the 'power' ranking, which takes into account both the quality and quantity of research activity, and 7th for quality according to Times Higher Education rankings. Eighty-four per cent of research at King's was deemed 'world-leading' or 'internationally excellent' (3* and 4*). The university is in the top seven UK universities for research earnings and has an overall annual income of more than £684 million. The Department of Geography at King's College London undertakes interdisciplinary research that aims to deepen our understanding of the environments and societies in which we live. It focuses on tackling global challenges related to

environmental dynamics, development and poverty alleviation, ecosystems services, risk and resilience.

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.

There are multiple beneficiaries from this project, who can be categorized into five groups: 1) International Agencies with an expressed interest in project outcomes, e.g. the International Whaling Commission (IWC) and the South Pacific Whale Research Consortium (SPWRC), 2) other High Level Stakeholders, e.g. policy makers in international organizations such as the UK Marine Management
Organisation (MMO) relating to the Overseas Territories Blue Belt Programme, Government of Pitcairn Islands, 3) Island community, 4) Tourist Industry and tourist visitors, and 5) the international scientific community.

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 core project team is equally balanced with regard to gender. King's College London's Equality, Diversity & Inclusion Policy statement outlines the university's commitment to equality and diversity in all its activities and areas of work. All King's students, staff, affiliates and suppliers are responsible for meeting these commitments to value diversity and create an inclusive environment. The Department of Geography at King's College London has been awarded a Bronze Athena SWAN award in recognition and celebration of the department's practices towards the advancement of gender equality in higher education.

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.

Understanding key demographic factors of the humpback whales is essential in assessing their recovery from intense exploitation and is a crucial step for their conservation worldwide. The project will characterise the distribution, abundance and genetics of the humpback whale population in the Pitcairn Islands. The outputs will be: data on humpback whale distribution around the Pitcairn Islands with recommendations on standardised monitoring methods; establishment of a citizen science monitoring programme to improve understanding of population trends over time and; establishment of a marine megafauna database with data contributing to relevant international databases. This scientific information will establish a baseline population estimate and enable an assessment of connectivity to other sites in the Oceania region, strengthening regional conservation efforts and supporting Convention on Migratory Species commitments.

Whale watching and other nature-based tours are a new tourism activity in the Pitcairn Islands, but the island community wish to adopt a cautionary approach to this development. Whale watching can have potential negative impact on the whales' natural behaviour, including their ability to feed, rest and rear their young, which can cause problems in the short and long term. Hence, a key focus will be to create in tourists a deep and meaningful connection to the whales and the sanctuary that the archipelago provides as a safe calving and nursery grounds. The awareness-raising activities will change the behaviour of visitors to the Pitcairn Islands, encouraging them to be more environmentally responsible. This will ensure that both current and future tourism activities are well managed and do not cause disturbance to the humpback whales and other marine wildlife. These activities will also raise the Pitcairn Islands' profile on an International scale as a key destination for nature-based tourism. This will encourage more visitors to come, enhancing economic benefits for the whole island community.

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.

In the short-term, the project will address gaps in scientific understanding of the status of humpback whales around the Pitcairn Islands and the connectivity between these humpback whales and those in French Polynesia and the Easter Islands. This will address specific actions in the Oceania Humpback Whale Recovery Plan. Longer-term, the project will support regional conservation efforts under the Memorandum of Understanding for the Conservation of Cetaceans and their Habitats in the Pacific Islands Region and international commitments under the Convention on Migratory Species. It will also improve global understanding around the importance of very large MPAs in the conservation of migratory marine megafauna.

Project activities will ensure that current and future nature-based tourism is well managed. One of the most effective ways of raising ecological awareness and respect amongst tourists is through personal information provided by well-trained tour guides. Training Pitcairn Islanders will both provide them with economic benefit and encourage behaviour change amongst tourists, minimising disturbance to the humpback whales. The production of videos shared widely through different media will raise Pitcairn's profile as a key destination for nature-based tourism. The Strategy and Action Plan will identify future nature-based tourism opportunities, encouraging more visitors and enhancing economic benefits.

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?

Training in humpback whale visual identification methods will be provided to the local community and marine tour guides as part of the project. Ensuring that there is a pool of trained individuals will provide long-term resilience. This will ensure that any tourism activities are well managed and do not cause disturbance to the humpback whales. Oversight of the citizen science monitoring will become embedded in the day-to-day activities of the Environment, Conservation & Natural Resources Division to enable it to continue when the project ends. Provision of the awareness-raising videos to Pitcairn Islands Tourism will enable them to promote the Pitcairn Islands as an important destination for nature-based tourism. This will encourage more tourists to visit in the future, bringing economic benefits to the island community. Wider actions related to MPA management will continue to be supported by the Blue Belt Programme until 2025.

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?

The project will be conducted under the King's College London code of practice for research ethics, which complies with all important legal obligations (e.g. the Research Governance Framework from the Department of Health, the 1964 Declaration of Helsinki by the World Medical Association, European Union Directives such as Directive 95/456 on the protection of personal data and Directive 2001/20 on ethics, the Data Protection Act, the Freedom of Information Act, and the Nolan Report). All project activities involving people and animals will be submitted for ethical approval through the King's College London Research Ethics Committee. The guiding principle is that the well-being and safety of the participants engaged with this project are always held paramount. The main principles governing research are hence informed consent, confidentiality, and respect.

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-under-_100K-DPR10S1-1034_6Jan22

📅 06/01/2022

🕐 11:34:54

📄 xlsx 37.29 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.

All partners are financially-stable world-class institutions with an established track record of successful delivery of project outcomes that maximises value for money. There may be a small risk of fluctuating foreign exchange, however, the NZ$-£UK Stirling exchange rate has remained stable over the last three years.

Q23. Funding

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

◉ Development of existing work

Please provide details:

This project builds upon the earlier Darwin project 20-006 "A sustainable marine and fisheries management plan for the Pitcairn islands" where the Pitcairn Islands were first identified as an important breeding and nursery grounds for the endangered Oceania sub-population (Dawson et al., 2017; Irving et al., 2018) and a citizen science whale sightings recording scheme was trialled. A follow-up expedition to Pitcairn Island in 2018 by Dawson and Hardman resulted in the collection of two
biopsy samples for DNA analysis recorded in the South Pacific Whale Research Consortium database. Through the Blue Belt Programme, Hardman has assisted the GPI to develop a whale watching code of conduct and facilitated practical training for Island-based tour operators in the implementation of this code of conduct. Consultations with GPI and the local community to inform development of the 5-year Pitcairn Islands MPA Management Plan highlighted the humpback whales as one of the key values of the MPA and the Plan includes actions to promote and monitor implementation of the whale watching code of conduct. The associated Monitoring and Research Plan identifies information about the movement and behaviour of humpback whales as a key evidence gap for GPI to enable effective MPA management.

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

work?

◉ No

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?

King's College London has a Department of Research Governance, Ethics & Integrity, which is committed to enabling researchers to achieve research excellence. They support the King's research community to ensure that all research conducted is safe, lawful, and of the highest standards of integrity and rigour. This is to ensure that the academic community, funding bodies, and the public can have confidence that any research spending, data, findings, and results produced by members of the university are reliable and trustworthy. Once a project has been formally accepted by King's College London, the KCL Award Management team, within the Research Management and Information Directorate, will manage the financial administration of the funds and provide support to the project leader on account management, forecasting, budgetary control, financial reporting, risk management and audit requirements.

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 scientists visiting the Pitcairn Islands through this project will provide economic benefits to the community through on-island spending on food, accommodation (home-stay arrangements with the islanders), boat hire and recreational spending. Marketing materials and videos developed through this project will encourage more tourists to visit the Pitcairn Islands and participate in nature-based tourism activities. The training of a pool of on-island marine tour guides and development of a Nature-based Tourism Strategy and Action Plan will ensure that in the longer-term, the island community gains economic benefits from the MPA and that these benefits are shared equitably amongst the community. Including the costs of the berths on the Pitcairn's contracted supply ship which are sold through the island's tourism department, circa 40% of the total Darwin Plus funds will go to the Pitcairn Government and/or local community. We will be looking to create and develop an 'enabling environment' to support private enterprise on the islands with respect to marine resources and tourism. There is clear space and opportunity for island-based entrepreneurs to see these opportunities and to take ideas forward through the development of businesses. This will result in an escalation of sustainable economic activities from an initial modest budget.

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.

A small amount of expedition equipment (quadcopter drone, Soundtrap hydrophone) will be purchased for monitoring and for ongoing data collection. The budget for these essential items are less than 10% of overall costs. Following training in the use of this equipment to selected members of the island community, they will remain on Pitcairn island for continued data collection following the completion of the project.

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.

The budget has been carefully worked out in collaboration with all partners. The project assumes the scheduled boat transportation availability and current costs (█████ Return per berth) remains stable. The transport limitations and therefore fixed times on the island are both helpful in determining visitor subsidence costs, as well as constraining in terms of flexibility. Given the very high costs involved in visiting the Pitcairn Islands, the project leader and partners have designed an efficient programme of activities that both maximises time spent on the islands by appropriate experts as well as build upon the very substantial infrastructure of the organisations involved. Building skills and capacity within the Pitcairn Islands community is a central part of the proposal to maximise efficiency when the UK-based project leaders are off the islands. The project leader is very experienced in project management and maintaining budgetary constraints on expenditure, as well as demonstrating outstanding resourcefulness in achieving excellent value for money, as demonstrated on previous Darwin Initiative projects, and more widely though his large portfolio of externally-funded research grants.

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.

All research outputs relating to the PhD-based activities will be published in international peer-reviewed open-access journals through a special fund provided by UKRI to King's College London, so no costs have been requested from Darwin Plus to fund the research papers. All other reports and outputs will be published and made freely available through the project web-site and the Pitcairn Government website (https://www.government.pn/), which now has a special section on reports and news relating to their marine protected area and the environment more generally. All photo-IDs will be submitted to the Antarctic Humpback Whale Catalogue (AHWC), an internationally collaborative project investigating movements of humpback whales between the Southern Ocean and lower latitude waters.

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 King's College London safegarding policy sets out the university's duty to safeguard any child or adult at risk who either applies and is admitted as a student to King's College London, or who comes into contact with King's College London as a result of university activities, which applies directly to the activities relating to this proposal.

The policy and related procedures apply to all university staff, students, freelance practitioners, student ambassadors, alumni, volunteers and any associated personnel representing the university. Under a memorandum of association, we will request that all partners will agree to adhering to the policy, which has been attached to this application.

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.

  ⤓ R10_DPlus_St2_Logical_Framework_Template_FINAL_
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  🗓 05/01/2022
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  🗎 pdf 80.31 KB

Impact:

Scientific understanding of humpback whale population connectivity in the South Pacific is improved, strengthening local and regional conservation efforts and bringing economic benefits to the Pitcairn community through nature-based tourism.

Outcome:

Baseline populations of humpback whales established and conservation management strengthened at local to international scales to support Convention on Migratory Species commitments and encourage environmentally responsible nature-based tourism.

Project Outputs

Output 1:

Humpback whale population around the Pitcairn Islands documented, analysed and findings published, generating recommendations on standardised monitoring methods to inform UK Blue Belt and international commitments.

Output 2:

Citizen science programme established and populated with individual whale identifications.

Output 3:

Marine megafauna database established for Pitcairn Islands, with data contributing to relevant national and international databases documenting individual humpback whales, GENBANK (DNA sequence data) and whale-songs.

Output 4:

Visitors to the Pitcairn Islands are aware of the importance of humpback whales and know how to behave responsibly and Strategy and Action Plan for nature-based tourism in the MPA produced to inform future development of activities.

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 Conduct surveys to determine the occurrence and spatial distribution of humpback whales and their nursery/calving grounds at all islands.

1.2 Conduct DNA and genetic sampling using standardised approaches.

1.3 Establish genetic database and produce methodological report and publications.

2.1 Development of standardised methods for photo-ID catalogue and conduct training for island community and visiting scientists.

2.2 Establish online image database to enable citizen scientist to upload their photographs.

3.1 Develop protocols to ensure all individual whale sightings and associated information is logged and recorded online and linked/updated to International scientific databases (GENBANK and AHWC).

3.2 Training workshops for staff in the Environmental, Conservation & Natural Resources Division, GPI.

4.1 Provide training for local Pitcairn islanders to enable them to work as marine tour guides.

4.2 Produce films and share these with Pitcairn Islands Tourism for publication on TV and online.

4.3 Assist the marine tour guides to develop presentations to give to tourists and passengers on cruise ships and Explorers Voyages.

4.4 Carry out questionnaires with visitors to capture environmental awareness and understanding of responsible behaviour.

4.5 Hold consultation meetings with Pitcairn Islands Tourism and the local community to agree objectives for Strategy and Action Plan for nature-based tourism in the MPA.

4.6 Prepare Strategy and Action Plan report and present to Pitcairn Islands Tourism for approval.

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.

   ⤓ <u>R10_DPlus_Implementation_Timetable__FINAL_6Jan22</u>
   🗓 06/01/2022
   🕐 17:20:36
   📄 pdf 159.02 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 <u>Finance Guidance</u>**).**

The project will be managed by the Project Leader and King's College London, with local implementation coordinated by the Pitcairn Island Government and Council, with Michele Christian as the key point of contact. Each year, detailed annual work-plans containing activities and an implementation schedule will be elaborated by each partner in conformance with the outputs, activities, indicators and milestones contained in the logical framework relevant to each stakeholder or organization. Activities and corresponding progress indicators measuring effort expended will be reported every 6-months and annually. Specific baselines and target values for each 'measurable indicator' will be defined in the first stakeholder and partner meeting to be held in the summer 2022. Such planning meetings will be held 6-monthly in which overall project evaluation will be undertaken to determine progress towards delivery of outputs and towards achieving the overall project purpose. In addition, at these meetings, the following year's work-plan and half-yearly monitoring indicators will be elaborated. 6-monthly reports from all partners will be sent to the Lead Partner and Project Leader, who will review the reports, coordinate clarifications and provide the half-year and annual reports in the Darwin Initiative format. Financial reports will be elaborated each half-year by each partner to demonstrate consistency between expenses, activities undertaken and progress towards outputs and overall project purpose. The above monitoring and evaluation system is familiar and consistent to partners who have already working together on previous projects.

Outreach will be measured by number of unique website visitors, number of Twitter followers, Facebook likes, comments and followers, fieldwork data collections. Tourist activities and outputs will also be evaluated to determine changing knowledge and perception for the cruise ship and island visitors over the period of the project.

Total project budget for M&E in GBP (this may include Staff, Travel and Subsistence costs)	████
Number of days planned for M&E	██
Percentage of total project budget set aside for M&E (%)	7

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
20-006	Terence Dawson	A sustainable marine and fisheries management plan, Pitcairn Islands
EIDCF003	Terence Dawson	A community-led marine management action plan for the Pitcairn Islands
14-048	Terence Dawson	Galapagos coral conservation: impact mitigation, mapping and monitoring
9006	Terence Dawson	Towards Sustainable Development of South-eastern Madagascar's biologically unique littoral forests
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

trustees

of

King's College London

I apply for a grant of

█████████

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	Terence P. London
Position in the organisation	Professor of Global Environmental Change, King's College London

Signature (please upload e-signature)	⬇ <u>tdsignature</u> 🗓 08/12/2021 🕐 12:51:29 📄 jpg 3.71 KB
Date	11 December 2021

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

⬇ <u>safeguarding-policy-v5.1</u>
🗓 08/12/2021
🕐 12:52:31
📄 pdf 289.65 KB

Please attach the requested signed audited/independently examined accounts.

⬇ <u>2019-2020-financial-statement</u>
🗓 08/12/2021
🕐 12:53:55
📄 pdf 998.7 KB

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).