Applicant: Brodie, Juliet

Organisation: Natural History Museum, London, UK

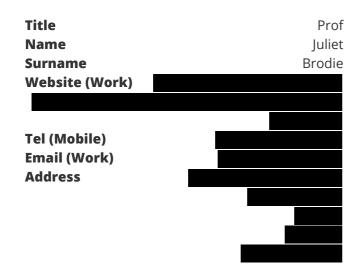
Funding Sought: £245,841.00 Funding Awarded: £245,841.00

## **DPR8S2\1022**

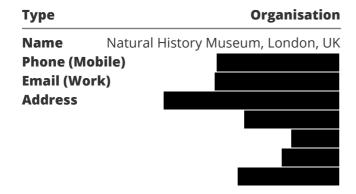
DPLUS122 Biodiversity discovery and the future of South Georgia's seaweed habitats

## **Section 1 - Contact Details**

#### PRIMARY APPLICANT DETAILS



#### **GMS ORGANISATION**



## **Section 2 - Title, Dates & Budget Summary**

## Q3a. Project title

DPLUS122 Biodiversity discovery and the future of South Georgia's seaweed habitats

## Q3b. What was your Stage 1 reference number? e.g. DPR8S1\10008

DPR8S1\1069

## Q4. UKOT(s)

Which UK Overseas Territory(ies) will your project be working in? You may select more than one UKOT from the options below.

☑ South Georgia and The South Sandwich Islands (SGSSI)

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

Yes

#### Please list below.

Falkland Islands: support for the South Atlantic Environmental Research Institute (SAERI), Shallow Marine Surveys Group (SMSG), Golden Fleece Expeditions and local services (e.g. accommodation, transport).

#### Q5. Project dates

Start date:	End date:	Duration (e.g. 2 years, 3	
03 August 2020	02 February 2022	months):	
		1 year 6 months	

#### **Q6. Budget summary**

Year:	2020/21	2021/22	2022/23	<b>Total request</b>
Darwin funding request (Apr - Mar)	£			<b>£</b> 245,841.00

#### Q6a. Do you have proposed matched funding arrangements?

Yes

#### What matched funding arrangements are proposed?

of the total project funding is provided in kind by the NHM (lead institute) together with Project Partners (PPs) SAERI, SMSG and BAS.

NHM: The NHM is providing funding in kind to cover the following staff time: Project Leader (PL) Brodie (40%) £ Senior Algal Curator Wilbraham (4.55%) £ and Molecular Laboratories technical support Misra (5%) £ and Mackenzie Dodds (2%) £ The NHM is a UKRI Independent Research Organisation and thus uses the approved IRO rates for FEC costing model. The NHM will meet the costs of FEC estates and indirect costs for all core-funded staff (£ and make a substantial contribution towards the costs for the Project Officer (PO) Mrowicki (£ The NHM will also provide workshop room hire in kind (£ as well as £ for camera equipment.

SAERI and SMSG: SAERI and SMSG are providing £ funding in kind. This covers half the staff time for the 21-day Y1 field expedition: PP Brickle and Steve Brown (£ Paul Brickle's time in Y2 (£ and half of the two SMSG divers costs (£ SAERI will also cover £ laboratory costs, transport and other consumables for the field expedition (£

BAS: BAS will be providing the recompression chamber for the dive as an in kind cost (£

Q6b. Proposed (confirmed & unconfirmed) fractional matched funding as % of total project cost (total cost is the Darwin request plus other funding required to run the project).



## **Section 3 - Lead Organisation Summary**

### **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 working may be used by Defra in communications e.g. as a short description of the project on <a href="GOV.UK">GOV.UK</a>.

Please write this summary for a non-technical audience.

No Response

## **Q8.** Lead organisation summary

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	
DARPP202	Tom White	Investigating the soil biodiversity of western Madagascar for ecosystem restoration	
2532	David Ouvrard	Biodiversity and Agriculture: addressing scale insect threats in Kenya	
DPLUS068	Juliet Brodie	Building foundations to monitor and conserve Falklands marine forest habitats	
18010	Alex Monro	Tools for the sustainable harvesting of Mayanut (Mesoamerica)	
DARSC175	David Ouvrard	Biodiversity and Agriculture: addressing scale insect threats in Kenya	

No Response No Response No Response

Have you provided the requested signed audited/independently examined accounts? If you select "yes" you will be able to upload these. Note that this is not required from Government Agencies.

Yes

Please attach the requested signed audited/independently examined accounts.

- <u>annual-report-accounts-2018-19</u>
- **i** 25/11/2019
- © 21:11:48
- pdf 597.85 KB

- <u>annual-report-accounts-2017-18</u>
- © 21:11:48
- pdf 510.93 KB

## **Section 4 - Project Partners**

#### **Q9. Project Partners**

Please list all the partners involved (including the Lead Organisation) and explain their roles and responsibilities in the project. Describe the extent of their involvement at all stages, including project development.

This section should illustrate the capacity of partners to be involved in the project. Please provide Letters of Support for the Lead Organisation 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 (if applicable) and all letters of support.

Lead Organisation name:	The Natural History Museum
Website address:	https://www.nhm.ac.uk

## Details (including roles and responsibilities and capacity to engage with the project):

The NHM is a world-leading centre for biodiversity research, with globally significant collections and exceptional curation, digitisation and public capacity. It houses a unique seaweed herbarium (~20,000 specimens) and state-of-the-art molecular laboratories.

This project was devised jointly by the PL and PO, developed with all PPs and South Georgia's Government (GSGSSI), in consultation with key NHM personnel).

The PL will oversee the entire project (managing the PO) and devoting 40% of her time throughout, while liaising with the Research and Consulting Office (RCO) to manage project finances. Prof. Brodie brings extensive capacity to this role: a leading seaweed scientist, she has initiated and led many seaweed projects around the world. Recently she worked with the PO, Rob Mrowicki, on the Darwin-funded 'Falklands marine forests' project (DPLUS068), with SAERI and NHM support.

The PO, with experience managing DPLUS068, will manage the project. He is a marine ecologist with expertise in biodiversity and environmental change, and molecular taxonomy. He has led and participated in marine and fisheries-related research in South Atlantic OTs, including Tristan (DPLUS005, DPLUS062 marine sustainability projects), Ascension Island (CSSF-funded Blue Belt inshore programme) and Falklands. He is a diving instructor with extensive experience of conducting surveys in remote places.

## 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:	South Atlantic Environmental Research Institute (SAE	RI)
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**Website address:** https://www.south-atlantic-research.org

Details (including roles and responsibilities and capacity to engage with the project):

SAERI has the infrastructure and capacity to conduct environmental research throughout the South Atlantic and further afield. It has significant grant and project management and delivery experience which includes several previous Darwin Initiative projects. SAERI infrastructure includes data management through the IMS-GIS centre, run by two full-time staff members, which will take care of the management of the entire life cycle of the data generated by the project with the Project Team. Data documentation and accessibility will be ensured through metadata (as requested by the research permit) and by creating a public facing webGIS service. Data storage occurs on a dedicated server backed up daily and off-site.

The PP, Dr Paul Brickle, SAERI's Director, has many years' experience managing and co-ordinating multi-institutional research projects, seeing them through to timely and successful delivery. His leadership in the South Atlantic OTs will be pivotal to the project's success. He was expedition leader for a recent South Georgia subtidal and intertidal survey in 2010

(http://www.gov.gs/docsarchive/Environment/Marine /SMSG%20Sth%20Georgia%20Expedition%20Report%202010.pdf), invaluable experience for this project. He will advise on relevant personnel and provide assistance for survey and outreach work. He also brings capacity in relation to marine alien invasive species, a knowledge gap for South Georgia seaweeds.

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

#### Do you have more than one partner involved in the Project?

Yes

**2. Partner Name:** Shallow Marine Surveys Group (SMSG)

**Website address:** https://www.smsg-falklands.org

# Details (including roles and responsibilities and capacity to engage with the project):

The role of SMSG will be to lead the field expedition for data and specimen collection. They will provide diving personnel and logistical support. Their expertise and experience in diving and marine ecological research in the South Atlantic, including South Georgia, will provide excellent capacity for this work.

The PP, Dr Paul Brewin, SMSG Director, has a wealth of diving experience and brings invaluable survey expertise to the project. He has worked extensively in Antarctic, temperate and tropical marine regions and has led a range of commercial diving projects in Falklands. He was the scientific officer of the subtidal and intertidal survey for initial seaweed and faunal collections of the North Coast of South Georgia, the expedition that was led by Dr Paul Brickle in 2010.

# Have you included a Letter of Support from this organisation?

Yes

#### 3. Partner Name:

British Antarctic Survey (BAS)

#### **Website address:**

https://www.bas.ac.uk/

# Details (including roles and responsibilities and capacity to engage with the project):

BAS (component of NERC) provides the mainstay for UK polar science. BAS scientists are responsible for undertaking strategic research that assists the Government of South Georgia and South Sandwich Islands (GSGSSI) in management of fisheries. The South Georgia fishery is Marine Stewardship Council (MSC) certified and operates in relation to the Conservation of Antarctic Marine Living Resources (CCAMLR) Treaty. BAS also host South Georgia GIS, a collection of topographic, management and scientific data about South Georgia, on behalf of the GSGSSI. BAS, therefore, engage with the project in relation to the capacity they bring working in the Southern Ocean, the relationship between offshore fisheries and inshore seaweed habitats (e.g. nurseries for fish), and the repository for biodiversity data.

The PP Prof. Peter Convey is an established cross-disciplinary senior BAS researcher, with a considerable record in biodiversity studies, and experience of South Georgia and the South Sandwich Islands. He has been instrumental in assisting with the practicalities of working in South Georgia, notably enabling retention of a diving recompression chamber to satisfy UK HSE Approved Code of Practice (ACOP) for Scientific and Archaeological Diving. He will continue to provide advice for the project.

#### Have you included a Letter of Support from this organisation?

Yes

4. Partner Name:	Tritonia Scientific Ltd.
Website address:	https://tritoniascientific.co.uk/
Details (including roles and responsibilities and capacity to engage with the project):	Tritonia Scientific Ltd is a diving and underwater research company that has evolved from the UK's National Facility for Scientific Diving. It will engage with the project through its capacity to support advanced scientific diving.
	The PP Dr Martin Sayer will act as Diving Supervisor for the project. Martin used to be the Head of the UK National Facility for Scientific Diving (NFSD). He will manage the diving operations to ensure that they adhere to the UK HSE Approved Code of Practice (ACoP) for Scientific and Archaeological Diving, so far as is reasonably practicable. Martin was co-author of the ACoP in 1997 and contributed to the 2014 revision.
	Martin will also liaise with BAS regarding on relying on the recompression facility at the King Edward's Point Research Station in the event of any diving-related illness. Martin's company, Tritonia Scientific Ltd., operates a NHS-registered emergency recompression chamber in Scotland where they provide approximately 40+ diver treatments a year. Martin designed and co-ordinated the building of the portable BAS recompression chamber that will be at KEP. He also authored the Operation Manual for that chamber.
Have you included a Letter of Support from this organisation?	<b>⊙</b> Yes
F. Bautuan Naman	Ma Daniera
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	○ Yes ○ No
organisation?	O INO

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.

- O 15:19:54
- pdf 2.1 MB

- Brodie 2019 letter response to feedback
- © 15:01:39
- pdf 111 KB

## **Section 5 - Project Staff**

## **Q10. Project Staff**

Please identify the key project personnel on this project, their role and what % of their time they will be working on the project.

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 core 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	% time on project	1 page CV or job description attached?
Juliet Brodie	Project Leader	40	Checked
Rob Mrowicki	Project Officer	100	Checked
Paul Brickle	Project Partner	6	Checked

Paul Brewin Project Partner 8 Checked

#### Do you require more fields?

Yes

Name (First name, Surname)	Role	% time on project	1 page CV or job description attached?
Peter Convey	Project Partner	3	Checked
Martin Sayer	Project Partner	7	Checked
No Response	No Response	0	Unchecked
No Response	No Response	0	Unchecked
No Response	No Response	0	Unchecked
No Response	No Response	0	Unchecked
No Response	No Response	0	Unchecked
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.

_	_		
ス노	I)a	rwir	ı CVs

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

① 15:04:15

pdf 554.68 KB

## address? Why are they relevant, for whom? How did you identify these problems? How will your proposed project help? What key OT Government priorities and themes will it address?

Although South Georgia is far from many human impacts, its marine biodiversity faces threats from rapid climate change (ocean warming and acidification), invasive species (including seaweeds), tourism and fishing activities (e.g. pollution). Seaweeds, many on the edge of their distribution range, are indicators of environmental change and their responses can resonate throughout entire ecosystems, with knock-on effects for fisheries and tourism.

This project will generate the first detailed seaweed diversity knowledge for South Georgia, establishing baselines and developing, implementing and integrating tools for monitoring and decision-making, facilitating knowledge transfer among stakeholders, and raising public awareness of South Georgia's marine environmental importance. This is relevant for key stakeholders: marine managers/policy-makers (GSGSSI), researchers (e.g. BAS, SAERI, SMSG) and tour operators.

The PL, who has researched Atlantic seaweed diversity and environmental change for >30 years, recently the Falklands, recognizes South Georgia as an obvious gap. Seaweed diversity (~127 species listed) is underestimated, much identity is taxonomically uncertain and the distribution of critical groups unknown, e.g. dominant, structurally important, cryptically diverse coralline algae, have never been studied.

This work directly addresses Objective 5 of the SGSSI Biodiversity Action Plan 2016–2020, i.e. "enhance knowledge of biodiversity and habitats" and "establishment of scientific baselines" – particularly 5.1, improving understanding of flora through 5.1.1–5.1.5. Outputs also feed into 1.1, 2.2, 3.1, 4.1 and 7.3 (http://www.gov.gs/docsarchive/Environment/NBAP/SGSSI%20DRAFT%20NBAP\_for%20consultation.pdf). The project contributes to the SGSSI Environment Charter, notably both the UK and SGSSI Governments' commitment to 7 (http://www.gov.gs/environment/environmental-charter/). It also aligns with the SGSSI MPA and Monitoring Plan (RMP; DPLUS069 workshop). Results will support the UK Government's Blue Belt programme, through "improved understanding of the biodiversity of the marine environment", relevant to SGSSI's sustainable fisheries managed in accordance with CCAMLR (https://www.gov.uk/government /publications/the-blue-belt-programme). Results will contribute to Aichi Biodiversity Targets 9–11 and 19 (https://www.cbd.int/sp/targets/).

## Q12. Methodology

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

- How you have analysed historical and existing initatives 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.)

Please make sure you read the Guidance Notes before answering this question.

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

To obtain baseline seaweed diversity knowledge, we will:

- -Database ~500 NHM herbarium specimens from South Georgia (19th century-2011);
- -Identify ~160 recent specimens from 2010 SMSG expedition http://www.gov.gs/docsarchive/Environment

/Biodiversity/south%20georgia%20seaweed%20report.pdf) via DNA sequencing (Falklands DPLUS068 methods), providing taxonomic framework for subsequent work;

- Collect seaweeds from >30 intertidal and subtidal (<10 m) sites (across ~180 km northeast coast, building on 2010 SMSG expedition) during 3-week field expedition (Golden Fleece), targeting under-represented/unresolved taxa (e.g. coralline algae) and ecologically important (e.g. range-edge) species;
- -Concurrently, undertake quantitative seaweed surveys (and associated fauna), community structure and environmental variables using established transect-based methods (SMSG) and ROV footage;
- -Ground-truth maps (DPLUS065) of key seaweed habitats e.g. kelp forests, via remote underwater camera deployment;
- -Produce comprehensive species checklist via molecular-assisted taxonomy;
- -Establish South Georgia seaweed reference collection (~1500 specimens).

Using baseline knowledge, we will develop tools for monitoring and management:

- -Prioritised sites and biodiversity hotspots, Important Seaweed Areas (ISAs) based on Important Plant Area (IPA) methods;
- -Maps of key seaweed habitats (kelp forests, coralline reefs);
- -Maps of contemporary vs. historical species distributions, and seaweed Red Data List, highlighting priority species;
- -Illustrated seaweed identification guide (e.g. Falklands DPLUS068 http://tiny.cc/Fl\_seaweed\_guide);
- -Electronic identification keys (e.g. 'Seaweed Sorter', P. Martone, University of British Columbia) highlighting endemics, non-natives, range-edge species;
- -Downloadable guide (~10 species) with accompanying video for tourists/citizen scientists.

These tools will strengthen capacity for marine conservation and research in conjunction with the following training and outreach activities:

- -Handbook for managers and policy-makers with methodologies and recommendations for using baseline data in environmental management activities agreed with GSGSSI;
- -Training and policy workshop (NHM, 2.5 days), for identification of South Georgia seaweeds for relevant stakeholders (including GSGSSI, SMSG, BAS) and to engage with stakeholders, government representatives/agencies and policymakers to facilitate knowledge transfer and foster partnerships between organisations;
- -Engage with tour operators and cruise ship companies via IAATO (International Association of Antarctica Tour Operators) to raise awareness of the importance of seaweed habitats among tourists and enable participation in citizen science project;
- -Public outreach via talks and TV/radio broadcasts (Falklands) to raise awareness of the importance of South Georgia's marine biodiversity.

#### Data and outputs

- -All data and publications will be available via open access databases (NHM Data Portal, SAERI IMS-GIS Data Centre, BAS GGMarBase).
- -Herbarium specimens and DNA will be incorporated into NHM collections, to serve as long-term repositories for temporal, spatial and genetic data for future research.
- -Results will be disseminated via >2 peer-reviewed scientific articles, and the project publicised via news articles and social media.

#### Project management

There will be regular contact between PL and PO (weekly), PPs (monthly) and Project Management Group (PMG) members (quarterly). NHM researchers (PL and PO, supported by algal curator and molecular laboratory team) will lead specimen databasing, collecting, taxonomy and training/outreach; SAERI will provide data management and logistics support; SMSG will conduct diving fieldwork, with PP Sayer (Tritonia) as Diving Supervisor. NHM will manage the budget to ensure financial security, including monthly meetings between PL, PO and RCO team. Additional meetings will occur as necessary (see Q30).

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

- Appendices letter to GSGSSI and Safeguarding notes
- O 16:40:32
- pdf 129.72 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.

Key stakeholders: GSGSSI, SAERI, SMSG, BAS and IAATO.

The project will continue engaging with GSGSSI, consulted at Stage 1 (letter, Appendix 1), by providing baseline data and monitoring tools for inshore marine communities relevant to Treaties, Conventions and RMP.

Partners SAERI and SMSG who developed the project with the PL and PO, will provide logistics and personnel for fieldwork and are key in ensuring that results are open access via the SAERI on-line repository for South Atlantic UKOTs (see Q26).

BAS was consulted from the start of the project and will provide a recompression chamber on South Georgia. They will also host data in the South Georgia GIS which BAS holds on behalf of GSGSSI and which is freely available to the Scientific Community.

IAATO, the main coordinating organisation for Antarctic Tour Operators, were consulted at Stage 2 to address long term monitoring, and hence project sustainability, via a citizen science project that could be undertaken by tourists during visits (Letter of support).

Engagement with key stakeholders will be throughout the project. A representative of each stakeholder will be invited to join the PMG.

Stakeholders will be integral to the NHM workshop with the opportunity for seaweed identification and monitoring training. Additional stakeholders, including CCAMLR, FCO and marine managers/policy makers (e.g. MMO, Cefas), will be invited to this workshop to develop a strategic framework to integrate the project outputs into decision-making processes for sustainability on South Georgia.

The project will engage with the stakeholders via a website and social media.

## **Q14. Institutional Capacity**

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

NHM is a leading international authority on the natural world with excellence in curation, research and public engagement. The collections (>80 million specimens) provide a unique basis for scientific discovery and a powerful tool to understand the natural world. The museum houses one of the world's largest seaweed collections. The NHM is a world leader in collections digitisation and committed to making collections available to global audiences. Supported by a Digital Collections Programme, it will provide expertise, and technology support. The NHM's library is the world's most comprehensive resource for natural history literature and dedicated to supporting research and curation.

SAERI: Initially a Falkland Islands Government (FIG) initiative but now independent, is a world renowned, environmental research institute. SAERI has the experience, infrastructure and capacity to conduct environmental research throughout the South Atlantic and beyond.

SMSG: The group contribute to high quality marine ecological science, inshore resource assessment, conservation and education. Falklands based, they operate throughout the South Atlantic. Their research experience through diving and exploration, notably recently in South Georgia, provides logistical, technical and diving capacity to contribute project delivery.

PL Brodie: extensive capacity as leading seaweed researcher; >30 years' experience.

PP Brickle: highly experienced marine scientist; considerable experience in the South Atlantic, including South Georgia.

PO Mrowicki: Marine ecologist/seaweed researcher; South Atlantic OTs including Blue Belt inshore programme.

PP Brewin: diving survey experience including South Georgia.

PP Convey: highly experienced polar scientist, >30 years with BAS.

PP Sayer: scientific diving operations in remote locations, notably Falklands and Antarctica.

## **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.

GSGSSI will be able to use the baseline data (BAS South Georgia GIS) to establish monitoring activities. This will benefit BAS for their scientific monitoring responsibilities on South Georgia.

The evidence-base can be integrated into current decision-making processes, influencing the path to policy, thus supporting SGSSI MPA Draft Research and Monitoring plan, notably Theme 10 – protecting the shallow inshore environment from any form of fishing activity. This will benefit other environmental institutions working in the area: outputs have the potential to improve management of inshore habitats, which support juvenile fish and are therefore vital for the sustainability of offshore fisheries.

The project will benefit the long-term targets of UK Government's OTs Blue Belt, including priorities for upcoming research and monitoring, evidence of ecosystem change, and future threats including climate change.

The tourist industry will benefit directly due to tourists having increased public awareness of the MPA and potential to participate in a Citizen Science long-term monitoring programme, and indirectly because of better inshore biodiversity management.

The NHM will be a direct beneficiary. The new seaweed collections will enhance the value of the historical material making future comparisons possible. Collections will also be openly available as a resource in perpetuity.

## **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?

We are mindful of gender throughout this project. During the fieldwork expedition, we will be operating from the Golden Fleece. South Georgia is uninhabited apart from a small permanent station of scientific staff and two semi-permanent museum staff. We therefore do not anticipate any gender issues on South Georgia.

The project team is led by a woman (Juliet) and the other key personnel are male (Paul, Paul and Rob). NHM curation/laboratory support team includes two women and one man. There is scope for two people of any gender to join the field expedition. All expedition members will be treated fairly and equitably.

We do not know what the gender ratio will be for the workshop. The PL has a small amount of evidence that there can be gender differences between the way in which men and women approach species identification. She will take this into account in the planning and ensure opportunities for positive learning interactions between all participants during the workshop.

Citizen science projects developed for the longer term will be open to all volunteers who wish to participate regardless of gender.

Our institutions operate under current gender legislation.

## 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.

(a) Short-term

Detailed baseline knowledge of South Georgia's seaweeds will provide a unique resource to meet GSGSSI's biodiversity target for their MPA.

GSGSSI starts incorporating the indicator and monitoring tools and the data they produce into its procedures.

Workshop and analysis will result in the identification of monitoring hotspots in the intertidal and subtidal. This will benefit parties directly involved in management (BAP, Blue Belt, RMP, fisheries) and monitoring in this region (GSGSSI, SAERI, SMSG, BAS, researchers).

Data locked in South Georgia NHM seaweed specimens will be available, enhancing access to collections, for those involved in environmental management and policy, and the wider scientific community.

#### (b) Long-term

Inshore marine biodiversity conservation will be strengthened because environmental policy-makers, managers and researchers will use tools and data made available by this project.

New inshore biodiversity conservation practices will be integrated with offshore management, ensuring a sustainable future for South Georgia's marine ecosystems.

South Georgia is recognized locally and globally as a model for robust, long-term conservation and the approach is adopted by other UKOTs and beyond.

The project will provide new foundations for future research. For example, coralline algae are high resolution archives of past climate and ocean variability. Collections of these calcified seaweeds from South Georgia for the first time will be a reference point for climate scientists. Resolving species concepts will enable distribution maps to be created, and population genetic studies undertaken, of value in conservation planning.

The NHM seaweed collections will be a resource in perpetuity and extend the South Georgia information span to beyond two centuries. This legacy will be of value to researchers for temporal and spatial studies, including Red Data lists. Coupled with DNA collections, these represent a repository of genetic information.

Citizen science for tourists will enable continued data collection to feed into future monitoring.

## Q18. Pathway to change

Please outline your project's expected pathway to change. This should be an overview of the overall project logic and outline how you expect your Outputs to contribute towards you overall Outcome, and, longer term, your expected Impact.

Seaweed habitats, at risk from ocean warming and arrival of non-natives, require effective monitoring to recognize change. This necessitates baseline data whereby biodiversity is documented and intervention measures implemented. Baseline knowledge is essential for conservation of South Georgia's marine environment. By addressing specific GSGSSI priorities (Q11), this project will generate previously unavailable data and tools, including checklist, Red Data list, ID guide, non-native seaweed list, to support managers and policy-makers implementing this recognized pathway towards strengthening inshore marine protection (Outcome).

A major advance in seaweed diversity baseline knowledge (Output 1) is a pre-requisite for development of tools and resources supporting monitoring and research (Output 2), which can then be integrated with training and knowledge transfer among stakeholders (Output 3) to achieve BAP objectives and enhance international capacity for sustainable environmental management. Future monitoring will be enhanced further through citizen science, enabling observations to be fed into relevant agencies and maintaining public awareness.

Longer term, project outputs will contribute to understanding marine ecosystem functioning at a regional

scale. Results will complement other evidence-based approaches focusing on offshore and deep-water environments, thus supporting holistic biodiversity conservation strategies, and enabling South Georgia to be recognized globally as a model for large-sale marine management.

### Q19. Sustainability

How will the project ensure benefits are sustained after the project have come to a close? If the project requires ongoing maintenance or monitoring, who will do this and how will it be funded?

All data will be freely available long-term via open access repositories (see Q26) and specimen collections, representing two centuries of data, will be maintained in perpetuity at the NHM. Scientific knowledge will be synthesised and disseminated to stakeholders (including ID training and policy workshop), with tools designed specifically to facilitate incorporation of new evidence into ongoing MPA policy planning. In particular, this project is unique in addressing the knowledge gap surrounding inshore biodiversity, to complement current/planned research focussed on deep-water benthic and offshore pelagic systems.

Resulting from enhanced capacity to identify seaweeds, inshore monitoring can be sustained by BAS on a five-yearly basis as part of their scientific programme. On a more frequent basis, monitoring can be augmented by tourists participating in the Citizen Science project.

This project will forge new partnerships among organisations and reinforce existing ones, creating an international network of researchers, managers and policymakers to build on project outputs and develop new marine environmental research objectives for South Georgia.

Funding will be sought for a follow-up workshop, 2024, to disseminate taxonomic results emanating from the project (e.g. regional biogeographical relationships), progress with South Atlantic seaweed science network, and evaluate the Citizen Science/monitoring schemes and impact on policy.

## **Section 9 - Funding and Budget**

## Q20. Budget

Please complete the appropriate Excel spreadsheet, which provides the Budget for this application. Some of the questions earlier and below refer to the information in this spreadsheet. Note that there are different templates for projects requesting over and under £100,000 from the Darwin Plus budget.

- R8 D+ Budget form for projects under £100,000
- R8 D+ Budget form for projects over £100,000

Please refer to the Finance Guidance for Darwin/IWT for more information.

N.B: 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.

Budgets submitted in other currencies will not be accepted. Use current prices – and include anticipated inflation, as appropriate, up to 3% per annum. The Darwin Initiative cannot agree any increase in grants once awarded.

- O 15:41:31

#### **Q21. Co-financing**

#### Are you proposing co-financing?

No

Q22c. None

#### If you are not proposing matched funding, please explain why.

We have mentioned that we are planning to establish a South Atlantic seaweed working group at the 12th International Phycological Congress in Chile in March 2021 and that we will seek separate funding. The PL has discussed this with the Moore Foundation who are potentially interested in funding a workshop to initiate this group but any application would be in 2020. It is also anticipated that costs would be minimal. If funded, this meeting will provide further impact for the project.

#### **Section 10 - Finance**

#### **Q22. 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?

NHM

The NHM is responsible for managing a budget of >£70 million per annum, comprising Government Grant-in-Aid and externally generated funds from both corporate and grant-giving sectors. The responsibility of managing the funds rests with the Director of Finance, Neil Greenwood.

The NHM has an independent audit committee who are responsible for oversight of the financial procedures of the NHM. Full audited accounts are available on the website at http://www.nhm.ac.uk/about-us/corporate-information/museum-accounts/index.html

Day-to-day administration of the grant will be the responsibility of the Research and Consulting Office (RCO) a team of fifteen people headed by Vanessa Pike.

## **Q23. Financial Management Risk**

Explain how you have considered the risks and threats that may be relevant to the success of this project, including the risks of fraud or bribery.

The lead organisation, the NHM, will manage the whole budget for the duration of the project to ensure the

financial security of the project.

Once a month, there will be a formal meeting of the PL, PO and RCO team member dedicated to the project to review the budget. Additional meetings will be arranged as necessary.

The budget spread is designed to cover the field expedition and associated staff and equipment costs, in the front half of the project. Laboratory work will begin in the first half of the project but the main work will be undertaken in the second half. Salary for the PO (core staff) are museum rates.

Costs have been worked out as accurately as possible based on currently available information. Salary costs are fixed. Costs for molecular work are based on those charged by the NHM. Travel costs are based on a combination of scheduled information (e.g. flights to Falklands), PPs with prior experience of conducting research expeditions in South Georgia, local knowledge from OT contacts, and colleagues with knowledge.

Members of the project team have worked with each other over several years. They are chosen for their specialist knowledge, and their integrity, reliability and honesty.

### **Q24. Value for Money**

Please explain how you worked out your budget and how you will provide value for money through managing a cost effective and efficient project. You should also discuss any significant assumptions you have made when working out your budget.

The budget has been calculated to provide sufficient funds for personnel and resources required for this work, drawing on the team's wealth of expertise, especially from previous projects (see Q23). This project supports the OT by funding high-quality scientific research (including a major field expedition) that will yield a large body of evidence targeting identified knowledge gaps (inshore biodiversity) and generate new tools addressing specific conservation priorities, thus maximizing impact.

Outputs have been designed to ensure that benefits are sustained beyond the end of the project (see Q19). Capacity will be built through ID training, knowledge transfer and tool development. Data and specimens will be freely available and curated/maintained through existing infrastructure, representing an important resource for future work. We will draw upon existing NHM South Georgia seaweed collections (Emma Wells – letter of support) to kick-start the taxonomic study and to improve efficiency of fieldwork.

The secured matched funding (49%) highlights exceptional value for money. The time of the PL, SAERI PP, SMSG PP, curation/molecular staff are given in kind. Only the PO (Rob) will be funded full-time. Fieldwork is timed to coincide with availability of a recompression chamber on South Georgia (supporting wharf construction work) – required under the HSE Scientific and Archaeological Diving ACOP – provided in kind by BAS. NHM will support the stakeholder workshop, and additional departmental funding can potentially contribute to the project (travel, workshops/meetings, student projects). Initiating the South Atlantic seaweed science working group at ICP12 (Activity 3.2) will be funded separately

## **Q25. Capital Items**

If you plan to purchase capital items with Darwin Funding, please indicate what you anticipate will happen to the items following project end.

None.

## **Q26. 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.

It is anticipated that this project will generate a significant number and range of outputs, including historical and contemporary specimen datasets, molecular data, peer-reviewed journal articles (minimum 2), scientific meeting abstracts, training material, id guides, field photographs and GIS layers.

All the outputs from this project will be open access and freely available on-line. Printed material will also be provided free of charge as required.

Data will be deposited in IMS-GIS (Information Management System and Geographic Information System) data centre, SAERI's on-line repository for the UKOTs in the South Atlantic region (https://www.south-atlantic-research.org/research/data-science).

Databased specimen information will reside in the NHM's EMu database. All information associated with the databased specimens will be freely available via the searchable on-line NHM Data Portal (https://data.nhm.ac.uk).

Data will be managed during the project via Box, the cloud content management and file sharing service used by the NHM.

All publications will be available as open access. Costs are included during the project for some publications. Beyond the lifetime of the project, ongoing publication will be funded from other sources.

Identification guides and any related material will be available via the NHM and SAERI websites. The PL's web pages will host this material (https://www.nhm.ac.uk/our-science/departments-and-staff/staff-directory /juliet-brodie.html) along with https://macroalgalresearchgroup.com, a website showcasing the PL research group's seaweed research.

Molecular sequence data will be deposited in GenBank (https://www.ncbi.nlm.nih.gov/genbank), a collection of all publicly available DNA sequences.

Seaweed taxonomic and nomenclatural information will be available via AlgaeBase (https://www.algaebase.org), a database of information on algae.

## **Section 11 - Safeguarding**

## **Q27. 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 safegaurding polices in place. Please confirm the lead organisation has the following policies in place and that these are available on request:

We have a safeguarding policy, which includes a statement of your commitment to safeguarding and a zero tolerance statement on bullying, harassment and sexual exploitation and abuse	Unchecked
We keep a detailed register of safeguarding issues raised and how they were dealt with	Unchecked
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	Unchecked
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

## **Section 12 - Logical Framework**

#### **Q28. Logical Framework**

Darwin Plus projects will be required to report against their progress towards their expected Outputs and Outcome if funded. This section sets out the expected Outputs and Outcome of your project, how you expect to measure progress against these and how we can verify this.

#### Impact:

South Georgia is recognized globally as a model for large-scale marine management, with robust long-term strategies founded upon rigorous scientific evidence, protecting unique ecosystems while sustaining fisheries, tourism and research.

Project summary	<b>Measurable Indicators</b>	Means of verification	Important
			Assumptions

#### **Outcome:**

Inshore marine biodiversity conservation is strengthened because environmental policymakers, managers and researchers are using previously unavailable tools and data generated through a major advance in seaweed diversity baseline knowledge.

0.1. Major knowledge gaps filled for diversity and taxonomy of South Georgia seaweeds, with anticipated 100% increase in documented species, c. 500 historical and contemporary museum specimens databased, and reference collection of c. 1500 specimens established by end of project. 0.2 At least 6 tools to support long-term monitoring and management of South Georgia's inshore marine environment, founded upon baseline seaweed biodiversity knowledge, developed by end of project. 0.3 Management recommendations delivered to policymakers, scientists trained in seaweed identification. establishment of citizen science programme for visitors, increased public awareness of the importance of South Georgia's inshore marine biodiversity.

0.1 Specimen database records and photographs ('virtual herbarium' and DNA archive); comprehensive species checklists; new species descriptions in scientific literature. 0.2 Illustrated species ID guide; priority species keys and information pamphlet; seaweed habitat and biodiversity hotspot maps, ISA site descriptions, Red Data List and indicator/nonnative species guide; open access data repository records. 0.3 Handbook for environmental managers and policymakers; knowledge transfer workshop proceedings; citizen science programme materials and data records; films, radio broadcasts and other media used for public outreach.

Project partner institutions remain centres of excellence for organismal biology and South Atlantic marine environmental research. Key project personnel remain in post for duration of project, and science and management staff are available. Travel and field-based activities are not restricted by weather or logistical issues, and relevant visiting and research permits are granted. Public engagement activities are taken up, and local capacity is maintained long-term via staff continuity and/or knowledge transfer. Online data repositories continue to be freely accessible.

#### **Output 1:**

1. Enhanced baseline knowledge of seaweed diversity and distribution in South Georgia.

1.1 C. 200 historical and 300 contemporary NHM South Georgia herbarium specimens digitised, georeferenced and imaged by Q2Y1. 1.2 Contemporary specimens (c. 160, collected 2011) identified through DNA sequencing to develop a taxonomic framework by Q3Y1. 1.3 Current distributions of at least 5 ecologically important seaweed species surveyed at >30 sites around South Georgia by Q3Y1. 1.4 Reference collection of South Georgia seaweeds (estimated 1500 specimens) established and databased by Q4Y1. 1.5 Overall seaweed diversity inventoried and taxonomy of problematic groups resolved, likely

increasing the number of known species in South Georgia to c. 227

by Q4Y2.

1.1 NHM Data Portal records and photographs.
1.2 Molecular analysis results; initial species checklist and identification guide based on current taxonomy.
1.3 Species distribution maps.
1.4 Labelled NHM herbarium specimens; NHM Data Portal records and photographs ('virtual

1.3 Species distribution maps.
1.4 Labelled NHM herbarium specimens; NHM Data Portal records and photographs ('virtual herbarium').
1.5 Report containing phylogenetic trees and DNA barcoding results; full species checklist highlighting previously undocumented taxa; scientific journal article containing descriptions

of new species.

DNA extraction and sequencing methods are successful for a representative range of novel taxa. NHM herbarium and molecular lab technical support staff remain available. Travel to South Georgia (via the Falklands) is not prevented by political or logistical issues. Access to field sites and completion of survey activities are not restricted by weather conditions. Diving recompression chamber remains operational on South Georgia for the duration

of fieldwork.

#### **Output 2:**

Tools for monitoring, managing and researching South Georgia's inshore marine environment, founded upon baseline biodiversity knowledge.

2.1 Potential inshore biodiversity hotspots and vulnerable habitats are identified, based on surveys at >30 sites around South Georgia by Q2Y2. 2.2 Maps of key seaweed-dominated habitats (e.g. kelp forests and coralline reefs) developed via ground-truthing existing fine-scale coastal maps for South Georgia by Q3Y2. 2.3 Short- (10 yrs) and long-term (200 yrs) trends in seaweed

diversity and distribution analysed to reveal species introductions, range contractions/expansions and shifts in community structure by Q3Y2. 2.4 South Georgia seaweed species ID guide (including at least 150 key species) for researchers, managers and visitors, highlighting indicator and non-native species, published by Q4Y2.

2.5 Electronic identification keys to common and conspicuous seaweed species developed for managers and citizen scientists by Q4Y2. 2.6 Red Data List/Important Seaweed Area assessments and priority lists identifying potentially vulnerable and invasive species presented to managers and policy-makers by Q4Y2.

2.1 GIS consensus maps of seaweed and faunal diversity and community structure; field expedition report and survey data. 2.2 Refined habitat maps for kelp forests and coralline reefs; WebGIS spatial data layers (SAERI IMS-GIS Data Centre and BAS South Georgia GIS). 2.3 Contemporary and historical species distribution maps; report summarising indicator species. 2.4 Published ID guide. 2.5 Electronic keys published via website and mobile app. 2.6 Management recommendations report with details of priority species and sites. 2.7 NHM Data Portal

and SAERI IMS-GIS Data

Centre uploads; BAS

South Georgia GIS

spatial data layers;

GenBank accession

download requests.

numbers; data portal

Quantity and reliability of identity/locality data associated with historical specimens are sufficient for robust temporal and spatial analyses. Suitably-trained SMSG volunteers provide the required capacity for combining specimen collection with detailed quantitative surveys. Tools including printed and electronic seaweed identification guides, Red Data List, Important Seaweed Areas, non-native species list are all dependent on the checklist based on the most up to date taxonomy.

2.7 All data and reports made publicly available through open access repositories by end of project.

#### **Output 3:**

Strengthened capacity for marine environmental protection and research in South Georgia, through training, knowledge transfer and public awareness raising.

3.1 Raised public awareness of the importance of seaweeds, via a public talk (>15 attendees), TV/radio interviews and museum exhibition in the Falklands during O3Y1. 3.2 South Atlantic seaweed science working group established during 12th International Phycological Congress, Chile (IPC12, 21-26 March 2021), in Q4Y1. 3.3 Seaweed biodiversity information synthesised and disseminated to stakeholders by Q3Y2. 3.4 GSGSSI, BAS and SMSG staff and other stakeholders trained in seaweed ecology and identification coupled with policy-orientated workshop, attended by at least 10 government and non-government stakeholders, held in the UK during Q3Y2 3.5 Scientific results disseminated via at least 3.6 Letter of two open access peer-reviewed articles and presentations at one UK and one international phycology conference by Q3Y2. 3.6 Citizen science programme developed for visitors, delivered through tour operators and cruise companies, and taken up by at least one tour company by end of project.

3.1 Presentation slides: recorded FITV/Falklands Radio broadcasts; display specimens at Falkland Islands Museum. 3.2 Workshop attendance list; meeting minutes and proceedings; document outlining proposed work programmes. 3.3 Handbook for stakeholders, including biodiversity metrics (e.g. proportions of endemics vs. non-natives, species shared with other territories). 3.4 Presentation slides; course attendance list; participant feedback forms; workshop meeting minutes and outcome report. 3.5 Submitted manuscript(s) for peer-reviewed articles; online article access/sharing metrics; presentation slides; conference proceedings and abstract booklets. commitment by tour company; species ID leaflet and accompanying video; uploaded data records; blogs and social media

There is sufficient interest among stakeholders (researchers, managers and visitors) for uptake of training activities and public engagement. International stakeholders and government representatives are available for a joint meeting. Information on biodiversity and status of seaweed habitats is recognised as an important contribution to future spatial management strategies. All stakeholders have long-term access to data repositories, which will be maintained into the future.

**Output 4:** No Response No Response

No Response

posts.

No Response

Output 5: No Response No Response No Response

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 Database existing historical and contemporary herbarium specimens
- 1.2 DNA analysis of recent specimens; produce initial checklist and guide
- 1.3 Survey distribution and abundance of seaweed and faunal species
- 1.4 Identify, label and database new specimens; establish reference collection
- 1.5 Inventory seaweed diversity via molecular assisted taxonomy of new specimens
- 2.1 Identify inshore biodiversity hotspots and vulnerable habitats
- 2.2 Map seaweed-dominated habitats (kelp forests and coralline reefs)
- 2.3 Analyse temporal trends in seaweed diversity and distribution
- 2.4 Write and publish ID guide for South Georgia seaweeds
- 2.5 Develop electronic identification keys to common and conspicuous seaweeds
- 2.6 Conduct Red List and ISA assessments; produce species/site priority lists
- 2.7 Upload data and reports to open access repositories
- 3.1 Public talk and TV/radio interviews; set up museum exhibition
- 3.2 Establish South Atlantic seaweed science working group
- 3.3 Synthesize and disseminate biodiversity information to stakeholders
- 3.4 Conduct ID training and policy-orientated workshop with stakeholders
- 3.5 Disseminate scientific results via peer-reviewed articles and conference presentations
- 3.6 Develop and implement citizen science programme

## **Section 13 - Implementation Timetable**

# Q29. 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 Excel spreadsheet template as appropriate to describe the intended workplan for your project.

**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. The workplan can span multiple pages if necessary.

- 🕹 DPLUS R8 implementation timetable Brodie
- © 16:30:44
- xlsx 22.25 KB

## **Section 14 - Monitoring and Evaluation**

#### Q30. Monitoring and evaluation (M&E) plan

Describe, referring to the Indicators above, how the progress of the project will be monitored and evaluated, making reference to who is responsible for the project's M&E.

Darwin Initiative projects are expected to be adaptive and you should detail how the monitoring and evaluation will feed into the delivery of the project including its management. M&E is expected to be built into the project and not an 'add' on. It is as important to measure for negative impacts as it is for positive impact. Additionally, please indicate an approximate budget and level of effort (person days) to be spent on M&E (see Finance Guidance for Darwin/IWT).

The project will be overseen by a PMG of stakeholders including PPs and government/non-government representatives. The PL will be responsible for overall M&E. Formal meetings will be held monthly between the PL and PO, and quarterly between the PL, PO, PPs and PMG to review progress, with other team members attending as needed. The PL will review the budget with the NHM RCO administrative assistant once a month and present it as part of the quarterly formal meeting. Meetings will be in person and/or by Skype or phone, and meeting summaries/minutes will be circulated to the team, with more detailed project reports circulated on a quarterly basis. This overall approach has been successful in previous projects (DPLUS068).

To monitor progress, the PL will work initially with the PO, PPs and PMG to establish milestones and targets. An online management system (Box) will assist in achieving targets, and be where current project documents and analyses are placed. This will be reviewed at the quarterly meetings. There will be on-going informal M&E among all members of the team throughout the project.

Annual and half-year reports to the Darwin Initiative will summarise progress against planned outputs. Project risks and assumptions will be monitored closely and indicators will be reviewed regularly – if any additional risks are detected and/or indicators require adjustment, this will be raised with Darwin, as well as any anticipated changes to project design (e.g. through the formal Change Request process). There is scope within the project to modify or extend timings of activities, if necessary.

Health and Safety regulations will be observed at all times. Dive operations will adhere to HSE Scientific Diving ACoP regulations with Dive Manager supervision.

#### Specific actions

The PO and PL will evaluate databasing and DNA biodiversity work weekly for the first quarter. Anticipated problems include time to locate specimens, slower progress due to problematic material and difficulty amplifying DNA from old specimens. Procedures in place from DPLUS068 will assist efficiency here and protocols modified as necessary.

South Georgia fieldwork: weather and sea state will be critical and constantly monitored to ensure safety. The Dive Master will ensure that diving follows ACoP regulations. Care of the specimens will be monitored daily.

Tool production and data analysis will be evaluated, and progress reviewed monthly between the PL and PO. Our previous experience has enabled us to plan this work, but innovative approaches, e.g. identifying Important Seaweed Areas, will be carefully managed by the PO and plans adapted accordingly.

Taxonomic challenges, particularly amongst some key groups (e.g. coralline algae) will be managed through specialist research from the global community, including development of the South Atlantic seaweed science group (IPC12 workshop), and Masters/doctoral level through development of separate research projects.

Capacity building: A programme of outputs, activities and events with fixed or approximate dates will be developed at the start of the project. Training and awareness raising events will be evaluated via feedback questionnaires. ID guides will be trialled prior to use in field/training events and modified as necessary.

Total project budget for M&E in GBP (this may include Staff, Travel and Subsistence costs)	£
Number of days planned for M&E	61.00
Percentage of total project budget set aside for M&E (%)	5.60

## **Section 15 - Certification**

#### **Q31. Certification**

#### On behalf of the

trustees

of

The Natural History Museum

#### I apply for a grant of

£245,841.00

I certify that, to the best of our knowledge and belief, the statements made by us in this application are true and the information provided is correct. I am aware that this application form will form the basis of the project schedule should this application be successful.

(This form should be signed by an individual authorised by the applicant institution to submit applications and sign contracts on their behalf.)

• I 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	Tim Littlewood
Position in the organisation	Director of Science
Signature (please upload e-signature)	<ul> <li>♣ Tim Littlewood e-signature</li> <li>★ 26/11/2019</li> <li>♠ 09:01:34</li> <li>♠ pdf 68.55 KB</li> </ul>
Date	26 November 2019

## **Section 16 - 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 included a 1 page CV or job description for all the Project staff identified at Question 14, including the Project Leader, or provided an explanation of why not.	Checked
I have included a letter of support from the Lead Organisation and main partner organisation(s) identified at Question 13, or an explanation of why not.	Checked
I have included a cover letter from the Lead Organisation, outlining how any feedback at Stage 1 has been addressed where relevant.	Checked
I have been in contact with the FCO in the project country(ies) and have included any evidence of this. if not, I have provided an explanation of why not.	Checked

I have included a signed copy of the last 2 years annual report and accounts for the Lead Organisation, or provided an explanation if not.	
I have checked the Darwin website immediately prior to submission to ensure there are no late updates.	Checked
I have read and understood the Privacy Notice on GOV.UK.	Checked

#### We would like to keep in touch!

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

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 <u>here</u>. 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 organisation, 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).