

DPR9S2\1018

Bathymetry, and seafloor habitats within Ascension Island's nearshore waters

The nearshore habitats of the Ascension Island Marine Protected Area (AI-MPA) comprise high biodiversity and are most at risk from anthropogenic development and climate change. This project will determine the character, distribution, and extent of these key habitats through an integrated programme of hydrographic and ground-truthing surveys. Resulting seafloor habitat maps will provide urgently needed tools to better monitor and protect marine ecosystems, and underpin the evidence-based management of the AI-MPA.

Section 1 - Contact Details

PRIMARY APPLICANT DETAILS

Name Dayton
Surname Dove
Tel (Work) [REDACTED]
Email (Work) [REDACTED]
Address [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

CONTACT DETAILS

Title Mr
Name Rhys
Surname Cooper
Website bgs.ac.uk
Tel [REDACTED]
Tel [REDACTED]
Email [REDACTED]
Address [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

GMS ORGANISATION

| Type | Organisation |
|--------------|--|
| Name | British Geological Survey |
| Phone (Work) | [REDACTED] |
| Email | [REDACTED] |
| Website | [REDACTED] |
| Address | [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] |

Section 2 - Title, Dates & Budget Summary

Q3a. Project title

Bathymetry, and seafloor habitats within Ascension Island's nearshore waters

Q3b. What was your Stage 1 reference number? e.g. DPR9S1\10008

DPR9S1\1040

Q4. UKOT(s)

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

St Helena (ODA eligible), Ascension and Tristan da Cunha* (ODA eligible)

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

Ascension

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

No

Q5. Project dates

Start date:

30 September 2021

End date:

31 March 2023

Duration (e.g. 2 years, 3 months):

1 year 7 months

Q6. Budget summary

| Year: | 2021/22 | 2022/23 | 2023/24 | 2024/25 | Total request |
|------------------------------------|-------------|------------|---------|---------|------------------------|
| Darwin funding request (Apr - Mar) | £239,614.00 | £23,334.00 | £0.00 | £0.00 | £ 262,948.00 |

Q6a. Do you have proposed matched funding arrangements?

Yes

What matched funding arrangements are proposed?

- Difference between the allowable cost and the staff FEC will be borne by the BGS - £[REDACTED] GBP
- The BGS and AIGCFD are providing the acoustic and ground-truthing equipment to the project 'in kind', providing savings of £[REDACTED] GBP.
- The UK Hydrographic Office (UKHO) could provide assistance as part of their Overseas Territories Seabed Mapping Programme. However, this a separate and currently uncertain source of funding that will only fulfil the high priority safety of life at sea (SOLAS) mapping areas. Any UKHO mapping on Ascension in the future is likely to be limited to the small area around the pier and not provide the more extensive habitat mapping coverage required for MPA management. Any extra resourcing provided will fulfil the UKHO requirements

for charting. Additional support is likely to take the form of additional personal, equipment and logistical support. UKHO will also provide the funding to validate the data back in the UK;

- Ascension Island Government (AIG) will provide staff time to support project (~£[REDACTED] per year = ~[REDACTED])
- TOTAL - £[REDACTED]

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

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 working may be used by Defra in communications e.g. as a short description of the project on [GOV.UK](https://www.gov.uk).

Please write this summary for a non-technical audience.

The nearshore habitats of the Ascension Island Marine Protected Area (AI-MPA) comprise high biodiversity and are most at risk from anthropogenic development and climate change. This project will determine the character, distribution, and extent of these key habitats through an integrated programme of hydrographic and ground-truthing surveys. Resulting seafloor habitat maps will provide urgently needed tools to better monitor and protect marine ecosystems, and underpin the evidence-based management of the AI-MPA.

Q8. Biodiversity 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? You should refer to Articles or Programmes of Work here. You should also consider local, territory specific agreements and action plans here.

The Convention on Biological Diversity places a responsibility on States to identify and monitor biodiversity (Article 7b) and identify and minimise adverse impacts (Article 14). AICHI Target 11 calls for effectively-managed protected areas to be created in 10% of the world's oceans by 2020. The effective management of the Ascension Island MPA is the highest conservation priority for the Ascension Island Government and a UK Government priority through the Blue Belt Programme. This project will support the strategic objectives of the MPA to result in no loss of species or habitats within inshore areas and also be central to designing a robust monitoring programme that is a key component of Protected Area Management Effectiveness. The AI MPA Management Plan and associated Monitoring, Evaluation and Research Strategy identify the mapping of nearshore habitats as the highest priority for research as it will provide the foundation of other monitoring programmes and development control assessments.

Section 4 - Lead Organisation Summary

Q9. 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 |
|--------------------|--------------------|--|
| DPLUS093 | Heather Stewart | HOT: Hadal zones of our Overseas Territories |
| <i>No Response</i> | <i>No Response</i> | <i>No Response</i> |
| <i>No Response</i> | <i>No Response</i> | <i>No Response</i> |
| <i>No Response</i> | <i>No Response</i> | <i>No Response</i> |
| <i>No Response</i> | <i>No Response</i> | <i>No Response</i> |
| <i>No Response</i> | <i>No Response</i> | <i>No Response</i> |

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.

No

If no, please provide details.

Government departments and agencies are not required to provide audited accounts

Section 5 - Project Partners

Q10. Project Partners

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

This section should illustrate the capacity of partners to be involved in the project. 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: British Geological Survey

Website address: <https://www.bgs.ac.uk/geology-projects/sea-floor-marine-geoscience/>

Details (including roles and responsibilities and capacity to engage with the project): British Geological Survey: Our role will be to acquire, process and analyse data acquired from the nearshore area of the AI-MPA. Working closely with the AIGCFD, we will develop substrate and habitat data and map products to be used for MPA management. Specific responsibilities will include: Project management and planning; conduct hydrographic and ground-truthing surveys, hydrographic data processing, data analysis, map production, and reporting; Our team of scientists, hydrographers and technical experts are undertaking a programme of geological mapping of the seabed and sub-seabed of the continental shelf surrounding the UK (UKCS). Our maps of the properties and type of sediment and/or bedrock exposed on the seabed, as well as the detailed geological and geomorphological models we provide, will better inform the development, management, and protection of the UK seabed environment.

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

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

Do you have partners involved in the Project?

Yes

1. Partner Name: Ascension Island Government Conservation and Fisheries Directorate (AIGCFD)

Website address: <https://www.ascension.gov.ac/>

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

AIGCFD: Project planning and advising on MPA requirements and AIG needs; AIGCFD is the government body responsible for protecting biodiversity on Ascension. It is a multidisciplinary team, with core programmes in turtle and seabird monitoring, invasive species management, botanical conservation, marine and fisheries research and management. AIGCFD is the Management Authority for the AIMPA and has a dedicated team of four marine scientists who conduct monitoring and management activities.

AIGCFD identified the need for this project and have been involved in developing the proposal to ensure outputs will meet management needs. They will provide ongoing advice on delivery of the project, assist with data interpretation, habitat classification, and reporting and lead on the ground-truthing survey work. AIGCFD will also work together with BGS to engage local stakeholders.

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


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

No

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

 [BGS AIG Combined LoS](#)

 02/02/2021

 11:43:58

 pdf 900.14 KB

 [DPR9S1 1040 BGS Ascension CoverLetter](#)

 02/02/2021

 11:36:04

 pdf 204.22 KB

Section 6 - Project Staff

Q11. Project Staff

Please identify the core staff on this project, their role and what % of their time they will be working on the project. Further information on who should be classified as core 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 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? |
|----------------------------|-------------------------------------|-------------------|--|
| Rhys Cooper | Project Leader | 100 | Checked |
| Dayton Dove | BGS Marine Geologist | 50 | Checked |
| William Lewis | BGS Skipper / Hydrographic Surveyor | 100 | Checked |
| Diane Baum | AIG Project Lead | 5 | Checked |

Do you require more fields?

Yes


| Name (First name, Surname) | Role | % time on project | 1 page CV or job description attached? |
|----------------------------|----------------------|-------------------|--|
| Tiffany Simpson | AIG Marine Ecologist | 20 | Checked |
| Daniel Sadd | AIG Marine Scientist | 15 | Checked |
| Darcy Philpott | AIG Marine Scientist | 15 | Checked |
| <i>No Response</i> | <i>No Response</i> | 0 | Unchecked |
| <i>No Response</i> | <i>No Response</i> | 0 | Unchecked |
| <i>No Response</i> | <i>No Response</i> | 0 | Unchecked |
| <i>No Response</i> | <i>No Response</i> | 0 | Unchecked |
| <i>No Response</i> | <i>No Response</i> | 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.

 BGS AIG Combined CVS

 02/02/2021

 11:58:25

 pdf 5.16 MB

Have you attached all Project staff CVs?

Yes

Section 7 - Background & Methodology

Q12. 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).

Nearshore habitats are a key component of the recently-designated Ascension Island MPA. They contain a high proportion of the MPA's biodiversity including at least 30 endemic species and are also the areas most threatened by ongoing human activity and climate change. The MPA Management Plan sets out objectives to maintain the health of nearshore habitats and populations through the management of activities such as recreational fishing, coastal development and pollution discharges. There is also a commitment to monitor the natural features of the MPA and feed the results back into management measures.

At present, the above activities and commitments are precluded by the lack of accurate data on the extent and distribution of nearshore habitats. Without this resource it is not possible to:

1. Monitor future changes in habitat extent or condition;
2. Establish species-habitat associations and identify the most biologically important habitat types and their distribution;
3. Extrapolate fish abundance surveys into full stock assessments that will determine whether fisheries management measures are needed;
4. Identify the most appropriate location for any closed areas to fishing;
5. Design robust species and threat monitoring surveys designs that are representative of all habitat types;
6. Assess the impact of development proposals by considering the proportion of a habitat type that would be affected.

All these will be critical to successful management of the MPA given the MPA Monitoring and Research Strategy has identified the creation of a nearshore habitat map as the highest research priority.

AIGCFD do not have the specialist equipment and expertise to conduct the survey nor the ability to translate the data produced into a GIS habitat layer that can be integrated into existing data systems. The expert input of the BGS is required to carry out the cost-effective, high quality mapping needed to manage the MPA

Q13. 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 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.)

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)

- New, high-resolution seafloor mapping will allow observations from previously conducted, deeper mapping (>100 m depth; Barnes et al., 2015) to be joined, and compared with the nearshore environment;
- Cefas have an expedition scheduled for Nov 2021 on RRS Discovery as part of the Blue Belt programme. We anticipate our nearshore habitat mapping will complement their work programme. BGS staff are in contact with Cefas to ensure harmonisation between these projects. CEFAS have no intention of surveying the shallow waters vital to this project;
- Seafloor substrate maps produced here will be invaluable towards ongoing efforts (BGS and AIG) to characterise volcanic hazards on the island;
- DPLUS039 collected data on nearshore biodiversity and established long-term monitoring protocols. Habitat maps from this project will provide context to these data, and add value by allowing species-habitat associations to be extrapolated into distribution maps and abundance surveys into overall population estimates;
- AIGCFD are developing inshore monitoring sites incorporating remote video recording, water quality loggers, passive acoustics, settlement panels and visual transects. The final site locations will be determined by the geospatial products from this project;
- AIG are introducing MPA Regulations that will require Environmental Impact Assessment of any development proposals. Nearshore habitat mapping will provide a basis for these assessments.

• Hydrographic acoustic survey and ground-truthing campaign: Acquire continuous high-resolution multibeam echosounder (MBES) bathymetry and backscatter data (proxy for seafloor composition and hardness) within the nearshore waters around Ascension Island (< 100m depth)). Utilise BGS's portable MBES system (Kongsberg EM2040P) aboard the BGS White Ribbon or a locally-contracted vessel (See below).

This multibeam system is very well suited to undertaking cost-effective survey in this remote environment. Ground truth surveys conducted according to habitat priority areas. Deploy drop-camera system to provide point-source ground-truth samples of seafloor habitat types.

Process MBES bathymetry and backscatter data to IHO charting standards;

- Seafloor mapping: Apply geospatial analysis to characterise seafloor substrate, morphology and composition using a range of quantitative and qualitative methodologies. Use bathymetric derivatives, together with backscatter data and ground-truthing observations to model distribution of hard substrates (important predictor of benthic habitat character) and sediment composition. Produce further classified maps indicative of seafloor processes (e.g. seafloor geomorphology, sediment thickness and mobility);
- Habitat mapping: Analyse and classify ground-truthing imagery. Incorporate existing data within nearshore, and deeper, environments. Produce final seafloor habitat maps (attributed according to morphology, hardness, composition, and biological cover).

Survey Platform. There are currently 3 options available.

1) BGS own a small 8m survey catamaran, called the White Ribbon. Transporting this vessel to Ascension will reduce the operating costs and ensure that there are no safety or other concerns when mounting and operating the various survey sensor systems involved.

2) AIG are currently renovating their survey boat, the Wide Awake. This renovation will be complete by

September 2021, but BGS will need to ensure it has an appropriate MCA safety certification/ability to mount survey equipment.

3) BGS / AIG have additionally sourced a suitable locally owned vessel called the Argonaut.

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

No Response

Section 8 - Stakeholders and Beneficiaries

Q14. 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 principle project stakeholder is AIGCFD, who have been closely involved in project design and will input into all stages of the project to ensure the outputs meet their future management needs. As project partners, they will provide assistance with the survey logistics, contribute ground-truthing data and coordinate the public engagement activities on Ascension.

Other departments within the Ascension Island Government will also be key stakeholders. The Operations Directorate will provide logistical support for the surveys and the Administrator's Office will provide links to policy formulation and planning within the Ascension Island Government in areas of environment and disaster risk reduction to realise impact from the proposed research. The mapping outputs will be made available across AIG, but will be particularly useful for the Assistant Harbourmaster who has responsibility for maritime safety. BGS and AIGCFD will work with the Assistant Harbourmaster to integrate the maps into existing spatial datasets

The Ascension Island community will be involved in the project through public engagement events that will ensure there is wide understanding of the project. The maps produced will be widely shared and publicised so that people living on the island are able to see the underwater landscape for the first time.

Q15. Institutional Capacity

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

Hydrographic Survey: BGS marine scientists have extensive experience in managing and operating hydrographic surveys, from small coastal surveys to large-vessel operations. Trained hydrographic surveyors have experience in both academic and commercial projects, and our lead surveyor (Rhys Cooper) is active in developing internationally recognized best-practice data processing routines (Lurton et al., 2015).

Key person: Rhys Cooper, MSc Geographical Information Systems, PG Dip Hydrographic Surveying (IHO CAT A). Over 20 years' experience working as a Hydrographic Surveyor and as a GIS Specialist. He is responsible for the operation of the BGS owned survey vessel the White Ribbon.

Seafloor Habitat: Several marine geoscientists within BGS specialise in characterising the geology of the seafloor and shallow sub-seafloor, and are recognized internationally in developing innovative mapping and classification approaches (e.g. Diesing et al., 2015; Dove et al, 2016). With regards to marine ecosystems,

their experience includes applying this information to help delimit MPA boundaries within the UK and modelling substrates atop tropical seamounts as relevant to coral ecosystems and fisheries stock. This work is presented in relevant project-reports, policy documents, and peer-reviewed literature (see CV's).

AIGCFD employs four marine scientists with extensive experience of nearshore marine survey work on SCUBA around the Ascension coast. They have knowledge of the marine habitats and species found on Ascension and can provide technical and logistical support to the habitat survey as well as leading on the ground truthing strand.

Q16. Project beneficiaries

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

The most immediate benefits will be to the AIGCFD MPA management team, who are currently struggling to deliver the evidence-based management they aspire to. Habitat maps produced through this project will transform their work. The maps will provide a fundamental basis for species distribution mapping, extrapolation of species density data to estimate abundance, and contribute to stock assessments of nearshore fished species. They will allow for informed stratified sampling design to monitor species diversity, species abundance, water quality, and habitat condition.

Application of the maps across the Ascension Island Government will benefit the Ascension community and visitors to the island. It will enable thorough environmental-impact-assessment of future development proposals, and aid navigational safety for vessels operating around Ascension's coast.

Ultimately the main beneficiaries of this project will be the nearshore biodiversity of the MPA. The habitat maps will improve management decisions and provide the foundation for further research to better understand and protect this unique ecosystem.

Section 9 - Gender and Change Expected

Q17. 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?

No Response

Q18. Change expected

Detail the expected changes 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.

These habitat maps will provide a fundamental basis for species distribution mapping and extrapolation of species density data to estimate abundance and contribute to stock assessments of nearshore fished

species. They will allow informed stratified sampling design to monitor species diversity, species abundance, water quality, and habitat condition.

Short-term:

The results of this project will transform AIGCFD's ability to manage the richest ecological region of the Ascension Island MPA. All members of AIGCFD will have access to GIS habitat mapping layers that will enable them to make more informed and more strategic decisions about MPA management. An immediate consequence would be that nearshore species and water quality monitoring would be restructured so that it is representative of different habitat types making it more robust and more sensitive to identifying changes from new or existing threats. Estimates of fish population size will be possible by combining the habitat maps with the results of abundance surveys, and additionally, habitat maps will provide greater confidence for AIGCFD staff asked to respond to development control proposals.

Long-term:

All geospatial outputs from this project will be integrated into AIGCFD's data systems and provide a resource to draw upon for all aspects of MPA management. It will set a baseline used for the long-term monitoring of habitats, species and potential threats as part of the MPA Monitoring and Research Strategy. Fish population estimates derived from the maps will be the basis of the planned adaptive management of the recreational fishery by determining when interventions are necessary. The maps will also identify potential closed areas for fishing should such measures be prescribed. Combined with the planned species abundance surveys, ecosystem modelling and physical measurements, it will create the comprehensive picture of the nearshore environment required for the evidence-based decision making called for in the MPA Management Plan

Q19. 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.

The recently established Ascension Island MPA is home to many species of high conservation value including fish, turtle, and seabird species that are considered globally important. With existing data, it is anticipated that the nearshore waters around the island are the most species rich, however the character, distribution, and extent of the seafloor habitats that support these species is currently not well constrained. The seafloor mapping campaign proposed here will produce habitat map products tailored towards the management of the MPA. The BGS's portable seafloor mapping system provides an ideal cost-effective means to undertake this work in a remote setting. The project benefits from BGS's expertise in seafloor and habitat mapping, and the involvement of AIGCFD in project planning and implementation to ensure project outputs are fully integrated into ongoing and future monitoring and management initiatives within the MPA. The resulting seafloor habitat maps will provide a clear baseline of the distribution and character of marine ecosystems around the islands, which will inform range of ecosystem assessment and monitoring. It will also ensure that any future anthropogenic developments (or stresses) in the nearshore environment are judged with reference to an accurate evidence base.

Q20. 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?

- AIGCFD has capacity within existing resources to directly realise the benefits of projects outputs in immediate MPA management.
- Knowledge Transfer: AIG will be able to use mapping outputs, integrate them into existing management system
- All data (e.g. MBES bathymetry/backscatter) and map products will be made available via relevant open-access repositories (e.g. UKHO INSPIRE);
- Bathymetry data (water depth) provide a fundamental environmental dataset that will support a range of future marine science and spatial planning activities;
- Seafloor data and substrate maps are necessary to improve understanding of nearshore ecosystems, which are crucial environments for regional biodiversity.
- New seafloor mapping will enable currently available biological sampling to be extrapolated more accurately around Ascension.
- The data and GIS layers made available to researchers will encourage further research. Follow-on work with marine ecologists will use project outputs to develop integrated ecosystem models to assess nearshore ecosystem goods and services, as well as management trade-offs
- Marine Spatial Planning: Stakeholder workshop report on the dissemination of project outputs
- Follow-on project proposals, e.g. to investigate the interdependence and sustainability of marine diversity and volcanism around Ascension, drawing in experiences of ecosystem recovery following pyroclastic flow inundation offshore Montserrat.

Section 10 - Funding and Budget

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 templates for projects requesting over and under £100,000 from the Darwin Plus budget.

- [R9 D+ Budget form for projects under £100,000](#)
- [R9 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.

 [DPR9S1_1040_darwin-plus-round9-budget-over-100k](#)
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 xlsx 63.43 KB

Q22. Funding

Q22a. Is this a new initiative or a development of existing work (funded through any source)?

New initiative

Please provide details:

This is a new initiative developed from extensive discussion with AIGCFD. BGS and AIG have collaborated before and recognised the value of undertaking this project together. BGS have the skills and equipment to help AIG manage a resource; the project has clear impact on an OT as detailed in this document.

Q22b. Are you aware of any other individuals/organisations/projects carrying out or applying for funding for similar work?

Yes

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

The United Kingdom Hydrographic Office (UKHO) have an obligation to provide charts for Safety of Life at Sea (SOLAS) for Overseas Territories. However, they currently have a high degree of uncertainty over future funding for their seabed mapping programme and have not scheduled any visit to Ascension. Any UKHO mapping on Ascension in the future is likely to be limited to the small area around the pier and not provide the more extensive habitat mapping coverage required for MPA management.

BGS have discussed this project proposal with UKHO and will share the data and resources produced to add value where possible

Q23. Co-financing

Are you proposing co-financing?

Yes

Q23a. Secured

Provide details of all funding successfully levered (and identified in the Budget) towards the costs of the project, including any income from other public bodies, private sponsorship, donations, trusts, fees or trading activity, as well as any your own organisation(s) will be committing.

(See [Finance for Darwin/IWT](#) and [Guidance Notes](#))

| Donor organisation | Amount | Currency code | Comments |
|--------------------|--------|--------------------|--|
| BGS | ██████ | GBP | The difference between the allowable staff cost and full economic cost (FEC) will be borne by the BGS |
| BGS | ██████ | <i>No Response</i> | Hire charge for Kongsberg EM2040P, USM survey mount, Searex Seapath MRU and associated positioning systems. Valeport SVP |
| AIGCFD | ██████ | GBP | In-kind staff contribution / Ground-truthing equipment ~20k per year |
| <i>No Response</i> | 0 | <i>No Response</i> | <i>No Response</i> |

Q23b. Unsecured

Provide details of any matched funding where an application has been submitted, or that you intend applying for during the course of the project. This could include matched funding from the private sector, charitable organisations or other public sector schemes. This should also include any additional funds required where a donor has not yet been identified.

| Date applied for | Donor organisation | Amount | Currency code | Comments |
|--------------------|--------------------|--------|--------------------|---|
| 06 June 2021 | CEFAS | ██████ | GBP | Transportation of small BGS owned survey vessel on RSS Discovery Nov 21. Application upon award and confirmation of CEFAS cruise dates |
| <i>No Response</i> | <i>No Response</i> | 0 | <i>No Response</i> | <i>No Response</i> |
| <i>No Response</i> | <i>No Response</i> | 0 | <i>No Response</i> | <i>No Response</i> |
| <i>No Response</i> | <i>No Response</i> | 0 | <i>No Response</i> | <i>No Response</i> |

Do you require more fields?

- Yes
- No

Section 11 - 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?

Rhys Cooper and Dayton Dove are both experienced project managers with evidence of past projects equivalent to and greater in value than the requested level of funds.

Expenditure/procurement will be continuously monitored and supported by qualified accountants within BGS.

BGS as a public body adheres to UK Government Treasury guidelines. The BGS is a non-departmental public body, part of the Natural Environment Research Council (NERC), responsible to the United Kingdom Research and Innovation (UKRI) and to the Department for Business, Innovation and Skills. NERC and UKRI, being publicly funded bodies, are subject to the scrutiny of the National Audit Office with their accounts presented to the UK Parliament annually. The accounts are publically available online. There are strict procurement regulations and formal approvals required by the PM before procurement or travel and subsistence are purchased and these are administered by UKSBS, as dictated by BEIS.

Q25. Financial Management Risk

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 or bribery, but may also include the risk of fluctuating foreign exchange and internal financial processes such as storage of financial data.

The BGS is a non-departmental public body subject to UK Government Treasury Department accounting and audit procedures. As such it is not incorporated according to UK company law and therefore cannot be declared bankrupt or have its affairs administered by a court. The BGS operates under a UKRI policy regarding fraud, based on The Fraud Act 2006. The Chief Executive, as Accounting Officer, is formally responsible for ensuring that reasonable and effective controls exist to prevent and detect fraud. In conjunction with this Policy, UKRI has defined a clear Fraud Response Plan, which will be followed in all cases. This covers the conduct of a formal investigation, which will accord with both the tenets of prevailing legal jurisdiction and laid down internal procedures, and subsequent reporting to both the Department for Business, Energy and Strategy (BEIS) and the NERC's Audit Committee. The BGS also operates under the UKRI policy regarding bribery, which is based on the Bribery Act 2010. Both policies cover actions by staff and contractors, and those in a contractual or commercial relationship with Innovate UK (UKRI)

Q26. Balance of budget spend

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

This is a cost-effective survey (portable hydrographic equipment aboard either BGS owned or locally-chartered vessel), offering significant multi-disciplinary scientific gains. An equivalent hydrographic survey from a large vessel (~£[redacted]/day GBP, long transits) (i.e. Darwin-Initiative to acquire the Deep MBES [Barnes et al., 2015]) would be an order of magnitude more expensive. In this project we can acquire more data, to higher standards (e.g. 1m spatial resolution), and still at significantly reduced cost. The BGS is also providing the survey equipment 'in kind', providing further savings of > £[redacted] GBP

The simple structure of the project enables us to focus on effectively implementing the project, and ensuring timely delivery of quality outputs. Seeking further financing would introduce unnecessary complexity/uncertainty to the project, inhibiting us from achieving our clear objectives.

The potential option of transporting the BGS owned survey vessel to Ascension to deliver the scope will reduce the operating costs and ensure that there are no safety or other concerns when mounting and operating the various sensor systems involved. On completion of the survey work the survey vessel will remain in Ascension with the title turned over to the AIG which will allow them to perform further

Q27. 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.

BGS will provide the portable MBES system free of charge. This includes all equipment required to undertake the hydrographic survey detailed above. No additional capital items will be required.

The potential option of transporting the BGS owned survey vessel to Ascension to deliver the scope will reduce the operating costs and ensure that there are no safety or other concerns when mounting and operating the various sensor systems involved. On completion of the survey work the survey vessel could remain in Ascension, with the title turned over to the AIG which will allow them to perform further marine work at a greatly reduced cost. Prevents lost outlay on a commercial survey vessel (~2k p/d)

Q28. 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.

BGS is vastly experienced in the cost effective and efficient delivery of projects and programmes. Marine surveys are expensive, but the pragmatic approach detailed here is the result of years of experience maximising returns, during a time of reduced national capability funding. The mantra 'collect once, use many times' is very appropriate as the quality of multibeam data collected will be adopted by various stakeholders and its specification, due to the standard of equipment deployed, good enough to be used for navigational charts. It is worth noting that the UK Civil Hydrography Programme costs on average £[redacted]/day. This project will deliver the same quality data in an OT at a fraction of the cost and also produce a suite of maps appropriate for AIGCFD in managing their MPA.

- The BGS portable MBES system provides value of at least £[redacted]/day of operation (equivalent hire), and is being provided as an in-kind contribution;
- AIGCFD are providing in-kind contributions of further ground-truthing work, as well as staff time, using their local ecological expertise to provide preliminary biological assessments of the seafloor data;
- AIGCFD will also provide indispensable liaison with local communities and government for all aspects of the project
- The bathymetry data provide a fundamental baseline dataset that will support future marine sciences and

spatial planning. Data will be acquired to high charting standards, and may also be incorporated in navigational charts.

Q29. 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 data (e.g. MBES bathymetry and backscatter) and map products will be made available via relevant open-access repositories according to a timeline agreed with funders. We would hope to provide the final GIS Database (data and map products) to project partners and the AIG on completion of the project, and to the public after 1 year moratorium following completion of the project;
- Acoustic and sample data will be made publicly available as part of the MEDIN-compliant DAC, for which the BGS is DAC for geological data. Bathymetry data will be uploaded to public repositories such as UKHO INSPIRE, the Global Multi-Resolution Topography (GMRT) and the National Oceans and Atmospheric Administration (NOAA) National Centers for Environmental Information (NCEI);
- Apart from project reports, we also anticipate at least two specialized peer-reviewed publications (as outlined within the Logical Framework) to further communicate the results of the project, with a further synthesis publication;
- While we cannot pre-suppose the results of the Stakeholder Engagement Workshops, reports and recommendations from these meetings will be made available at the discretion of the AIG and funders.

Section 12 - Safeguarding

Q30. 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:

| | |
|---|---------|
| 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.

In relationships with others:


- Treat colleagues, stakeholders, customers, suppliers and the public respectfully and professionally, taking account of confidential issues when appropriate.
- Deal courteously with those who hold opinions that differ from ours.
- Respect cultural differences.
- Have open and explicit relationships with government, the public, the private sector and other funders.


In our work:


- Operate with honesty and integrity in all our work, taking steps to identify and deal with corrupt scientific practices and professional misconduct.
- Be open and transparent in making decisions, undertaking activities and allocating funding; if that is not possible, explain why.
- Reach conclusions based on best scientific and professional practice, having considered all views.
- Work to the standards of UK legislation as a minimum here and abroad, and operate according to local laws as required.
- Disclose conflicts of interest and actively manage them.
- Ensure funding decisions are transparent and securely based on objective assessment and selection procedures.
- Recognise appropriately the intellectual, scientific support and operational contributions of others.
- Consider ethical challenges which arise from new or possibly risky research at the limits of our knowledge by broadening debate at an early stage.

Please upload the Lead Organisation's Safeguarding Policy as a PDF

 [NERC Ethics Policy-Jan2017](#)

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Section 13 - Logical Framework

Q31. 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. 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.

🔗 [DPR9S1_1040_R9_DPlus_St2_Logical_Framework_Template_AscensionBGS_DB](#)
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Impact:

There is a step-change in our understanding of the biodiversity and geodiversity of the nearshore Ascension Marine Protected Area providing a baseline to underpin future ecosystem assessment, monitoring, and development.

Outcome:

Ascension Island Government have significantly enhanced information on geodiversity and biodiversity to successfully support management and monitoring of the MPA. Geospatial data products will provide value long-after completion of project

Project Outputs

Output 1:

Marine Surveys - Hydrographic acoustic survey and ground-truthing campaign

Output 2:

Seafloor Substrate and Habitat Maps delivered to AIG and applied to management

Output 3:

Knowledge Transfer and Project Dissemination

Output 4:

No Response

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 Marine Survey - Hydrographic acoustic survey and ground-truthing campaign.
 - 1.1 Acquire continuous high-resolution multibeam echosounder (MBES) bathymetry (water depth) and backscatter data.
 - 1.1 Deploy drop-camera system from locally-contracted vessel to provide point-source ground-truth samples of seafloor habitat types;

- 1.2 – 1.4 Process MBES bathymetry and backscatter data to IHO charting standards;
- 2 Seafloor Substrate and Habitat Mapping
 - 2.1 Seafloor mapping
 - 2.1.1 Substrates. Apply geospatial analysis to characterise seafloor morphology and composition using a range of quantitative and qualitative methodologies;
 - 2.1.2 Use bathymetric derivatives, together with backscatter data and ground-truthing observations to model distribution of hard substrates (important predictor of benthic habitat character) and sediment composition;
 - 2.1.3 Produce further classified maps indicative of seafloor processes (e.g. seafloor geomorphology, sediment thickness and mobility);
 - 2.2 Seafloor Habitats:
 - 2.2.1 Analyse and classify ground-truthing imagery;
 - 2.2.2 Incorporate existing data within nearshore, and deeper, environments;
 - 2.2.3 Produce final seafloor habitat maps (attributed according to morphology, hardness, composition, and biological cover);
 - 2.3 Project delivery via GIS database, project reports and maps, and stakeholder engagement;
 - 2.3.1 Supply seafloor data, and classified map products of seafloor substrate and habitats;
 - 2.3.2 Prepare raw and processed data for project partners, stakeholders, and relevant data repositories to ensure long-term application of the data;
 - 2.4 Final Report Prepare report(s) in collaboration with AIG detailing the survey campaign, acquired data, and methodologies employed. The project report will also describe key observations and potential discoveries, as well as emphasise the applicability and impact of the data and map outputs;
- 3 Knowledge Transfer and Project Dissemination: Activity contributing to outputs 3.1 - 3.4
 - 3.1 Communication Plan developed early Y1 to include not only formal reporting but also social media engagement, academic outputs and grey literature. The Communications Plan will be a living document, updated regularly at Project Board meetings.
 - 3.2 Project partners will actively communicate (e.g. public presentations) with AIG and local stakeholders to highlight the need, interest and value, and findings from the habitat mapping
 - 3.3 Publish at least 1 peer reviewed paper
 - 3.4 Ensure dissemination via appropriate data archive centres. MEDIN, EMODnet etc.





Section 14 - Implementation Timetable

Q32. 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.

 [DPR9S1_1040_darwin-plus-round9-imp-timetable](#)
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Section 15 - Monitoring and Evaluation

Q33. Monitoring and evaluation (M&E)

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 Manager (Rhys Cooper) is responsible for implementing the M&E plan. Within the project we will use the Logical Framework to monitor and evaluate the progress of the project in accordance with the Implementation Timetable. We will report on this progress, and adapt alternative and contingent strategies when necessary (e.g. weather delays of survey activity).

A brief report will be issued following completion of each of the project's primary activities, outlining the results of each activity, identifying significant challenges that were faced, and describing how the project team delivered with respect to project objectives.

We have used the SMART indicators in developing the Logical Framework, and will continue to rely on this conceptual model throughout the project.

We will hold regular meetings between the hydrographic survey, data processing and seafloor mapping teams, together with the project partners to ensure all scientists are familiar with the over-all goals and progress of the project, as well as to identify opportunities or challenges if they arise.

At key stages during the project's survey planning, implementation, and reporting, stakeholders (e.g. Ascension Island Government and members of local community) will be invited to project meetings (Q&A) and/or invited to provide comments/feedback on the activities and outputs of the project.

Pre-Survey Planning: Rhys Cooper (Project Manager) and Diane Baum (Project Partner lead) will be responsible for organising the project working group, and ensure that the group is effective in establishing clear fieldwork priority areas, developing practical survey plans, and coordinating data analysis and reporting efforts.

Seafloor Surveys: Rhys Cooper, with assistance from D. Dove, will be responsible for developing the seafloor mapping survey plans. This will include mobilising the survey vessel, implementing appropriate health and safety protocols, and establishing consistent data acquisition and processing procedures. Rhys Cooper is a Chartered Marine Scientist (CSci CMarSci MIMarEST) and Hydrographic Surveyor (IHO CAT A) and is qualified to assess and sign-off data to recognised International Hydrographic Organisation standards.

Habitat Mapping: Members of the seafloor mapping team will stay in close contact with Diane Baum to

ensure complete understanding of the offshore mapping process. D. Dove and D. Baum will have regular meetings to update on progress of respective mapping efforts, and agree methods/formats to best integrate/communicate mapping results.

Project dissemination: R Cooper, D. Dove, together with project members, will be responsible for assembling final data and map layers for submitting GIS database to stakeholders and open-access repository. D. Dove and D Baum will coordinate regular, and final reports.

D Dove will serve as lead liaison with project partners and stakeholders, ensuring continuing impact of beyond the life of the project

| | |
|---|--------------|
| Total project budget for M&E in GBP (this may include Staff, Travel and Subsistence costs) | £ [REDACTED] |
| Number of days planned for M&E | 20.00 |
| Percentage of total project budget set aside for M&E (%) | [REDACTED] |

Section 16 - Certification

Certification

On behalf of the

company

of

British Geological Survey

I apply for a grant of

£262,948.00

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 | Chris Luton |
| Position in the organisation | Head of Legal |

Signature (please
upload e-signature)

 CLuton BGS

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Date

29 January 2021

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 Organisation 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 Organisation, 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 Organisation, or provided an explanation if not . | Checked |
| I have checked the Darwin Plus website immediately prior to submission to ensure there are no late updates . | Checked |
| I have read and understood the Privacy Notice on GOV.UK . | Checked |

We would like to keep in touch!

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

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 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).