



**Darwin Plus:
Overseas Territories Environment and Climate Fund**

Final Report

To be completed with reference to the “Writing a Darwin/IWT Report” Information Note: (<https://dplus.darwininitiative.org.uk/resources/reporting-forms-change-request-forms-and-terms-and-conditions/>). It is expected that this report will be a **maximum** of 20 pages in length, excluding annexes)

Darwin Project Information

Project reference	DPLUS071
Project title	Fine scaling the design of Falkland Islands Marine Management Areas
Territory(ies)	Falkland Islands (FI)
Lead organisation	South Atlantic Environmental Research Institute
Partner institution (s)	Fisheries Department; Directorate of Natural Resources; Falkland Islands Government (FIG) Shallow Marine Surveys Group (SMSG) British Antarctic Survey (BAS). Falkland Islands Government (FIG) Policy Unit and Environmental Planning Department
Darwin Plus Grant value	£329,379
Start/end date of project	1 st April 2018 / 31 st March 2021
Project leader name	Dr Paul Brickle Project Manager: Dr Ander M. de Lecea
Project website/Twitter/blog etc.	https://www.south-atlantic-research.org/research/marine-science/fine-scaling-the-design-of-falkland-islands-marine-management-areas/ Blog: https://www.south-atlantic-research.org/news/ Facebook: https://www.facebook.com/S4ERI/ #MMA_FI Twitter: @SAERI_FI
Report author(s) and date	Dr Ander M. de Lecea, Dr Al Baylis and Dr Paul Brickle

1 Project Summary

The Falkland Islands are situated in the South Atlantic (Fig 1). Their economy is underpinned by its marine environment, and commercial activities such as fisheries, tourism, and offshore hydrocarbon exploration are major contributors to GDP. In addition, the Falkland Islands are home to diverse and important marine environment, including highly rich inshore ecosystems, deep-water corals and globally important populations of seals, seabirds and cetaceans. Recognizing the need for a holistic marine management approach across all sectors that promotes sustainable use of the Falkland Islands’ marine resources and that safeguards its biodiversity, a long-term process of marine spatial planning (MSP) began in 2014 with the ‘*Marine Spatial Planning in the Falkland Islands*’ Darwin Plus project (DPLUS027).

Following the successful conclusion of DPLUS027, the Falkland Islands Government (FIG) funded SAERI to undertake a second phase (MSP Phase II; July 2017 to December 2017) which covered, among other things, the **A**ssessment of **F**ishing **C**losure **A**reas as **S**ites for wider marine management (**AFCAS**) study as potential MMAs using criteria for Marine Protected Areas to help guide the areas selected. DPLUS071 was the ‘next step’ for the effective design and management of the MMAs identified through AFCAS.

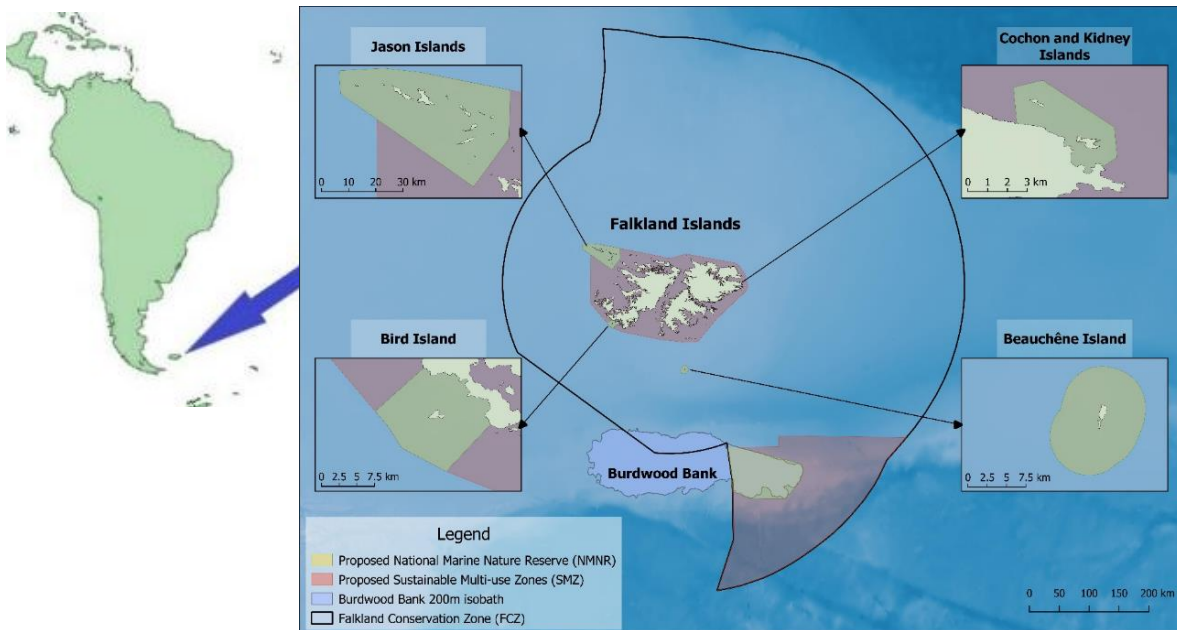


Fig 1: Location of the Falkland Islands, South Atlantic and proposed Marine Management Areas.

DPLUS071 was well aligned with priority funding areas identified in Round 6, in particular 1) Improving marine conservation, protection or management including developing integrated marine management plans, 2) Developing ecosystem-based initiatives for the conservation and sustainable use of terrestrial and marine environments and 3) Developing data systems on biodiversity.

- **Contribution to multilateral environmental agreements:** The project made a major contribution towards FIG meeting CBD objectives, in particular Aichi Targets 11 (10% of oceans in marine protected areas), 10 (Vulnerable Ecosystems) and 19 (biodiversity knowledge improved). The project also contributed towards commitments under ACAP (albatross and petrels) and CMS for Appendix I and II species (cetaceans, fur seals, sea lions), through comprehensive analysis and modelling of at-sea distribution and overlap with Falkland Islands MMAs.
- **National Commitments:** The project helped FIG meet commitments under the Falkland Island Environment Charter, in particular commitments 2 (wise use of natural resources), 4 (to seek expert advice and consult openly with interested parties on decisions affecting the environment), 5 (to aim for solutions which benefit both the environment and development), 7 (safeguard and restore native species, habitats and landscapes, and control or eradicate invasive species) and 10 (study and celebrate our environmental heritage as a future treasure). It addresses Falkland Islands Biodiversity Framework priority areas, particularly coastal, shelf and marine species and ecosystems.

The main goals of DPLUS071 were to: (1) review economic consequences of MMA designs, (2) formulate MMA policy formulation, (3) design MMA site management plans, (4) Suggest legislative framework and, (5) Legacy planning and MMA resourcing. In order to achieve these, four work-packages were developed:

- **WP1 - Data Collection Inshore – Data Collection Inshore:** Fine scale data gathering in the 3 nm baseline to better delineate categories in the proposed inshore MMA. This will include more benthic work in the proposed nature reserve areas (Jasons, Beauchêne and Bird Islands). Multibeam and dropdown camera work in depths greater than SCUBA. There is a gap in knowledge between 15 – 20m to about 100 m. In conjunction with data collection from the project, historical data from research cruises from the fisheries department will also be analysed. Different modelling approaches will be undertaken to examine suitable habitat for sensitive habitats like biogenic reefs etc. A significant amount of additional tracking work has been conducted since the higher predator model used in MSP project. These were consolidated and re-analysed to inform spatial and temporal seabird and marine mammal abundance.
- **WP2 - Data Collection Southern MMA and Burdwood Bank:** Data gathering on the Burdwood Bank using a research vessel to: 1) Mapping Bathymetry from 200 – 2000m; 2) SUCS camera landers for epibenthic characterisation 2) Agassiz trawl (AGT) for benthic ground truthing; 3) CTD (oceanography); 4) Pelagic nets for bathypelagic ecosystems e.g., Myctophids (lantern fish) are

abundant in that region and there has been mention of this within the fishing community; 5) Consolidate ROV, multibeam, core, grab and other data from the northern part of the bank and slopes from the oil industry. The multibeam, benthic work and consolidated data will allow modelling of the bank and its slope for habitats etc. and allow for fine scale design.

- WP3 - Designing the MMAs: Will bring together data from 1 and 2, along with bio-economic data from the fishery, and use objective decision support tools to help identify optimal locations for MMA delineations under different future resourcing models. Policy and legislative frameworks will be developed as parallel but interlinked processes. Design, and associated policy and legislation options will be presented at a local workshop and a follow-up reports will be circulated for stakeholder review. This stage will also allow for a preliminary analysis of the economic impacts (negative / positive) of the MMA designs.
- WP4 - Designating the MMAs: WP3 stakeholder agreed policy, legislation and design recommendations will be fed into MMA site management planning which will also undergo a stakeholder review process, through the regular Project Stakeholder group meetings. A review of resourcing requirements (financial and human) for designation will be undertaken and the 'designation package' (design, policy legislation, impact and resource) will be submitted to relevant government committees for approval.

2 Project Stakeholders/Partners

- Since the inception of the MSP project (Project No. DPLUS027), FIG has fully supported the conceptualization and the process of proposed MMAs. This includes funding to conduct the AFCAS study and subsequently the current DPLUS071 project. FIG has provided support to this project in a number of ways:
 - Financially, FIG has provided £ for the duration of the project, as it was originally outlined in the project proposal.
 - The Director of Policy and Economic Development (DPED; Originally Diane Simsovic, and since November 2019 Andrew Gaule), the Director of Natural Resources (Originally John Barton, and since November 2019 Dr Andrea Clausen) and the Director of Mineral Resources (Stephen Luxton) are all representatives on the Project Management Group (PMG) and have assisted with monitoring project progress, and in decision-making.
 - Andrew Gaule, Dr Andrea Clausen, David Jeffrey (Senior Policy Advisor at DPED) and Dr Rachel Cooper (Head of Environment) played a pivotal role in supporting the Executive Council (ExCo) paper, which resulted in the government supporting and endorsing a formal public consultation on MMAs.
 - The Department of Policy and Economic Development has also played a pivotal role in helping to develop a consultation questionnaire, and will lead the MMA consultation.
 - FIG provided licensing and permits to conduct the fieldwork and to export samples to UK, Italy, USA, Chile and Japan.
- The Shallow Marine Surveys Group (SMSG) supported fieldwork through survey design, and by providing diving equipment to undertake inshore surveys, which were successfully conducted in April and November 2019. On both occasions, SMSG's network of local volunteer divers joined the fieldwork expeditions, which provided a valuable platform for additional public engagement. SMSG hold a significant amount of inshore data that were made available to this project.
- The British Antarctic Survey (BAS) provided essential logistical support during the offshore fieldwork on the Burdwood Bank, which took place on board of the *RRS James Clark Ross* (JCR). Drs David Barnes and Chester Sands used their extensive field experience and knowledge of the broader region to provide the MMA project with advice on methodology and survey planning on the Burdwood Bank. Dr Sands conducted DNA barcoding analysis for many of the organisms collected on the Burdwood Bank.

Stakeholder involvement and engagement was key and was secured at the management level of this project. In addition to the senior FIG membership, Tom Blake (Falkland Islands Fisheries Companies Association representative) and Pippa Christie (Falkland Islands Petroleum Licensees Association representative) were invited join the PMG together with SMSG representatives. The PMG has met regularly every three months to review the project progress, monitor achievements, and suggest changes (see **Section 3.1**). Additionally, economic data have been provided by PMG members for the economic reports (see **Activity 4.2** and **4.3**).

The Project Stakeholder Group (hereafter PSG) include representatives from Falkland Conservation, FIG's Fisheries Department, the Falkland Island Tourist Board, the UK Military (Navy), New Island

Trust, Rural Business Association, FIFCA, salmon industry representative, the Maritime Authorities and Harbour Master representative, and the Falkland Islands Yacht Club. The project aims and progress were presented during the first meeting. It is important to note that partners SAERI, BAS and SMSG led on the science and it was FIG's responsibility to lead on policy development and formulation.

Additionally, the project has engaged with the wider local community, through a series of outreach activities (Annex 1).

The MMA team has also conducted international outreach activities, including:

- A briefing paper written for the Falkland Islands Governor Mr Nigel Phillips in order for him to present the important work being done by the MMA project to an international audience, the UK government – 05/09/2019
- A short presentation and the above-mentioned video was also provided to representatives of the local *Members of the Legislative Assembly* (MLAs) for them to showcase the work on a UK visit.
- Feature article published in the international magazine *the Marine Biologist* titled '*Marine ecosystem protection in the Falkland Islands*' – October 2019 ([link](#))
- Both Project Manager and Project Officer were interviewed by Sky News about the Burdwood Bank see Sky News blog – 01/02/2020
- A talk to a Chilean Cape Horn MPA workshop, providing details of the Falkland Islands experience and proposed MMA to the University of Magallanes, Chilean Government, amongst other organizations. The workshop program is available on request.

3 Project Achievements

3.1 Outputs

Output 1: Project Management structure, monitoring, evaluation and communications tools established

Output 1 of the DPLUS071 project focused on hiring a project manager and developing a communication and engagement strategy. The Project Manager (PM) began the work on the 2nd of October 2018 and was joined by the Project Officer (PO) a month later (**Activity 1.2**). The PO had experience in the Falkland Islands and working with Darwin projects having managed DPLUS042. This experience was crucial to get the DPLUS071 project up and running before going out on the first Burdwood Bank expedition in December 2018. The partner Memorandum of Understanding (MoU) was signed in November 2018 (**Activity 1.1**).

The Project Management Group (PMG) (**Activity 1.3**) was formed by three Government Directors (Director of Policy and Economic Development, Director of Natural Resources and Director of Natural Resources), two industry representatives (Falkland Islands Fisheries Companies Association (FIFCA) and Falkland Island Petroleum Licensees Association (FIPLA)) and a research organisation SMSG. Both the Director of Policy and Economic Development and the Director of Natural Resources changed during the project. The first PMG was scheduled at the beginning of the project to meet every three months. However, on various occasions the PMG met more frequently. Minutes from the meetings are available upon request. The PMG met nine times during the project lifetime, but there were several meetings with individual PMG members on a need-by-need basis.

The first PSG meeting (**Activity 1.4**) was held on the 22nd July 2019 (notes are available on request). The 2nd meeting was initially scheduled for January 2020, but later postponed until April 2020 to avoid conflict with fieldwork and further postponed due to the Covid-19 pandemic. As the project progressed and a framework for consultation was developed (**Activity 5.4**), it was decided by the PMG that further stakeholder engagement should be postponed until the formal MMA consultation was initiated by FIG. Nevertheless, the PSG wider community were kept informed via social media reports and local press (see Section 7 **Darwin Identity** for full details).

The project webpage (**Activity 1.5**; [link](#)) was regularly updated during the project and information was shared on the SAERI media accounts in twitter, Facebook, and the SAERI Newsletter (for blogs and newsletters please [click here](#)).

DPLUS reports, any fieldwork related report and any internal reporting were submitted as required (**Activity 1.6**).

Output 2: *Work-Package 1 - Data collection inshore*

Fieldwork planning (**Activity 2.1**) was followed by the inshore benthic data collection spread over two field expeditions (**Activity 2.2**). To facilitate fieldwork, a side-scan sonar, underwater camera and CTD (Conductivity, Temperature, Depth) were purchased in November 2018.

The inshore research expeditions were conducted in April and November 2019 and focussed on poorly studied areas including West Falklands, Bird Island and the Jason Islands (**Figure 2, Figure 3**). Fieldwork included the collection of specimens, benthic habitat classification in shallow (0-20 m) and deep waters (20-100 m), oceanographic characterization, assessment of pollution presence along the remote coastlines where the work was being conducted, and tissue sampling of the unique Falkland Islands dolphin populations ([fieldwork reports available here](#)). Both expeditions were conducted using a local charter yacht, the Golden Fleece, with the support of ten volunteers and two-crew .

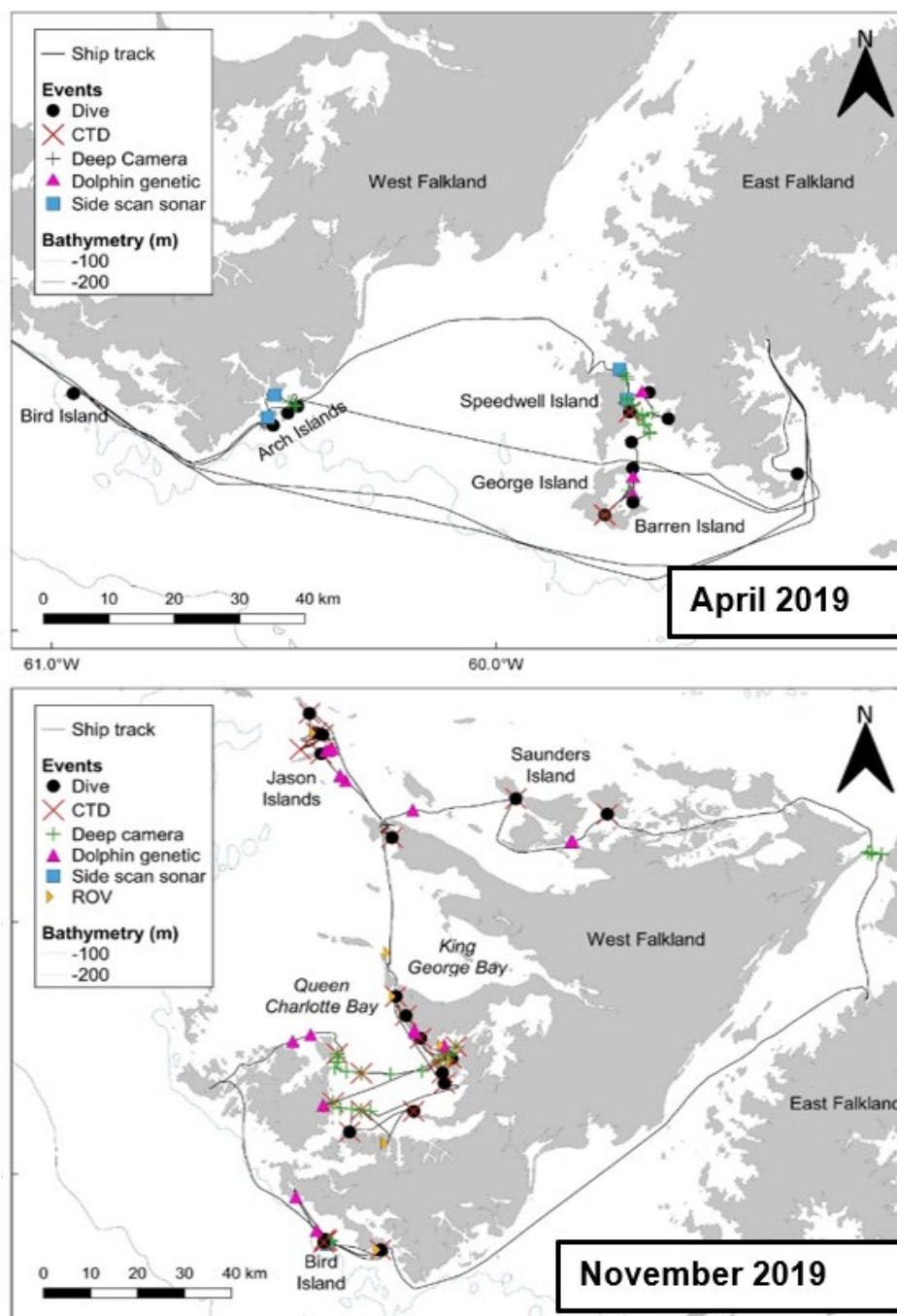


Figure 1. Maps showing the inshore benthic research expeditions carried out in April (top) and November 2019 (bottom) on board of the vessel Golden Fleece.

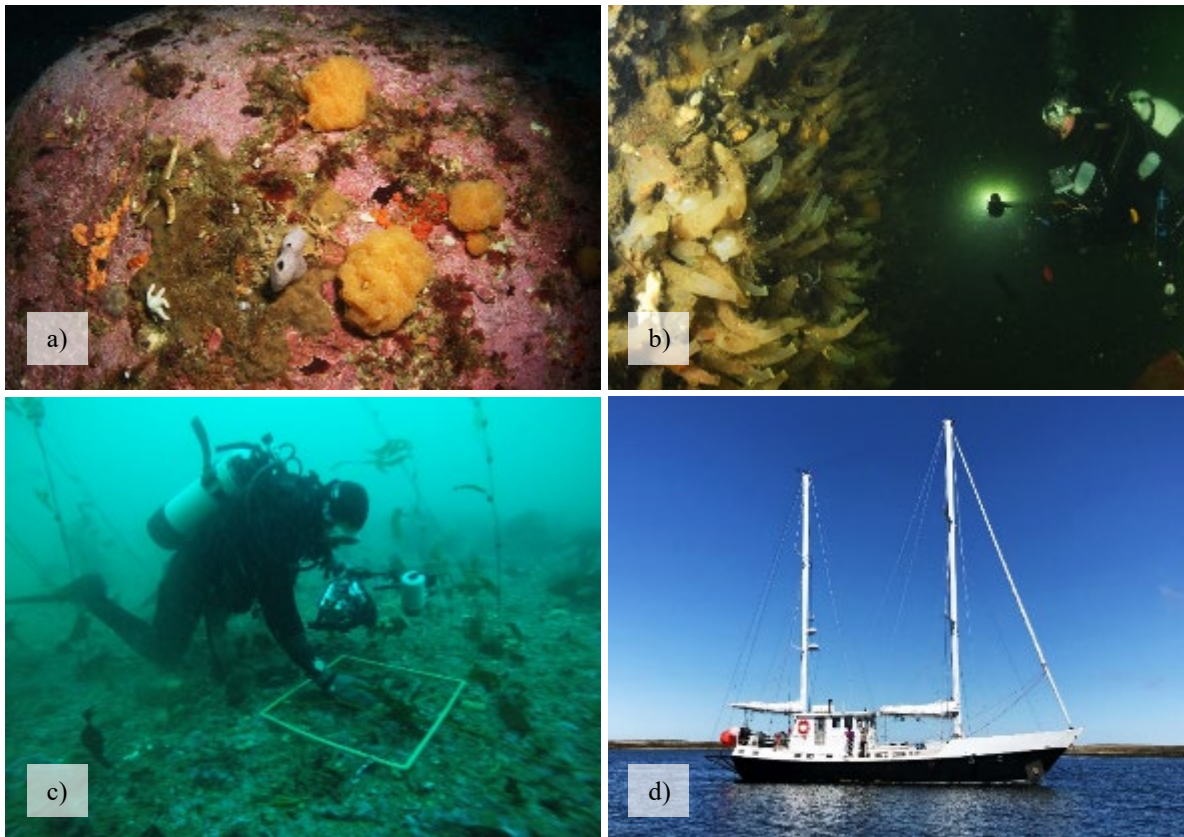


Figure 2. Inshore fieldwork in the Falkland Islands waters: (a) example of a benthic community at Bird Island; (b) the invasive species *Ciona intestinalis* covering a wall in Queen Charlotte Bay; (c) one of the researchers positioning the quadrat before taking a picture to quantify the benthic community; (d) the vessel *Golden Fleece*, used for both expeditions in April and November 2019.

The MMA project conducted 147 transects over 294 cumulative dives. In brief, data analysis (**Activity 2.4**) revealed that the Jason Islands, and Bird Island have the highest biodiversity of species, supporting the proposed designation of these sites as National Marine Nature Reserves. Data were collected and collated and first order analyses complete.

The deep-water camera, was deployed at depths of >20 m, which is beyond the SMSG permitted SCUBA diving depth in the Falkland Islands. The camera was deployed 134 times in total. The camera does not have a live feed and during the first expedition in April 2019, the camera was deployed 56 times. In November 2019 the camera was 78 times. The camera provided data on marine benthic environments, including rock beds, rocky outcrops, sandy and muddy bottoms, and provide baseline data on proposed MMAs (**Figure 4**). Similar to the SCUBA diving transect data, the results from the deep-water camera indicated that the highest species biodiversity was around Bird Island, again, supporting the proposed designation of Bird Island as a National Marine Nature Reserve (**Figure 5**).

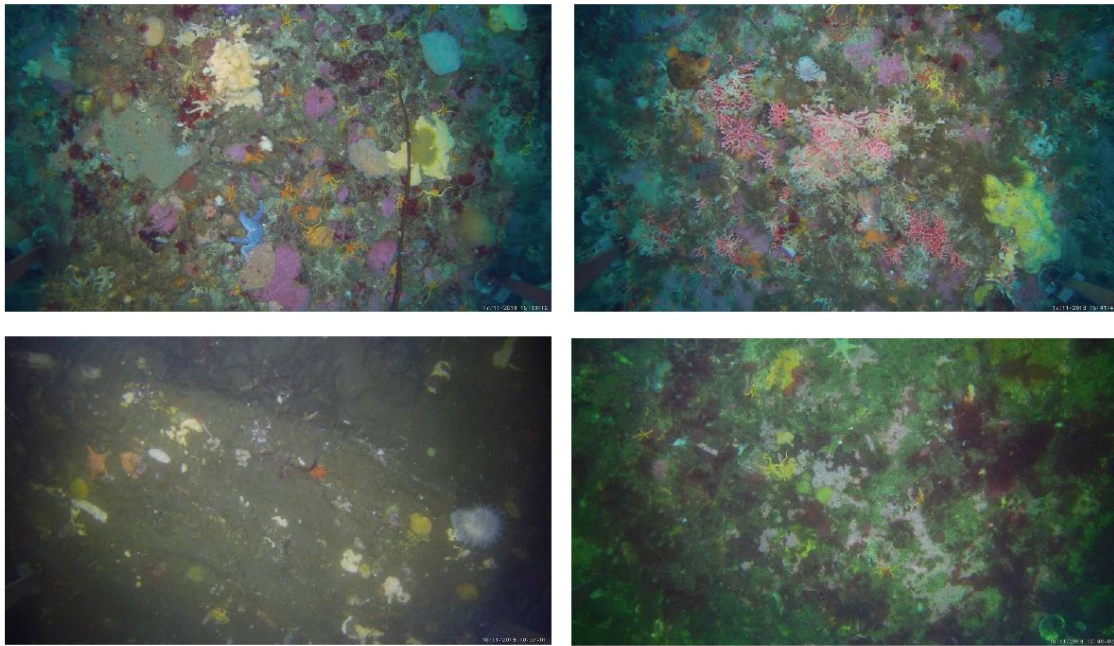


Figure 4. Examples of seafloor photographs taken by the deep-water camera.

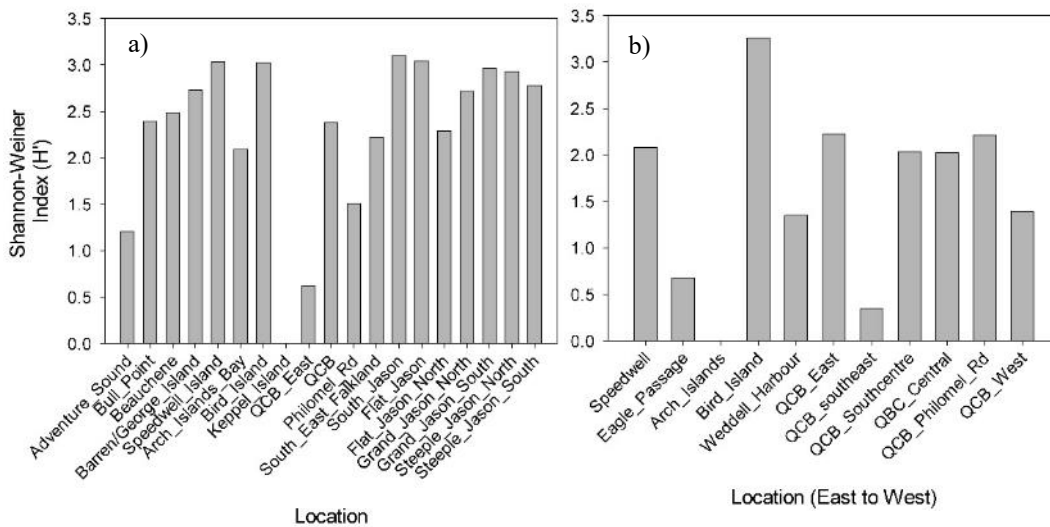


Figure 5. Graph showing results for the data collected (a) with divers at depth less than 20 m; and (b) using the deep-water camera. The Shannon-Weiner Index is a diversity index that indicates is the diversity in an area, taking into account how well distributed the number of individuals are within each species at each location. QCB = Queen Charlotte Bay. Please note that there was a deep-water camera malfunction at QCB and no deep-water pictures were taken around the Jason Islands or other locations.

Three different types of habitats were recorded for first time over the course of these surveys (**Figure 6**). These included a reef building cold-water hydrocoral (*Errina antarctica*), reef building parchment worms most likely *Chaetopterus* sp. and rhodolith beds (or maërl beds). The existence of these habitats are further evidence to the near pristine condition of Falkland Islands' inshore environments.

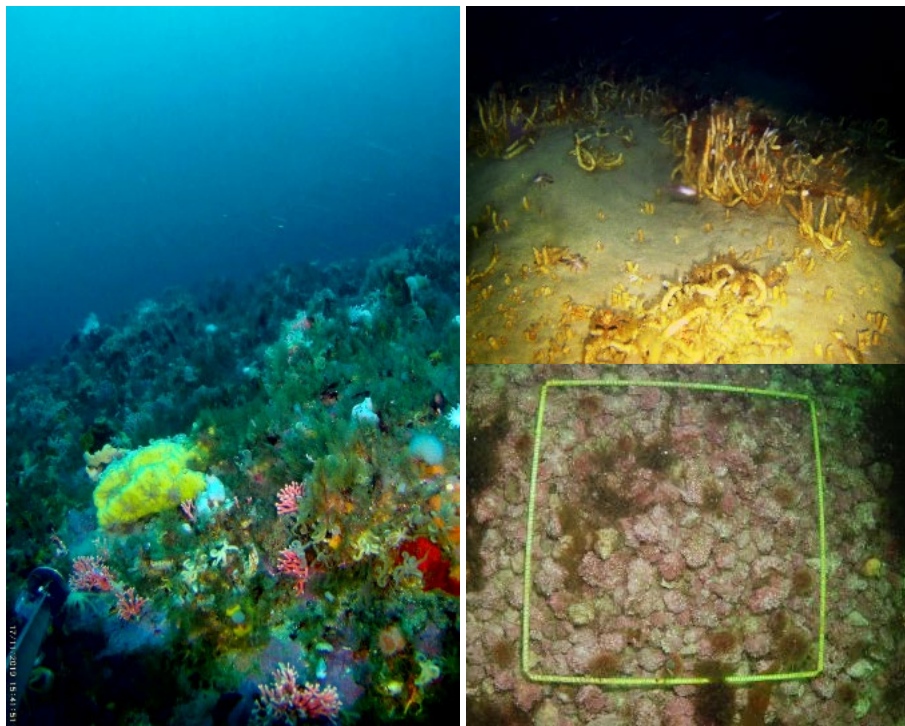


Figure 3. Example of the reef building species recorded off Bird Island. The picture on the left was recorded at a depth of 47 m, in it you can observe *Errina antarctica* cold-water hydrocoral branches in pink. The picture on the right was recorded at depth of 86 m and show a parchment worm reef. Bottom right hand side picture was recorded with divers at a depth of 17 m, off Outer Island, Queen Charlotte Bay and illustrates the rhodolith habitat.

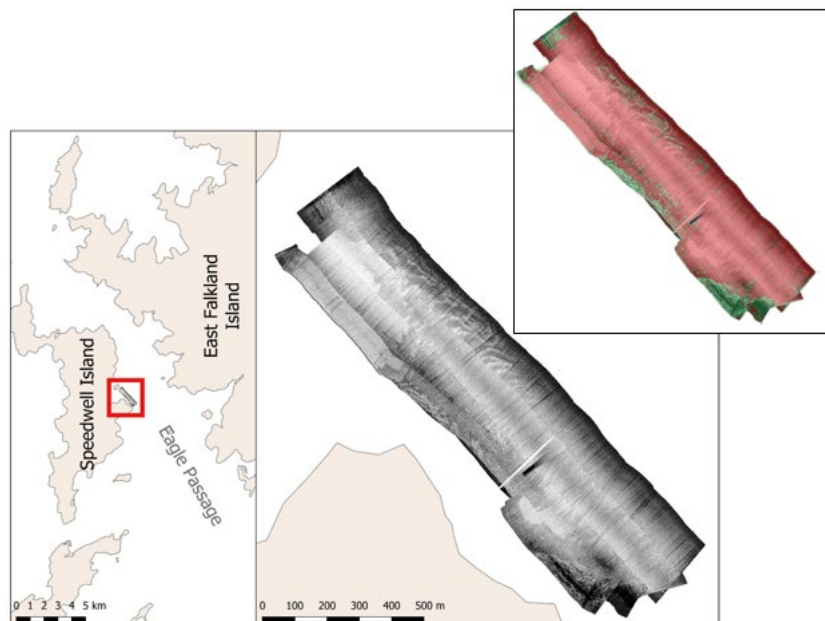


Figure 4. Side-scan sonar maps conducted to the east of Speedwell Island. Top-right hand side map represents an image segmentation showing that the majority of the area was sand (red), with some minor rocky outcrops closer to the islands (green).

Other data collected during the inshore expeditions include side scan sonar, which we used to understand the type of substratum and its 'texture' in a given area. In the example provided in **Figure 7**, the red colour represents reef areas, while the green colour represents fine sand/muddy substrate. In addition, CTD (Conductivity, Temperature, Depth) data were collected to help characterise the physical and chemical water properties of the survey areas (**Figure 8**).

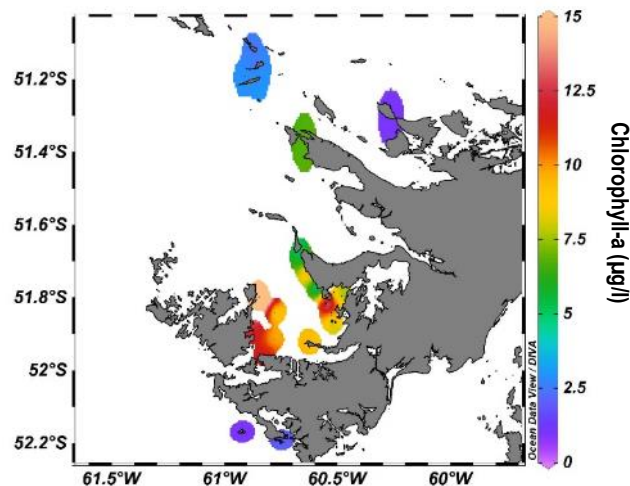


Figure 5. Primary productivity (fluorescence/Chlorophyll-a µg/l) data collected in the November 2019 research expedition. Map represents values at maximum station depth.

Although not related to the outputs of this project, SAERI has and continues to conduct research in the nearshore environment in support of understanding this incredible area lending further support to the evidence base for the MMA process. This work includes past and current PhD research. The work of SMSG also continues to provide data on habitats and species not covered during the project. The overarching pattern is that the Falkland Islands inshore marine environment is near pristine and highly diverse compared to areas in the Straits of Magellan and the Beagle Channel in southern South America and is an artefact of refugia during the last and previous ice ages.

In addition, the Falkland Islands kelp forests are central to near shore and offshore ecosystem function and a sustainable fishery. During the DPLUS071 project, SAERI commissioned a study on the valuation of ecosystem services of the giant kelp *Macrocystis pyrifera* via through the EU funded the “MOVE project”. This piece of research was a legacy of the DPLUS project (DPLUS065) “Mapping Falklands and South Georgia coastal margins for spatial planning” and to provide supporting evidence to DPLUS071. The study provided the first insight into how important this species is to the southern Patagonian Shelf. Kelp forests provide many important ecosystem services, including mitigating storm damage, cycling nutrients, providing nurseries and trophic links to fisheries and they sequester CO₂. The analyses illustrated kelp forests of the Falkland Islands provide a highly valuable range of direct and indirect services. The total estimated value of services provided is estimated at ~£ per year (or £ per km² per year) (Bayley et al., 2021 doi: 10.3897/oneeco.6.e62811).

As part of **Activity 2.4**, the project collated animal tracking data (1999-2019) and used a combination of kernel density estimation and model-based predictions of spatial usage to quantify overlap between colonial breeding marine predators and proposed Falkland Islands MMAs (**Figure 9**). The proposed inshore MMA, which extends 3 nautical miles from the inshore baseline, overlapped extensively with areas used by colonial breeding marine predators. This component of the project was led by Dr Alastair Baylis, and was accepted for publication in the journal *Ecological Applications* in March 2021. A copy of the paper, ahead of print, is available on request.

Concerning the management of datasets (**Activity 2.3**), 23 new datasets were collated and are stored on the SAERI IMS-GIS data centre. In addition, we created a new and updated webGIS project page, merging all GIS layers created during the MSP I, MSP II and the DPLUS071 project ([link](#)).

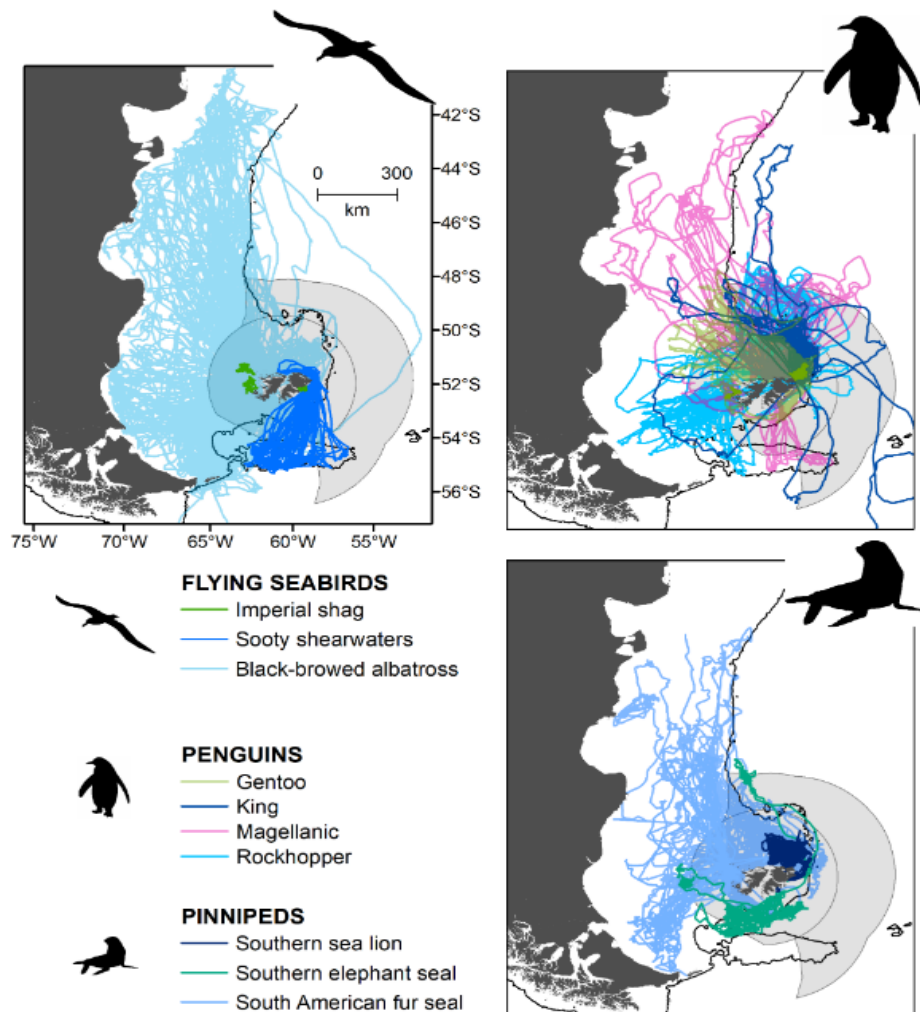


Figure 6. We collated all available tracking data for higher predators (seabirds, penguins and pinnipeds), to assess important at-sea areas and how these relate to the proposed MMAs. Source: Baylis et al. in press

Output 3: Work-Package 2 - Data Collection in the Southern MMA and Burdwood Bank

The Burdwood Bank was selected as a proposed MMA because it is known to be an important for benthic biodiversity and as a foraging site for marine higher predators. Data collection in the proposed southern MMA and on the Burdwood Bank was carried out successfully on the RRS JCR in collaboration with BAS (**Activity 3.2**). For logistical reasons, offshore fieldwork was divided across two years. The first part was carried out on the 4th and 5th of December 2018 and the second offshore fieldwork was carried out from the 31st of January to the 3rd February 2020 (**Figure 10**). Information gathered included oceanographic data collected with a CTD, pelagic zooplankton collected with a N70 plankton net, benthic organisms collected with a mini Agassiz trawl (hereafter miniAGT), pictures of the benthic community collected with a Self-Underwater Camera System (hereafter SUCS), high-resolution bathymetry data recorded with a multibeam, sub-bottom profile acquired with a topographic parametric sonar (TOPAS), and cetacean observations. Cruise expedition reports are available.

The metadata for the 20 datasets acquired during the offshore cruise expeditions have been produced and stored in the SAERI IMS-GIS centre (**Activity 3.3**). Metadata records are available through the [SAERI metadata portal](#).

The data confirms that the benthic communities on the Burdwood Bank are highly diverse, while tracking studies analysed reinforce the Burdwood Bank as being important to marine higher predators. In addition, the Burdwood bank is a potentially important source of carbon sequestration.

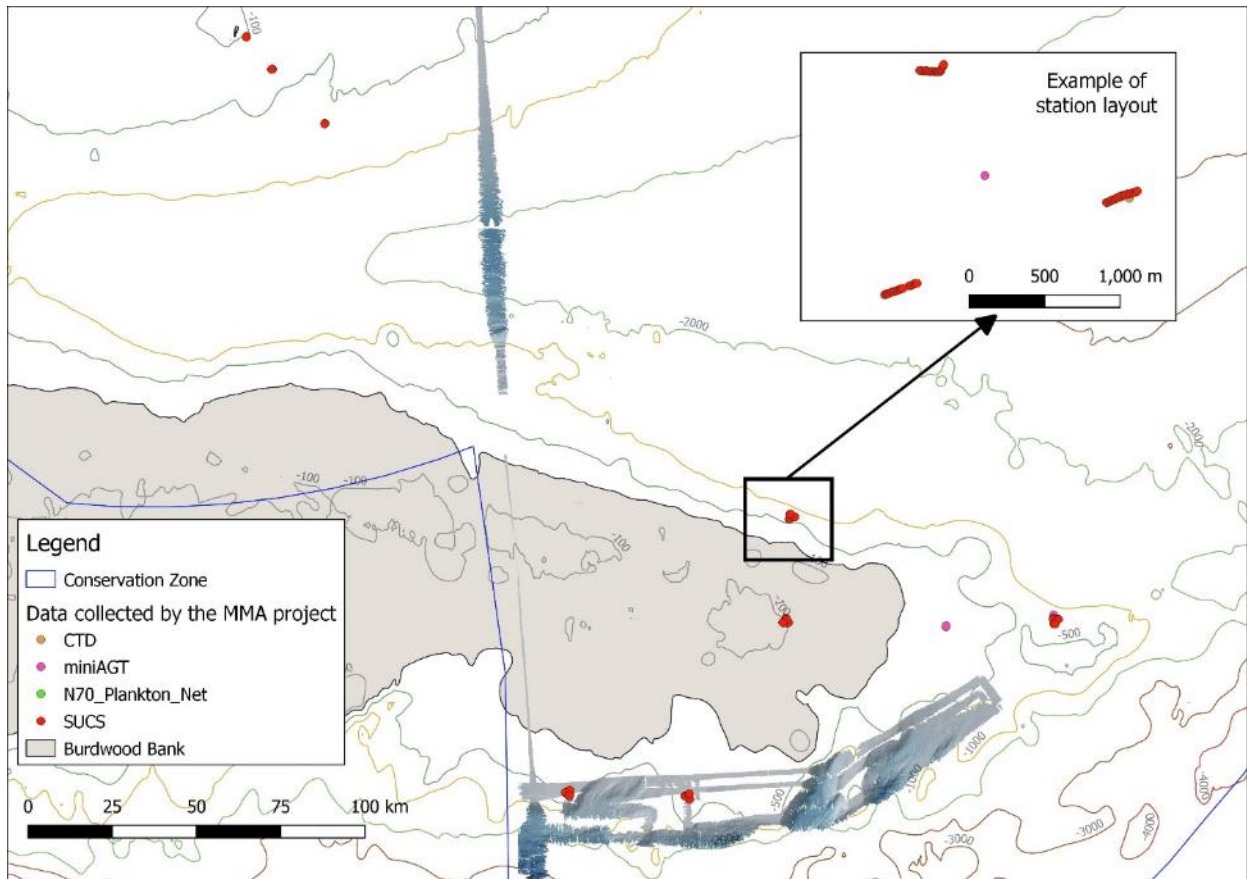


Figure 7. Map of the Burdwood Bank showing the stations where different data was collected. No underwater camera (SUCS) was deployed in station FIBB4 due to the weather. Lines represent the depth model, while the patch with different shades of blue represents the multibeam readings.

SUCS was used at all five stations with the exception of station FIBB4 where weather conditions hampered the camera deployment. For the five stations on the Burdwood Bank, three replicates with 20 pictures each were taken; only one replicate of 20 pictures was possible in each of the three stations south of Beauchene Island (**Figure 11**), making the total number of underwater pictures taken 360. The abundance and diversity of organisms on the Burdwood Bank was high in station FIBB5, the analysis of 60 photographs resulted in 1,800 animals counted, higher than most inshore stations. Note that SUCS, miniAGT and the multibeam data are complementary. The SUCS allows the benthic environment and habitats to be correlated with the multibeam and the miniAGT allows the researchers to collect specimens to confirm species identification captured from the SUCS photos.

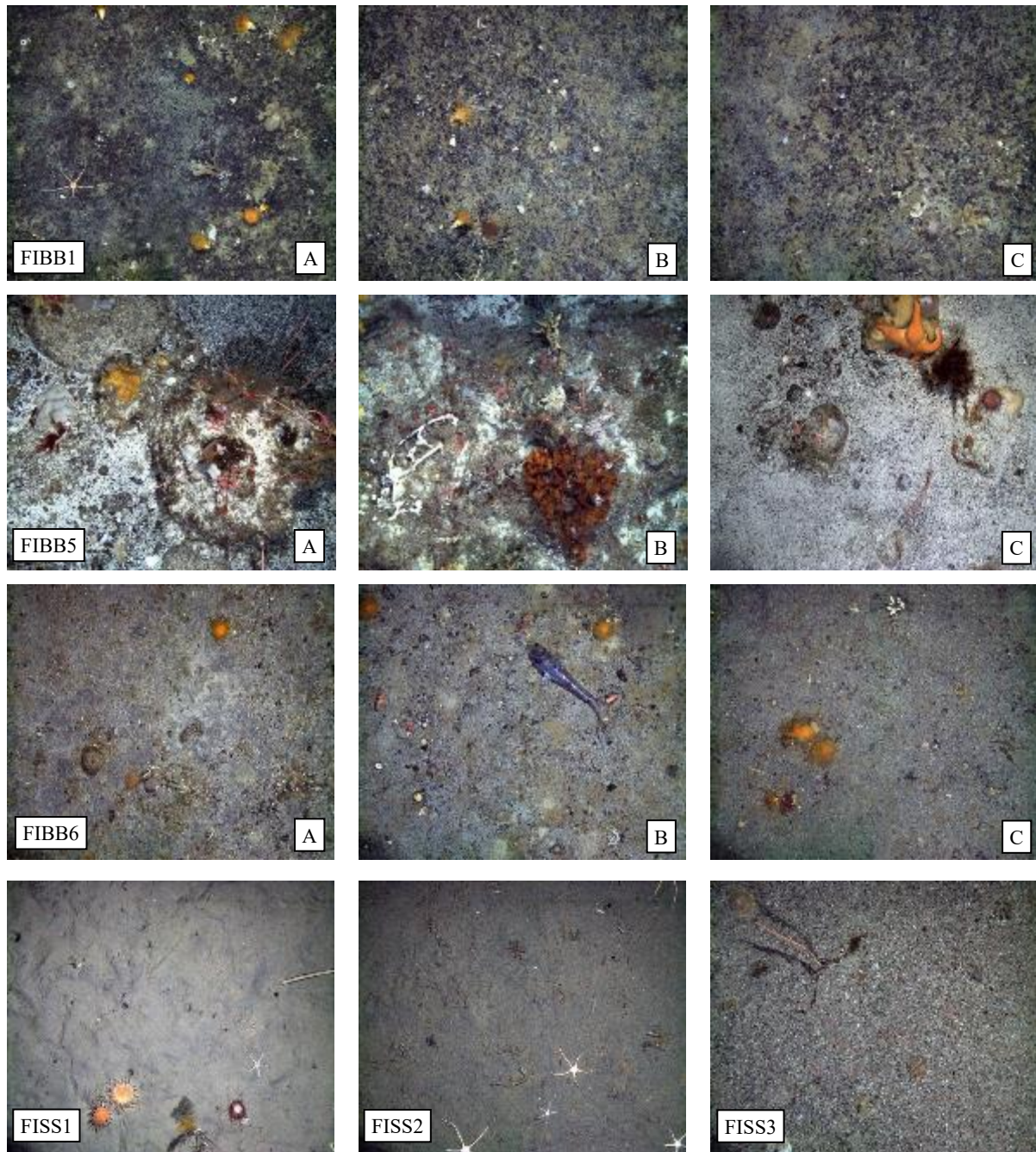


Figure 8. Example of images taken at each stations on the Burdwood Bank. Letters refers to the replicates in each station. The average depths per station are: FIBB1 -360m south, FIBB2 -412 south, FIBB3 -671 far east, FIBB5 -125 middle Burdwood Bank, FIBB6 -711m north. FISS1 to FISS 3: Example of images taken in each stations southern of Beauchene Island. The average depths per station and distance from Beauchene Island were: FISS1 -575m southernmost, FISS2 -396m, FISS3 -158m nearest.

When looking at the percentage of animals collected on the Burdwood Bank, Phyla such as Cnidaria, mainly Scleractinia corals, as well as Porifera (sponges) and Bryozoa are the important groups within the catches (**Table 1**). These groups, as well as certain echinoderms and ophiuroids are considered Vulnerable Marine Ecosystem (VMEs). VMEs provide important habitat but are also easily damaged by human activities. The data collect during DPLUS071 provides important insight into the distribution of benthic VMEs within the proposed MMAs. In addition, although not part of the project output, but of direct relevance to this project, work conducted by SAERI in support of toothfish Marine Stewardship Council Certification modelled and mapped VMEs in the Falkland Islands between 300 and 2,000 m (Brewin et al. 2020; doi:10.1093/icesjms/fsaa106). The data will be captured in the project webGIS page.

Table 1. Percentage of Phyla that dominated the samples for each station collected on the Burdwood Bank using the miniAGT.

Phylum	FIBB 1a	FIBB1 b	FIBB2 a	FIBB2 b	FIBB3	FIBB4	FIBB5 a	FIBB5 b	FIBB6
Anellida	10.1	7.5	8.7	11.2	3.2	7.2	2.1	7.3	6.6
Arthropoda	0.6	1.1	0.8	0.6	0.0	0.0	0.0	0.0	0.0
Brachiopoda	1.9	0.8	2.4	0.8	1.0	3.6	0.0	0.8	0.0
Bryozoa	44.8	6.9	12.2	0.6	11.0	13.9	24.7	30.7	0.0
Chaetognatha	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0
Chordata	0.0	1.7	0.8	1.6	0.0	0.0	0.0	0.0	1.5
Cnidaria	16.1	15.2	17.7	18.0	23.4	16.1	2.1	0.8	45.3
Crustacea	1.7	5.3	3.5	48.4	9.0	3.6	2.1	8.1	1.3
Echinodermata	18.8	36.0	42.5	11.2	31.9	40.4	30.9	37.1	23.4
Hemichordate	1.0	0.6	2.4	0.0	1.5	1.2	1.0	0.8	0.0
Mollusca	4.8	13.0	2.0	4.6	11.4	4.8	1.0	7.3	4.0
Nematoda	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0
Porifera	0.2	11.9	7.1	3.0	7.5	8.9	36.1	6.5	17.9
Sipunculida	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0

The pictures collected were analyzed using PhotoQuad software (Figure 12). This data provides baseline information on the benthic biodiversity of the Burdwood Bank, and enables estimates of carbon sequestration. Furthermore, DNA barcoding is being completed on many of the animals collected from the Burdwood Bank through collaborations between SAERI, the Italian National Antarctic Museum, the University of Siena and the University of Genoa. See Annex 6b for short technical report on results from the DNA barcoding written by our collaborators.

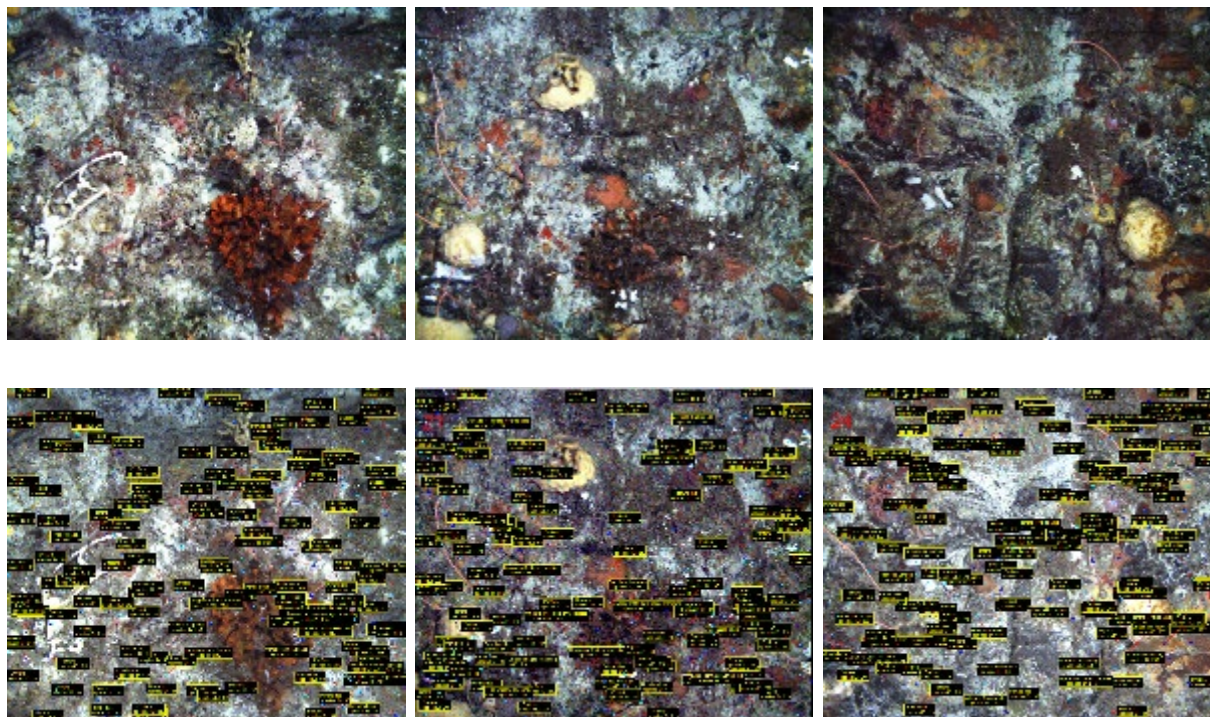


Figure 12. Pictures showing the pictures after having been analysed via PhotoQuad.

The metadata for the 20 datasets acquired during the offshore cruise expeditions have been produced and stored in the SAERI IMS-GIS centre (**Activity 3.3**). Metadata records are available through the [Falkland Islands data portal](#) (link).

Output 4: Work-Package 3- Designing the MMAs

A proposal with options for the design of MMAs (**Activity 4.1**) was circulated to the PMG in March 2020. The main change from the original MMA design was around the Burdwood Bank where the number of areas, and therefore complexity, were reduced (**Figure 13**).

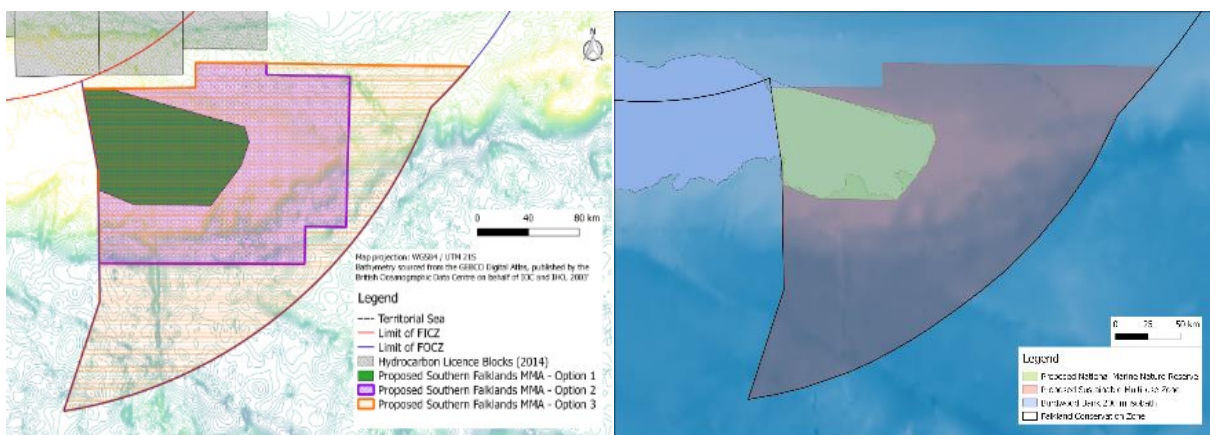


Figure 9. Maps showing the Burdwood Bank MMA as suggested by the AFCAS report (left; map extracted from AFCAS report). This option gave three different options to consider. On the right new MMA suggested by the MMA project, where only option 3 from AFCAS is considered, but the area is split into two zones, a National Marine Nature Reserve (Green) and a Sustainable Multi-use Zone (Pink).

The economic impact study (**Activity 4.2**), which included an analysis of the economic impacts of the MMA design (**Activity 4.3**), was originally submitted in November 2019 (**Figure 14**). An updated final version was signed off in November 2020. The economic reports contain *sensitive information* and the PMG requested that this report be released at the time of stakeholder consultation. These reports were attached along with the submission of this final report, but remain confidential.



Figure 10. Front page of the economic reports presented to the PMG in November 2019.

In order to complete **Activities 4.4, 4.5, 4.6a and 4.6b** two workshops were conducted with the PMG and key government officials (**Figure 15**). Two reports came out from the workshops in order to inform policy and the proposed management plans for the consultation. One report focused on the overarching vision statement and overarching policy goals, while the second report focused on proposed management frameworks.



Figure 11. Policy workshop attendees participating in the discussion.

Proposed overarching vision statement for the MMAs is: *“Protecting and conserving the marine biodiversity and ecosystem function of the Falkland Islands through locally driven, representative, well managed Marine Management Areas for the enjoyment of future generations that represent cultural, heritage and sustainable economic values.”* (**Activity 4.4 and 4.5**). In the workshop (**Activity 4.6a**) the overarching policy goals were also discussed (**Figure 16**).

A second workshop was conducted with the same participants in which the main focus was on developing a management framework for the MMAs. Including permissible and non-permissible activities within the MMAs were one of the aspects of this workshop, which helped participants to better understand during the consultation the kind of objectives that each MMA embodies (**Activity 4.6b**).

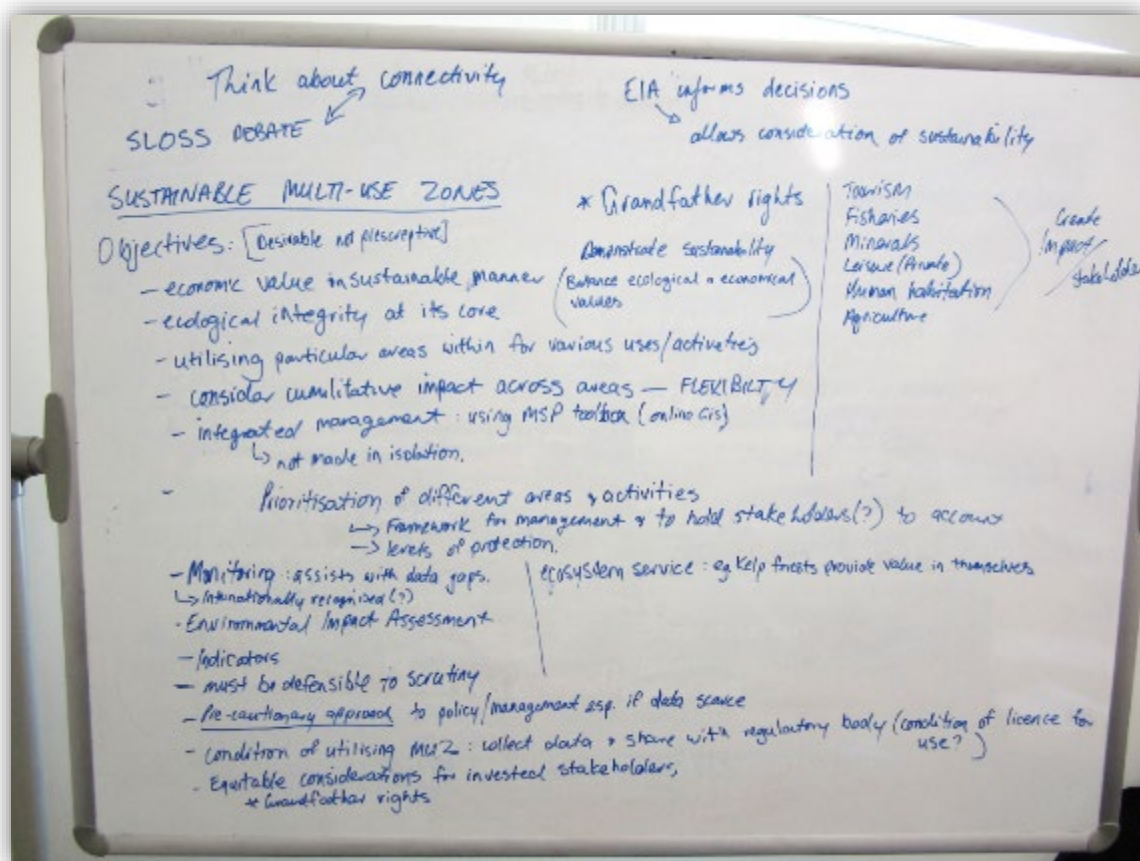


Figure 12. Example of ideas being discussed by Group 2 for overarching policy goals for the Sustainable Multi-use Zones (Activity 4.4, 4.5 and 4.6a).

Output 5: Work-Package 4 – Designating the MMAs

One of the main activities from **Output 5**, was to conduct a consultation (**Activity 5.4**). It was necessary to submit an Executive Council (ExCo) paper (**Activity 5.3**) requesting the FIG to allow the consultation to take place. From this process, **Activities 5.4** could be conducted and following this **Activity 5.1** could be finalized.

The ExCo paper approving a formal consultation was approved on the 24th February 2021 ([The document can be read here](#)). This was a key project milestone, because it re-enforced FIG support for MMAs and ownership of the MMA designation process. The consultation could not be conducted before the completion of the DPLUS071 project, due to the government conducting an *Environmental Strategy* consultation between 18th February and 14th March 2021. However, the Government fully supports the continuation of the MMA consultation. See Official Government letter in **Annex 6c** supporting the continuation of the process post DPLUS071. In addition, SAERI has recruited a 2.5 year Marine and Coastal Project Coordinator (**Annex 6d**), to continue to progress and support MMA designation initiated through DPLUS071 .

Activity 5.1 is therefore a draft document, until stakeholder consultation is completed. However from our interactions with stakeholders throughout the process, we do not envision major changes to this document. **Activity 5.2** is reported in the same document as **Activity 5.1**. A draft ExCo paper will be prepared to pave the way towards the development of the MMAs once the consultation has taken place (**Activity 5.5**).

3.2 Outcome

The main outcome of the project is *Designation of new Marine Management Areas (MMA) around the Falkland Islands*.

The outcome indicators are:

0.1 At least 3 Marine Management Area designated around the Falkland Islands by date

0.2 At least 1 MMA enabling policy drafted by date

The outcome statement of DPLUS071 is still valid but was not achievable over the latter part of the project due to the emergence of COVID-19 and FIG needing to invest all of its resources, including legislative, in responding to the pandemic. To ensure post-project sustainability we designed and secured funding for a non-project-based role to continue to supporting the designation of MMAs. This process started in June 2020. FIG fully supported this process (**Annex 6c**) and SAERI has ensured that there is continuity supporting the last stages of the process (**Annex 6d**).

The project has managed to collect and analyse large amounts of data (**Activities 2.2, 2.4, 3.2, 3.4**; [reports can be found here](#)). From an economic perspective, the project has also managed to understand the uses and potential conflicts that users might have with the MMAs (**Activities 4.2, 4.3**; reports are currently confidential and could be made available upon request). Project staff in collaboration with FIG submitted an ExCo paper for the Executive Council to formally conduct a consultation (**Activity 5.3**; [This document is available here](#)). This was submitted in February 2021, at the earliest opportunity, when the Department of Policy and Economic Development were dealing with matters other than COVID-19.

3.3 Monitoring of assumptions

Outcome Assumption: *Staffing turnover in FIG enables the continued progress of policy development Political will for this process will be maintained by through regular consultation and discussion.*

There were senior staff change overs at FIG however, the project staff maintained regular consultation and discussion with the new members of the staff who remain fully supportive of the process so this assumption was upheld. As described above, the delay in the critical policy elements, a major component of this project and thus the outcome statement, were due to COVID-19 pandemic. Recognising that the Pandemic would probably last greater than a year, we started contingency planning to ensure project sustainability. This was done by designing a non-project-based role to continue to support the MMA process. Therefore, the outcome statement is still valid but was not achievable in the later part of the project, because of the emergence of COVID-19 and FIG needing to invest all resources, including legislative, in responding to the pandemic.

Assumptions Output 1:

- *Recruitment results in appropriate candidate being recruited and available to be on island within the given timeframe.*

Comments: It held true for Y1 and there was no need to revise this.

Continued resource from project partners available to engage with the project for its duration.

Comments: Project partners contributed substantially to the project. For example, economic data were made available by several FIG sectors; SMSG and BAS supported fieldwork and provided expertise, the PMG meticulously reviewed documents and facilitated project outcomes and the FIG Policy and Economic Development Unit representatives, including the director contributed helped to deliver the ExCo paper. FIG provided £ funding.

Assumptions Output 2 & 3: *Weather conditions enable data collection within the proposed time period.*

Comments: Weather delays did not impact project delivery. Inshore and offshore fieldwork were successfully carried out resulting in large amount of data collected.

Assumptions Output 4:

- *Stakeholders available and have capacity to engage in the workshop within the given timeframe*

Comments: The PM regularly held meetings with diverse stakeholders in order to keep them informed of project progress and to answer questions. In addition, the PM gave talks to a) the MLAs, b) government, and c) the Falkland Island Fishing Companies Association (FIFCA) among others. Two workshops were hosted with PMG members, which include major stakeholder representatives, and government officials in order to fine tune the material for the formal consultation.

- *Policy and legal departments have the capacity to engage in the drafting processes within the given timeframe*

Comments: The economic reports provided a thorough assessment of potential economic impacts of the proposed MMAs. These reports allowed the draft policy to progress. It became apparent that, due to the COVID-19 pandemic the Policy and Economic Development Department was unable to meet the project deadline related to policy elements. Consequently, SAERI produced a draft policy document, and **Activity 4.4** was modified accordingly.

Assumptions Output 5:

- *Stakeholder buy in secured through continuous engagement and workshops*

Comments: The stakeholders were kept informed through the PMG and PSG platforms, while the wider stakeholder community were kept involved throughout the project (see section 2 for further details). It is important to note that the major stakeholders have been engaged from the start of the project through the PMG.

- *Active FIG engagement and FIG project partners help with political buy in*

Comments: The project was supported by FIG throughout, which came in the form of supplementary budget and the PMG, which included FIG Directors. During work package (WP 4), the Department of Policy and Economic Development were key to the development of policy formulation and political engagement. This has come in the form of providing support to conduct the workshops from WP3 and ensuring the ExCo paper was ready for submission requesting the formal consultation and having staff members available for the PM to consult. Furthermore, the CEO of the Falkland Islands, Mr Barry Rowlands and the Department of Policy and Economic Development organized for the PM to deliver a talk to the MLAs and later on to the FIFCA Board in order to update them on project delivery.

4 Project support to environmental and/or climate outcomes in the UKOTs

The project has collected analysed a significant amount on environmental baseline data in support of the MMA process. These data represent a great deal of discovery and will benefit many other initiatives outside of the MMA project. Therefore, it has current use and provides a great legacy for environmental understanding and management of the Falkland Islands marine environment. Although the Outcome statement was not achievable as of March/April 2020 due to the emergence of COVID-19 and, understandably, shifting Government priority in terms of policy and legislation, it is still valid.

The capability to manage environmental assets across the Falkland Islands has been improved through equipment, data and capacity building. For example, the project acquired equipment that will provide the Islands with high quality underwater imagery in order to continue monitoring the subtidal ecosystem around the Islands beyond scuba diving depth.

The project has collected novel data on the Burdwood Bank and has collected and collated available marine data within the inshore area. The project has provided baseline data for many previously unstudied sites, which enables the monitoring of MMA areas into the future and allows benchmarking of management strategies. It will also provide a baseline of the natural environment against which future change (e.g. climate change) can be measured.

Furthermore, data generated will prove useful beyond the scope the MMA project. For example, it will contribute to MSP by assessing the vulnerability of areas to certain commercial activities.

On Island capacity in marine science was developed and strengthened by the MMA project, through participation in project activities, and through outreach and project stakeholder interactions.

DPLUS071 directly contributed towards goals in the Islands Plan 2018 – 2022, for example a) Develop and implement a comprehensive environmental strategy, b) Encourage research into the Falkland Islands environment; and c) contributes to fulfilling FIG's commitments under international treaties, among other

goals. The Falkland Islands are currently developing an Environmental Strategy, and we believe MMAs will be an important feature in the strategy, specifically with regard to marine conservation.

Establishment of MMAs will also directly contribute to the Falkland Islands Ecoregions, Habitats, Species and Sites Strategy 2016 – 2020, the main goal of which is to ‘guide implementation of the Biodiversity Framework by considering the relevant Aichi Targets and setting out locally appropriate goals and indicators/targets’. The Strategy set its own goals and targets, which included:

- A. All Falkland Islands ecosystems are robust and healthy by 2040
- B. The level of threat is reduced for all Falkland Islands ‘Priority Species’ by 2020
- C. The majority of ‘Key’ sites and areas are conserved by 2020

The Falkland Islands Ecoregions, Habitats, Species and Sites Strategy identified the following (marine) ecoregions: deep sea, shelf break/slope, pelagic shelf, small offshore islands and near shore coastal, all of which are represented in the proposed MMAs.

Internationally, the proposed MMAs will help the Falkland Islands achieve their commitments towards the Convention on Biological Diversity (CBD) Aichi Biodiversity Targets. Particularly Target 11, which requires participatory countries to protect and manage >10% of their marine waters by 2020.

The MMAs will also help towards the following Aichi Biodiversity Targets:

- A. **Target 1:** People are aware of the values of biodiversity and how to use it sustainably
- B. **Target 4:** Governments, business and stakeholders at all levels have taken steps to achieve or have implemented plans for sustainable production.
- C. **Target 6:** All fish and invertebrate stocks and aquatic plants are managed and harvested sustainably, legally and applying ecosystem based approaches, so that overfishing is avoided.
- D. **Target 15:** Ecosystem resilience and the contribution of biodiversity to carbon stocks were enhanced, through conservation.
- E. **Target 17:** Each Party has developed, adopted as a policy instrument, and has commenced implementing an effective, participatory and updated national biodiversity strategy and action plan.

Other targets that could become relevant as development or environmental pressures change are: Target 5, 7, 8, 9 and 10.

Other MEAs for which the project will make an important contribution are towards commitments under ACAP (albatross and petrels) and CMS for Appendix I and II species (cetaceans, fur seals, sea lions).

In addition, although the Falkland Islands is not part of the UK Government Blue Belt Program, the results would support similar outputs such as a) improved scientific understanding of the marine environment; b) develop and implement evidence-based, tailored marine management strategies including surveillance and enforcement; and c) ensure management is sustainable and long term.

The project has engaged with senior FIG officials, and overall, there has been strong support. In addition, In November 2020, two workshops were conducted with the PMG and FIG representatives to develop a finer scale, high level definition of what is the objective of the MMAs, as well as some high-level policy goals prior to requesting permission to conduct a consultation. All government officials involved in the workshop agreed that new legislation was needed in order to fully developed the MMAs in the Falkland Islands.

The project has also engaged with the following FIG officials:

- Chief Executive of the Falkland Islands, Barry Rowlands
- Director of Policy and Economic Development, Andrew Gaule
- Director of Nature Resources, Dr Andrea Clause
- Director of Mineral Resources, Stephen Luxton
- Head of Environment, Dr Rachel Cooper
- Members of the Legislative Assembly:
 - Stacy Bragger
 - Dr Barry Elsby
 - Mark Pollard
 - Leona Roberts

- Roger Spink
- Teslyn Barkman
- Roger Edwards
- Ian Hansen

Finally, although the project is coming to an end, SAERI successfully secured funding for 2.5 years for a Marine and Coastal Project Coordinator (MCPC). This position will continue providing support to FIG Environmental Department with regard to proposed MMA designation (see section 6 below).

5 OPTIONAL: Gender equality

The project teams that worked on the development of this project proposal were of mixed genders. Upon the project being awarded, the team hired to run it were male (Project Manager) and female (Project Officer). The consultant hired to conduct the economic work was female (Dr Rachel Cooper). An intern hired for 5 months was female (Ms Lauren Shea), and collaborations have been established with a number of leading female experts (e.g. Heather Glon, Dr Claire Goodwin or Dr Angie Diaz).

The MMA project team worked with FIG staff and stakeholders of mixed gender, ensuring an equal gender representation wherever possible. The Project Management Group, which is formed by the main stakeholders of the project, was originally formed by two females and five males. A new member was added, bringing the ratio to three females and five males. Currently, this number has gone back to two females and six males.

The project engaged key stakeholders irrespective of gender and our public engagement strategy was to target all members of society irrespective of age, gender or social background to ensure that all parts of the local community are invested in the project, as management of the marine environment should be for the benefit of all.

In the SAERI office, the current staff cohort is 70% female and 30% male, an increase from 2019, and SAERI has an equal opportunities policy as part of its internal policy framework.

6 Sustainability and Legacy

The legacy of the DPLUS071 will be the designation of Falkland Islands MMAs. ExCo has approved a public consultation which will allow of finer scale policy development. The MMA project has managed to continue the legacy from the Marine Spatial Planning I (DPLUS027) and the Marine Spatial Planning II (funded by FIG). In addition to carrying the momentum and legacy from those projects, the DPLUS071 project has paved the way for FIG to conduct stakeholder consultation, after which the final management plans will be drafted and a final ExCo paper for designation of the MMAs can be completed. After this stage, a process of legislative and policy drafting and endorsement will have to be undertaken to designate the MMAs.

Dr Paul Brewin, SMSG Director highlighted that: *'The work done by the MMA team will be of great benefit to sustainability of our marine habitats, and offers a benchmark for future research and monitoring of impacts of developing marine activities in the Falklands'*.

To ensure sustainability and continue the legacy of DPLUS071, SAERI has sourced additional funding for and developed a new 2.5 year MCPC position that will continue the work developed under the MMA project, as outlined in the job description:

The role will be responsible for working with partners, stakeholders and the local community to deliver the three main outcomes:

- A. *The local community will be engaged in the Marine and Coastal environment of the Falkland Islands, and Falkland Islands Government (FIG) will be supported to lead on Marine and Coastal Environmental coordination into the future.*
- B. *Innovative research, and robust data management will enable a better understanding of the Marine and Coastal Environment of the Falkland Islands.*
- C. ***Input into the continued development of proposed Falkland Islands MMAs by working closely with FIG, and through continued stakeholder engagement.***

In addition to the development of the MMAs, the project legacy provides baseline data on the Burdwood Bank and around the Falkland Islands, from which future changes can be monitored and measured. The project staff have moved on to new positions and SAERI has engaged new resource with the MCPC role. All of the project's resources will continue to be used for marine research in support of the MMA process.

7 Lessons learned

Covid-19 significantly impacted the project and its ability to deliver the final policy and designation elements. Despite this, project staff along with our partners FIG were able to consult with Legislative Council and seek ExCo approval for a formal consultation. SAERI was also able to secure funding for a MCPC role, which will support MMA designation in the Falkland Islands.

Being locally driven was crucial to the success of the project. With SAERI being a local organization and the team being based in the territory, the team was able to actively meet with project partners and the PMG.

In addition, the PMG was formed by key local stakeholders that are aware of the importance of MMAs. As such, the effort taken to form and inform the PMG has certainly been well spent. The PMG will continue in order to advise the new MCPC role and program. For others doing similar projects, it may be very worthwhile to invest early on in developing an active and supportive PMG.

Another key factor to maintaining momentum during the MMA project was to build relationships with and motivate stakeholders to remain engaged in the process. This is particularly important, considering that legislative approval is a long process and its success will require broad participation and agreement. This was a key focus of Y3 where two workshops were conducted and preparations for public consultation were made.

The partnership with SMSG was, once again, a win-win situation. Knowledge of the local area and its challenges is essential for any successful data collection at sea, in particular in remote and dangerous areas such as the Falkland Islands. SMSG also assisted in the analysis and interpretation of data. Similarly, integrating the MMA benthic work as part of a BAS international research expedition to the Antarctic, meant that many international experts in different fields could be approached if needed. Tapping into existing knowledge from local resources as well as international experts allows for the application of best international practice, and maximizes outputs and relevancy.

7.1 Monitoring and evaluation

The project was divided into four work packages (WP) described in the introduction. There were no changes to WP 1. WP 2 had minor changes mainly to do with timeline deliverables. These were linked to the availability of the James Clark Ross, as the final expedition was only conducted in Y2Q4.

WP 3 changes were linked with Activity 4.6, which originally it was meant to be a local consultation workshop. Due to the delay on WP 5 Activity 5.3 (see below), this was adapted in the form of two workshops, one looking into overarching policy goals and another one looking at developing a MMA management framework, including permitted and non permitted activities. The information from these workshops will form an important part of the Management Plan consultation package (WP 5) for when the consultation takes place.

WP 5 was the work package that required the greatest amount of modification and adaptation. Under the original proposal, Activity 5.3 was originally planned to be a stakeholder consultation. However, the new Director of Policy and Economic Development advised that an ExCo paper would have to be prepared to request a formal consultation first (this became Activity 5.3). Due to project delays associated with the Covid-19 pandemic and the focus of FIG in responding to the global pandemic, the MMA project and its deliverables, were delayed. The ExCo paper was only considered at the end of February 2021, this has meant that all other activities within this WP had to remain as draft, as all require the outcome of the consultation in order to be finalized. SAERI obtained funding for a new position – the Marine and Coastal Programme Coordinator, to finalize this process and ensure project legacy.

The [Monitoring and Evaluation](#) plan was seen as a good system to keep tabs on what is happening with the project and to understand what achievements still needed completion.

In terms of internal monitoring, weekly meetings were held between the project manager and his line manager, as well as a progress meeting on a monthly basis with Dr Brickle, SAERI's Executive Director.

There is also ongoing accountability for progress to groups external to SAERI. The PMG oversees the evaluation and monitors project progress, including through regular meetings and careful review of

documentation. In addition, the first PSG meeting took place in July 2019, following that the PSG were updated regularly, especially on key milestones.

Indicators of achievements such as project reports, presentations on fieldwork or data analyses are regularly made available to the above-mentioned groups, as well as to the general public when appropriate. These are measured against the logic-framework when appropriate and otherwise overseen by the SAERI senior management team, the PSG and PMG.

Finally, having an ExCo paper approved by the Legislative Assembly of the Falkland Islands is not only a major milestone, but also a means to verify that the project is heading in the right direction and that there is a willingness from FIG to continue the legacy of this project post DPLUS071 life span.

7.2 Actions taken in response to annual report reviews

2020 annual report

Annual Report Reviewer Comment:

- *Will the changes under Output 4 affect Output 5?*

-

Response to address this comment.

a. As mentioned in the half-yearly report, based on intensive consultations with the Falkland Islands Government, and as a result of Covid-19 impacts, there are some changes in terms of timings and scheduling in Outputs 4 and 5. It is anticipated that these will require a change request, which we hope to submit in the next month once we have final certainty around workshop and consultation dates.

Update 2021

Covid-19 disruption continued through the duration of the project, specifically with regard to policy elements of the project, as FIG were concentrating their efforts on mitigating Covid-19 impacts, part of which was policy development and economic recovery.

8 Darwin Identity

Throughout the project, the Darwin Initiative was presented as a distinct entity, and the main sponsor of the MMA project (**Figure 17** is an example of some posts this financial year). Furthermore, the Darwin Plus project code is used as part of the project title in all communications and presentations (i.e. DPLUS071). There have been previous projects funded by Darwin Plus in the Falkland Islands, this project serves to enhance existing awareness and understanding of the funding scheme, particularly amongst government and businesses due to the many stakeholders involved in the project. The project has also been mentioned in publications linked to data collected by this project (**Figure 18**).

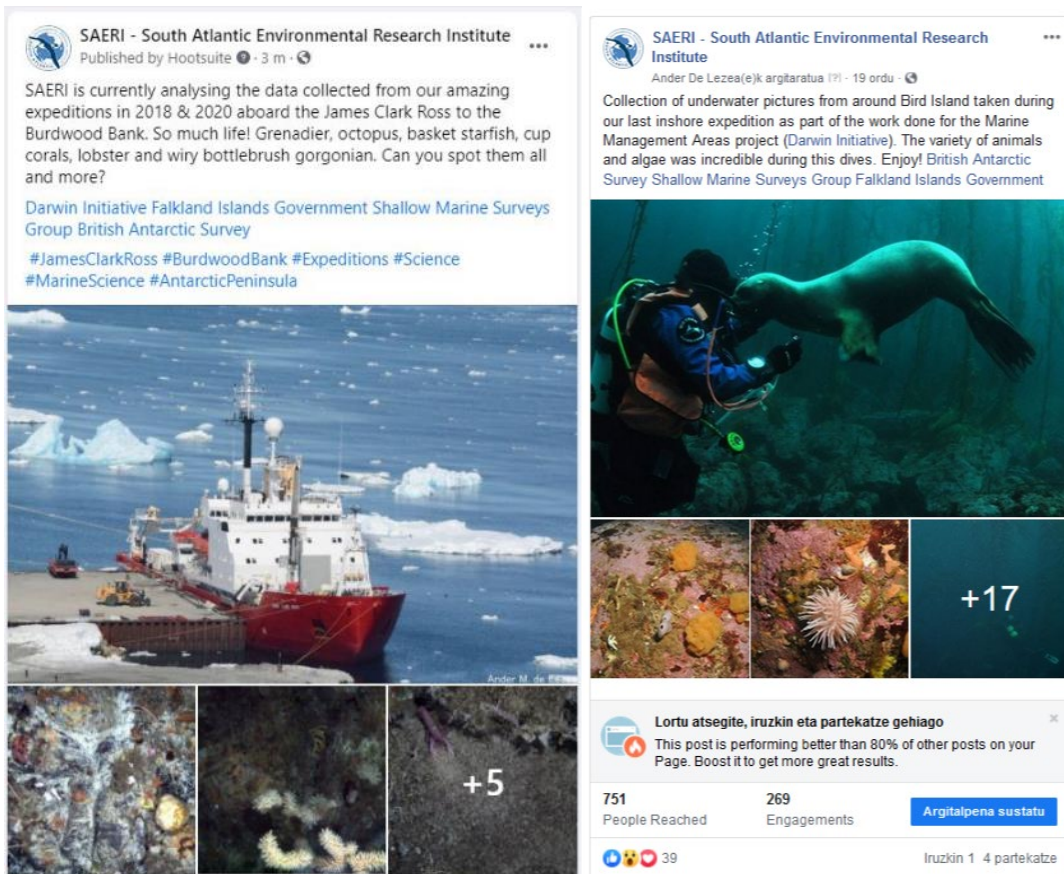



Figure 17. Example of social media posts.



BioInvasions Records (2020) Volume 9, Issue 3: 461–470

Rapid Communication

First record of the plumose sea anemone, *Metridium senile* (Linnaeus, 1761), from the Falkland Islands

Heather E. Glon^{1,*}, Marina Costa², Ander M. de Lecea^{2,3}, Claire Goodwin^{4,5}, Stephen Cartwright⁶, Angie Diaz^{7,8}, Paul Brickle^{2,5,9} and Paul E. Brewin^{2,6}

Funding Declaration

Funding sources for the expedition included the Shackleton Scholarship Fund, Darwin Initiative through UK Government Funding (through the DPLUS071 project – Fine Scaling of the Marine Management Area of the Falkland Islands), and The Falkland Islands Government. In-kind support came from the South Atlantic Environmental Research Institute and the Shallow Marine Surveys Group.

Figure 18. Evidence of Darwin Initiative funding identity being recognized in the funding declaration for the manuscript published in *BioInvasion Records*.



Figure 20. Twitter post related to students helping out.

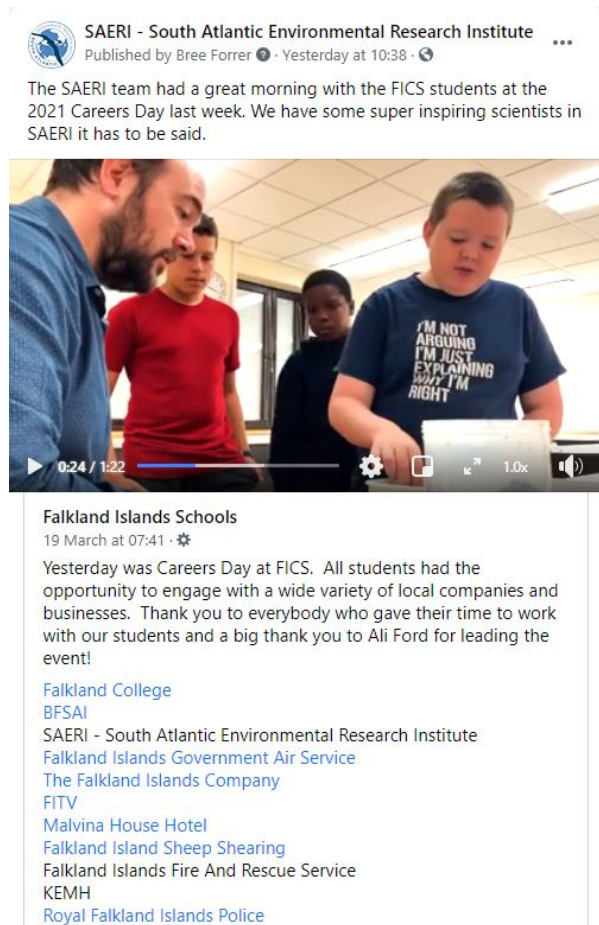


Figure 21. MMA Project Manager engaging with students from the high school. The post is from the promotional video made by the school team.

9 Impact of COVID-19 on project delivery

As in the last change request form, we requested an extension for the MMA consultation to occur in February 2021, with the final draft designation package delivered to FIG in March 2021. This was not completed because FIG priority was placed elsewhere.

Covid-19 caused significant disruptions to the DPLUS071 project time-line, which could not be addressed within the project timeframe. Specifically, we were unable to progress key policy and stakeholder consultation components of the project for approximately 10 months due to Covid-19, given that the focus of FIG was in responding to the global pandemic. Unfortunately, this meant we were unable to complete all of our project logframe. Nevertheless, despite this disruption, the project was still hugely successful in a complex stakeholder landscape, in fine-scaling MMAs, and progressing the MMA designation to a point where FIG will now undertake a consultation (with support from SAERI), with designation expected in 2022, subject to due political process. Although public consultation could not be achieved within the project timeline owing to Covid-19 delays, it will occur over the next months. Although the outcome statement was not achieved over the lifetime of the project because of Covid-19, it is still valid and will be achieved and the legacy of DPLUS071 secured with a newly recruited MCPC role and FIG aspirations for MMA designation (see Annex 6c).

10 Finance and administration

10.1 Project expenditure

Project spend (indicative) since last annual report	2020/21 Grant (£)	2020/21 Total actual Darwin Costs (£)	Variance %	Comments (please explain significant variances)
Staff costs				
Consultancy costs				
Overhead Costs				
Travel and subsistence				
Operating Costs				
Capital items				
Others				
TOTAL				

Staff employed (Name and position)	Cost (£)
Dr Ander Martinez de Lecea – Project Manager – 9 months	
Chester Sands/David Barnes (BAS)	
Tara Pelembe – Project Oversight	
Teresa Bowers - Finance	
Data Manager	
TOTAL	

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

None for this financial year	
TOTAL	0

Capital items – description	Capital items – cost (£)
None for this financial year	
TOTAL	0

Other items – description	Other items – cost (£)
None for this financial year	
TOTAL	

10.2 Additional funds or in-kind contributions secured

Source of funding for project lifetime	Total (£)
Falkland Islands Government – Environmental Budget	
Shackleton Scholarship Fund	
TOTAL	

Source of funding for additional work after project lifetime	Total (£)
Ellerman Funding – Marine and Coastal Project Coordinator	
TOTAL	

10.3 Value for Money

The project used the BAS vessel RRS JCR, which costs £per day, which for 5 days this is a total for £that the time on the JCR would have cost the project. However, BAS only charged £, making the rest of the cost in kind.

The inshore work depended on time provided by volunteers, all of whom took holidays in order to participate in the inshore work. We had 10 diving volunteers, 4 volunteers came in the first 5 days

expedition and 6 came in the second expedition of 7 days. Additionally, a series of activities were conducted that add value to the project, these are: (a) extra funding for Work-package 1 acquired through the Shackleton Scholarship Fund; (b) new partnerships established with the Huntsman Marine Science Centre (Canada), the Universidad de Concepcion (Chile), and Ohio State University (USA); and (c) a scientific paper reporting a novel invasive species of anemone in the Falkland Islands was submitted for publication.

Finally, the project used volunteers to help analyse some of the photographs collected during the cruises. For instance, Dr Alenjandro Roman has helped to analyse the pictures from the Burdwood Bank, and five volunteers have helped with photographs and/or laboratory time.

**11 OPTIONAL: Outstanding achievements of your project during the (300-400 words maximum).
This section may be used for publicity purposes**

I agree for the Darwin Secretariat to publish the content of this section (please leave this line in to indicate your agreement to use any material you provide here)

Marine Spatial Planning within the Falkland Islands was first explored in 2014 (MSP Phase I), as part of a Darwin- Plus funded project. Following its successful conclusion, FIG contracted SAERI to undertake a second phase (MSP Phase II, 2016-18) which covered three key aspects: a legislative review; developing a strategy for MSP, and an assessment of potential areas suitable for MMAs. The Assessment of Fishing Closure Areas as Sites (AFCAS) case study made evidence-based recommendations on potential MMAs that would meet international criteria for MPAs. The AFCAS study identified three key areas: 1) the inshore areas of the Falkland Islands 3nm from the baseline, 2) Beauchene Island, and 3) the Burdwood Bank areas (Figure 1). The volume of the fishery and the incredible abundance and diversity of flying and swimming seabirds, and indeed marine mammals, are testament to the productivity of Falkland Islands waters. Our coastal areas provide feeding and breeding habitats to support this incredibly rich and diverse ecosystem. It is also becoming clear that the archipelago is a hotspot for intertidal and shallow water diversity.

The AFCAS study was genesis of this current project and represents significant tangible strides for marine conservation in the Falkland Islands. Although the outcome was not achieved over the course of the project due to COVID-19 it still remains valid and will be delivered through a legacy post and programme in collaboration with FIG. The Falkland Islands are self-governing, economically self-sufficient from the UK, and have multiple stakeholders operating in its marine space. The complex stakeholder landscape is contrary to many, if not all of the current Blue Belt OTs. Therefore, the government must drive this process, which will involve policy development, stakeholder consultation. The current project has secured a legacy of vastly increased baseline knowledge and secured a trajectory that will see formal marine conservation through MMAs secured in the Falkland Island through public consultation, finer policy design and legislative drafting instructions. It has provided an exciting opportunity to progress marine conservation in a wildlife wonderspot we are fortunate to call home.

Annex 1 Project's full current logframe as presented in the application form (unless changes have been agreed)

Please insert your project's logframe (if your project has a logframe), including indicators, means of verification and assumptions. N.B. if your application's logframe is presented in a different format in your application, please transpose into the below template. Please feel free to contact Darwin-Projects@ltsi.co.uk if you have any questions regarding this.

Project summary	Measurable Indicators	Means of verification	Important Assumptions
Impact:			
A Policy and legislative framework for Marine Management Areas will be established on the Falkland Islands with new designations and supporting costed implementation options			
Outcome: Designation of new Marine Management Areas (MMA) around the Falkland Islands.	0.1 At least 3 Marine Management Area designated around the Falkland Islands by date 0.2 At least 1 MMA enabling policy drafted by date	0.1 MMA designation announced in the Falklands media 0.2 MMA policy paper submitted to the Falklands Executive Council	Staffing turnover in FIG enables the continued progress of policy development Political will for this process will be maintained by through regular consultation and discussion
Outputs: 1. Project Management structure, monitoring, evaluation and communications tools established	1.1 A Memorandum of Understanding (MoU) agreed and signed by all partners by November 2018 1.2 Project Manager recruited by August 2018 1.3 A Project Management Group (PMG) meeting held every 3 months starting October 2018 1.4 A Project Stakeholders group (PSG) meeting held every 6 months starting July 2019 1.5 At least 1 project webpage created by April 2018, and at least 1 update to the page made every 3 months. 1.6 1 Monitoring and evaluation plan created by October 2018	1.1 MoU signed by all parties 1.2 Project Manager employment contract signed 1.3 PMG meeting notes available online 1.4 PSG meeting notes available online. 1.5 Project webpage available for viewing online 1.6 Monitoring and evaluation plan available online	Recruitment results in appropriate candidate being recruited and available to be on island within the given time frame. Continued resource from project partners available to engage with the project for its duration

Project summary	Measurable Indicators	Means of verification	Important Assumptions
	1.7 Regular DPLUS reports submitted as required (yearly and half-yearly)	1.7 Final project report available online.	
2. WP1: Data Collection Inshore	<p>2.1 x (2) of inshore sites identified for inshore benthic data collection (small boat dive, drop down camera, multibeam) Y1 Q4, Y2 Q3</p> <p>2.2 x (2) x inshore benthic data (large multiday live aboard, multibeam, drop down camera, dive) collection trips carried out in Y2 Q1 and Y2 Q3</p> <p>2.3 At least x (80) new data sets and existing data sets will be cleaned and collated by the end of Y3 Q1</p> <p>2.4 Modelling analyses, analysis outputs will be produced by end of Y3 Q1. This includes new data from higher predator tracking gained since 2014 and new benthic data collated from SMSG</p>	<p>2.1 Map to show data collection sites available to project partners</p> <p>2.2 Survey reports written and made available online</p> <p>2.3 Metadata records for new data available online</p> <p>2.4 WebGIS project available online; data and modelling data reviewed by PMG and external collaborators</p>	Weather conditions enable data collection within the proposed time period.
3. WP2: Data Collection Southern MMA and Burdwood Bank	<p>3.1 x (1) Research cruise organisation for the Burdwood Bank in Y2Q3</p> <p>3.2 x (1) Research cruise undertaken by Y2 Q3</p> <p>3.3 At least 20 new data sets cleaned and collated by Y2 Q4</p> <p>3.4 Modelling analyses and biodiversity analyses output will be produced by Y2 Q4. This includes new data from higher</p>	<p>3.1 Research cruise plan available to partners</p> <p>3.2 Cruise report written and made available online</p> <p>3.3 Metadata records for new data available online</p> <p>3.4 WebGIS project available online; data and modelling data reviewed by PMG and external collaborators</p>	Weather conditions enable data collection within the proposed time period

Project summary	Measurable Indicators	Means of verification	Important Assumptions
	predator tracking gained since 2014 and new benthic data collated from the hydrocarbons industry		
4. WP3: Designing the MMAs	<p>4.1 Proposal with options for potential future MMA designs prepared by Y2 Q4</p> <p>4.2 Study of economic impact of the designs undertaken by Y2Q1</p> <p>4.3 Analysis of the economic impacts of MMA designs undertaken by Y2Q1</p> <p>4.4 Recommendations for draft MMA legislation undertaken by Y3 Q3</p> <p>4.5 Draft MMA policy undertaken by Y3 Q4</p> <p>4.6a At least 15 stakeholders attend local workshop to consult further on the policy vision statement and goals Y3 Q3 – <i>part of the means of verification of measurable indicator 4.5</i></p> <p>4.6b At least 15 stakeholders attend local consultation workshop on MMA framework in Y3 Q3</p>	<p>4.1 MMA designation options proposal paper available to partners and stakeholders</p> <p>4.2 Economic impact study available to partners</p> <p>4.3 Report on Analysis of the economic impacts of MMA designs available to partners and online</p> <p>4.4. draft legislation recommendations circulated to partners</p> <p>4.5 draft policy circulated to partners</p> <p>4.6a and b Workshop report circulated to all partners and attendees.</p>	Stakeholders available and have capacity to engage in the workshop within the given timeframe Policy and legal departments have the capacity to engage in the drafting processes within the given timeframe.
5. WP4: Designating the MMAs	5.1 3 MMA site management plans prepared by Y3 Q4	<p>5.1 MMA management plans available to partners and stakeholders</p> <p>5.2 Resourcing requirement review available to partners and stakeholders</p>	Stakeholder buy in secured through continuous engagement and workshops. Active FIG engagement and FIG project partners help with political buy in.

Project summary	Measurable Indicators	Means of verification	Important Assumptions
	<p>5.2 Review of the resourcing requirements of designation undertaken by Y3 Q4</p> <p>5.3 ExCo paper prepared for submission to request permission to conduct formal consultation by Y3Q4</p> <p>5.4 At least 20 stakeholders attend local consultation on the 'MMA designation package' by Y3 Q4</p> <p>5.5 Draft 'MMA Designation package' ready to be submitted to ExCo for consideration by Y3 Q4</p>	<p>5.3 ExCo paper prepared.</p> <p>5.3 Stakeholder attendance and active participation at the workshop</p> <p>5.4 Workshop report available online</p> <p>5.5 Draft ExCo paper prepared</p>	
<p><u>Output 1 - Project Management Structure</u></p> <p>1.1 A Memorandum of Understanding (MoU) agreed and signed by all partners</p> <p>1.2 Project Manager recruited</p> <p>1.3 A Project Management Group (PMG) meeting held every 3 months</p> <p>1.4 A Project Stakeholders group (PSG) meeting held every 6 months</p> <p>1.5 Project webpage created and updated every 3 months</p> <p>1.6 Monitoring and evaluation plan created</p> <p>1.7 Regular DPLUS reports submitted as required (yearly and half-yearly)</p> <p><u>Output 2 - WP 1: Data collection inshore</u></p> <p>2.1 inshore sites identified for inshore benthic data collection (small boat dive, drop down camera, multibeam)</p> <p>2.2 Inshore benthic data (large multiday live aboard, multibeam, drop down camera, dive) collection trips carried out</p> <p>2.3 New data sets and existing data sets will be cleaned and collated</p> <p>2.4 Modelling analyses and biodiversity analyses outputs produced</p> <p><u>Output 3 - WP2: Data collection southern MMA and Burdwood bank</u></p> <p>3.1 Research cruise organised for the Burdwood Bank</p> <p>3.2 Research cruise undertaken</p> <p>3.3 New data sets cleaned and collated</p> <p>3.4 Biodiversity analyses outputs will be produced</p>			

Project summary	Measurable Indicators	Means of verification	Important Assumptions
<p>Output 4 - WP3: Designing the MMAs</p> <ul style="list-style-type: none"> 4.1 Proposal with options for potential future MMA designs prepared 4.2 Study of economic impact of the designs undertaken 4.3 Analysis of the economic impacts of MMA designs undertaken 4.4 Recommendations for draft MMA legislation 4.5 Draft MMA policy undertaken 4.6a Local workshop to consult further on the policy vision statement and goals 4.6b local workshop to consult further on the MMA framework <p>Output 5 – WP 4: Designating the MMAs</p> <ul style="list-style-type: none"> 5.1 MMA site management plans prepared 5.2 Review of the resourcing requirements of designation undertaken 5.3 ExCo paper submitted to request permission to conduct formal consultation 5.4 Local consultation on the ‘MMA designation package’ 5.5 Draft ‘MMA Designation package’ ready to be submitted to ExCo for consideration by Y3 Q4 			

Annex 2

Report of progress and achievements against final project logframe for the life of the project (if your project has a logframe)

Project summary	Measurable Indicators	Progress and Achievements for the life of the project
<p>Impact:</p> <p>A Policy and legislative framework for Marine Management Areas will be established on the Falkland Islands with new designations and supporting costed implementation options</p>		<p>The project aimed to fine scale proposed MMAs by increasing our understanding of the biodiversity of the Falkland Islands leading to the designation of proposed MMAs.</p> <p>The project completed intensive inshore fieldwork, where divers conducted a systematic survey of the benthos of the Islands. In addition, videos at depths greater than those possible by divers were filmed, providing detailed views of life at depths greater than 20 m. This work provides the baseline data required to monitor and manage the proposed MMAs.</p> <p>Similarly, the work conducted offshore on the Burdwood Bank provided insights of life on top of the Bank as well as on the slopes (<1000 m). This will help to better understand the biodiversity of the region, as well as give us insight into blue carbon storage.</p> <p>There has also been a considerable effort put towards the understanding of how megafauna would interact with the proposed MMA areas. To this end, the project has collated large amount of tracking data from various higher marine predators and quantified overlap with proposed MMAs.</p> <p>During the last year of the project, considerable effort was directed towards engaging with FIG politicians and directors from. This cemented the support of the MLAs and ensured they were up-to-date with the project. There was regular engagement with DPED staff, who played a pivotal role in getting the ExCo paper ready for submission. The ExCo paper was approve by the Legislative Assembly on the 26th February. DPED staff will lead MMA consultation.</p> <p>In the background, the PM conducted two workshops with government and major industry stakeholders to develop a draft overarching statement and policy goals for the proposed MMAs. There was a second workshop to discuss the framework for the MMAs, including aspects such as permitted and not permitted activities. Draft implementation and management / monitoring costs were developed but are subject to the consultation process.</p>
<p>Outcome Designation of new Marine Management Areas (MMA) around the Falkland Islands.</p>	<p>0.1 At least 3 Marine Management Areas designated around the Falkland Islands by end of project</p> <p>0.2 At least 1 MMA enabling policy</p>	<p>0.1 Proposed designation of the MMAs by AFCAS has now been modified and is approved by the PMG. These will from part of the consultation and will be subject to ExCo decision post consultation.</p> <p>0.2 First policy draft completed. Report is confidential and available on request.</p>

Project summary	Measurable Indicators	Progress and Achievements for the life of the project
	drafted by end of project or shortly after the end of project (depends on the Policy Department).	
Output 1. Project Management structure, monitoring, evaluation and communications tools established	1.1 A Memorandum of Understanding (MoU) agreed and signed by all partners by November 2018 1.2 Project Manager recruited by August 2018 1.3 A Project Management Group (PMG) meeting held every 3 months starting October 2018 1.4 A Project Stakeholders group (PSG) meeting held every 6 months starting November 2018	1.1 MoU signed in Y1 1.2 PM and PO recruited and contract signed. The PO contract was extended for extra five months to support with the large amount of data collected 1.3 A total of 9 PMG meetings were held, excluding a cancelled one due to covid, but communications followed remotely via email and/or Skype. 1.4 Officially only one PSG meeting was held during the lifetime of the project. There were a number reasons behind this. The 2nd meeting was cancelled due to coronavirus; project progress is communicated by local media and social networking

Project summary	Measurable Indicators	Progress and Achievements for the life of the project
	<p>1.5 At least 1 project webpage created by April 2018, and at least 1 update to the page made every 3 months.</p> <p>1.6 1 Monitoring and evaluation plan created by October 2018</p> <p>1.7 Regular DPLUS reports submitted as required (yearly and half-yearly)</p>	<p>1.5 Web page revamped in Y2 and regularly updated (see web page for details). The updates came in the form of new update (link here)</p> <p>1.6 M&E plan created and shared</p> <p>1.7 DPLUS Half- and Annual reports submitted</p>
Activity 1.1 A Memorandum of Understanding (MoU) agreed and signed by all partners		Completed
Activity 1.2, Project Manager recruited		Completed
Activity 1.3 A Project Management Group (PMG) meeting held every 3 months		Completed
Activity 1.4 A Project Stakeholders group (PSG) meeting held every 6 months		Completed

Project summary	Measurable Indicators	Progress and Achievements for the life of the project
Activity 1.5 Project webpage created and updated every 3 months		Completed
Activity 1.6 Monitoring and evaluation plan created		Completed
Activity 1.7 Regular DPLUS reports submitted as required (yearly and half-yearly)		Completed
Output 2. WP1: Data collection inshore	2.1 x (2) of inshore sites identified for inshore benthic data collection (small boat dive, drop down camera, multibeam) Y1 Q4 2.2 x (2) x inshore benthic data (large multiday live aboard, multibeam, drop down camera, dive) collection trips carried out in Y2 Q1 and Y2 Q3 2.3 At least x (80) new data sets and existing data sets will be cleaned and collated by the end of Y3 Q1	2.1. Inshore sites identified in Y1. SMSG and Dion Poncet (Skipper of the Golden Fleece) input was highly valuable in order to maximise the output of the work during the planning exercise. 2.2. Two inshore expeditions completed April 2019 and November 2019 (reports available here). Both expeditions were highly successful and the inclemency of Falkland weather did not stop the project from collecting some very useful data towards the development of the MMAs. 2.3. Metadata were recorded and entered in the IMS-GIS data centre.

Project summary	Measurable Indicators	Progress and Achievements for the life of the project
	2.4 Modelling analyses, analysis outputs will be produced by end of Y3 Q1. This includes new data from higher predator tracking gained since 2014 and new benthic data collated from SMSG	2.4 Modelling to predict spatial usage of marine predators and overlap with proposed MMAs was completed and paper accepted for publication in <i>Ecological Applications</i> . A pre-print is available on request.
Activity 2.1. inshore sites identified for inshore benthic data collection (small boat dive, drop down camera, multibeam)		Completed
Activity 2.2. Inshore benthic data (large multiday live aboard, multibeam, drop down camera, dive) collection trips carried out		Completed
Activity 2.3 New data sets and existing data sets will be cleaned and collated		Completed
Activity 2.4 Modelling analyses and biodiversity analyses outputs produced		Completed

Project summary	Measurable Indicators	Progress and Achievements for the life of the project
<p>Output 3 WP2: Data Collection Southern MMA and Burdwood Bank</p>	<p>3.1 x (1) Research cruise organisation for the Burdwood Bank in Y1 Q3 and now extended to Y2Q4</p> <p>3.2 x (1) Research cruise undertaken by Y1 Q3 and now extended to Y2Q3</p> <p>3.3 At least 20 new data sets cleaned and collated by Y2 Q4</p> <p>3.4 Modelling analyses and biodiversity analyses output will be produced by Y2 Q4. This includes new data from higher predator tracking gained since 2014 and new benthic data collated from the hydrocarbons industry</p>	<p>3.1. Plans were completed prior to each expedition taking place. (Y1 and Y2). In both occasions, the input from both Drs Chester Sands and Dave Barnes were crucial during the planning stages, as their knowledge of BAS protocols, equipment capabilities and many years of experience ensured that time at the station was maximised.</p> <p>3.2. The first cruise was completed in December 2018, during that cruise the underwater camera was not functioning and we only managed to collect samples from the sea floor, as well as multibeam seafloor mapping. During the February 2020, with the underwater camera working, 6 stations, (x3 replicates of 20 pictures each) were planned for the field work period. In addition, 4 Agassiz trawls were also collected. Reports are available here</p> <p>3.3. 13 datasets collected and cleaned and record of it can be found in the IMS-GIS data centre accessible.</p> <p>3.4. Modelling to predict spatial usage of marine predators and overlap with proposed MMAs was completed and paper accepted for publication in <i>Ecological Applications</i>. A pre-print is available on request.</p>

Project summary	Measurable Indicators	Progress and Achievements for the life of the project
Activity 3.1 Research cruise organised for the Burdwood Bank		Completed
Activity 3.2 Research cruise undertaken		Completed
Activity 3.3 New data sets cleaned and collated		Completed
Activity 3.4 Biodiversity analyses outputs will be produced		Completed
Output 4. WP3: Designing the MMAs	<p>4.1 Proposal with options for potential future MMA designs prepared by Y2 Q4</p> <p>4.2 Study of economic impact of the designs undertaken by Y2 Q2</p> <p>4.3 Analysis of the economic impacts of MMA designs undertaken by Y2 Q4</p> <p>4.4: Recommendations for draft MMA legislation by Y3Q3</p>	<p>4.1. Improved design around the Burdwood Bank was presented to the PMG and agreed. The map presented in Figure 13 at the beginning of this report depicts the new design for the Burdwood Bank, which remove the option system suggested by AFCAS and instead suggested a two-zone system.</p> <p>4.2. Economic impact study completed (papers attached but remain confidential).</p> <p>4.3. Analysis of the economic impacts due to the MMA designs completed (papers attached but remain confidential).</p> <p>4.4. This output is dependent on the consultation (See points 5.3 and 5.4).</p>

Project summary	Measurable Indicators	Progress and Achievements for the life of the project
	<p>4.5 Draft MMA policy undertaken by Y2Q4</p> <p>4.6a At least 15 stakeholders attend local workshop to consult further on the policy vision statement and goals Y3 Q3 – <i>part of the means of verification of measurable indicator 4.5</i></p> <p>4.6b At least 15 stakeholders attend local consultation workshop on MMA framework in Y3 Q3</p>	<p>4.5. 1st policy draft completed post economic reports. Report is confidential and available on request.</p> <p>4.6 a and b Workshop report circulated to all partners and attendees. Report is confidential and available on request.</p>
Activity 4.1 Proposal with options for potential future MMA designs prepared		Completed
Activity 4.2 Study of economic impact of the designs undertaken		Completed

Project summary	Measurable Indicators	Progress and Achievements for the life of the project
Activity 4.3 Analysis of the economic impacts of MMA designs undertaken		Completed
Activity 4.4 Recommendations for draft MMA legislation		Not completed as statutory public consultation has not yet taken place
Activity 4.5 Draft MMA policy undertaken		Completed
4.6a At least 15 stakeholders attend local workshop to consult further on the policy vision statement and goals Y3 Q3		Completed
4.6b At least 15 stakeholders attend local consultation workshop on MMA framework in Y3 Q3		Completed
Output 5 WP4: Designating the MMAs	<p>5.1 3 MMA site management plans prepared by Y3 Q4</p> <p>5.2 Review of the resourcing requirements of designation undertaken by Y3 Q4</p> <p>5.3 ExCo paper prepared for submission to request permission to conduct formal consultation by Y3 Q4</p>	<p>5.1 This output is dependent on point 5.4. Consequently, until the consultation takes place, the document can only be considered a draft version.</p> <p>5.2 This output is dependent on point 5.4. Consequently, until the consultation takes place, the document can only be considered a draft version.</p> <p>5.3 The ExCo paper was prepared with the leadership of FIG's Policy and Economic Development Department and was approved by the Executive Council. Approved version can be found in FIG's web page.</p>

Project summary	Measurable Indicators	Progress and Achievements for the life of the project
	<p>5.4 At least 20 stakeholders attend local consultation on the 'MMA designation package' by Y3 Q4</p> <p>5.5 Draft 'MMA Designation package' ready to be submitted to ExCo for consideration by Y3 Q4</p>	<p>5.4 This is dependent on the formal consultation being undertaken and was not completed during the project. It will be progressed post-project.</p> <p>5.5 This is dependent on the formal consultation being undertaken and was not completed during the project. It will be progressed post-project.</p>
5.1 3 MMA site management plans prepared by Y3 Q4		Partially completed
5.2 Review of the resourcing requirements of designation undertaken by Y3 Q4		Partially completed
5.3 ExCo paper prepared for submission to request permission to conduct formal consultation by Y3 Q4		Completed
5.4 At least 20 stakeholders attend local consultation on the 'MMA designation package' by Y3 Q4		Not completed as statutory public consultation has not yet taken place
5.5 Draft 'MMA Designation package' ready to be submitted to ExCo for consideration by Y3 Q4		Not completed as statutory public consultation has not yet taken place

Annex 3 Standard Measures

Code	Description	Totals (plus additional detail as required)
Training Measures		
1	Number of (i) students from the UKOTs; and (ii) other students to receive training (including PhD, masters and other training and receiving a qualification or certificate)	2
2	Number of (i) people in UKOTs; and (ii) other people receiving other forms of long-term (>1yr) training not leading to formal qualification	0
3a	Number of (i) people in UKOTs; and (ii) other people receiving other forms of short-term education/training (i.e. not categories 1-5 above)	i) 6; ii) 1
3b	Number of training weeks (i) in UKOTs; (ii) outside UKOTs not leading to formal qualification	For all the above mention people together, about 31 weeks.
4	Number of types of training materials produced. Were these materials made available for use by UKOTs?	These individuals were trained on a one to one basis in order to assist with the project.
5	Number of UKOT citizens who have increased capacity to manage natural resources as a result of the project	2
Research Measures		
9	Number of species/habitat management plans/ strategies (or action plans) produced for/by Governments, public authorities or other implementing agencies in the UKOTs	1
10	Number of formal documents produced to assist work in UKOTs related to species identification, classification and recording.	X2 This is in-progress for both inshore and offshore species identification where we are developing taxonomic scratch pads (online taxonomic tools) to assist with species identification.
11a	Number of papers published or accepted for publication in peer reviewed journals written by (i) UKOT authors; and (ii) other authors	i) 5; ii) 0
11b	Number of papers published or accepted for publication elsewhere written by (i) UKOT authors; and (ii) other authors	i) 1; ii) 0
12b	Number of computer-based databases enhanced (containing species/genetic information). Were these databases made available for use by UKOTs?	One database was created to try and record benthic species recorded during dives. It is still in Beta version. Any DNA barcoding coming out of this work will be placed in open data bases. There is also the data sets created as part of this work, such as
13a	Number of species reference collections established. Were these collections handed over to UKOTs?	X2 Inshore and Offshore reference collections established locally and maintained by SAERI. Replicates sent to international museums.

Code	Description	Totals (plus additional detail as required)
13b	Number of species reference collections enhanced. Were these collections handed over to UKOTs?	X3. SAERI is an OT organization and we manage our reference collections both locally and overseas. For example, we have a relationship with the Natural History Museum in London, where we frequently deposit specimens, and in-time they will inform taxonomic scratch pads (online taxonomic tools). DNA barcoding results from all samples analysed will be placed in a freely accessible database (genbank). Enhanced local collection of Vulnerable Marine Ecosystems held by FIG, but managed by SAERI.
Dissemination Measures		
14a	Number of conferences/seminars/workshops/stakeholder meetings organised to present/disseminate findings from UKOT's Darwin project work	Within the Islands: x7 conferences/workshops
14b	Number of conferences/seminars/workshops/stakeholder meetings attended at which findings from the Darwin Plus project work will be presented/ disseminated	Covid dependent x2 international conferences presenting the work to South American researchers. At least x6 local engagements, several of which are available on-line
Physical Measures		
20	Estimated value (£s) of physical assets handed over to UKOT(s)	£
21	Number of permanent educational/training/research facilities or organisation established in UKOTs	0
22	Number of permanent field plots established in UKOTs	
23	Value of resources raised from other sources (e.g., in addition to Darwin funding) for project work	£ from FIG and £ from the Shackleton Scholarship.

Annex 4 Publications

Provide full details of all publications and material that can be publicly accessed, e.g. title, name of publisher, contact details. Mark (*) all publications and other material that you have included with this report

Type *	Detail (title, author, year)	Nationality of lead author	Nationality of institution of lead author	Gender of lead author	Publishers (name, city)	Available from (e.g. weblink, contact address, annex etc)
Journal	Baylis <i>et al.</i> in press	Australian	Falkland Islands	Male	Ecological Applications	
Journal	Glon, H. E., Costa, M., de Lecea, A. M., Goodwin, C., Cartwright, S., and Díaz, A. (2020). First record of the plumose sea anemone, <i>Metridium senile</i> (Linnaeus, 1761), from the Falkland Islands. <i>BiolInvasions Rec.</i> 9, 461–470.	America	America	Female		
Magazine	Brickle, P., J., B., Simsovic, D., Golding, N., de Lecea,	Falkland Islands	Falkland Islands	Male	The Marine Biological Association,	

	A. M., and Brewin, P. (2019). Marine ecosystem protection in the Falkland Islands. Mar. Biol. Mag., 20–21.				Plymouth, Devon	
*Newspaper article	Mapping the Burdwood Bank.	Spanish	Falkland Islands	Male	Penguin News	
Newspaper article	Falklands: First surveys of the Burdwood Bank completed for Marine Managed Areas Project.	Spanish	Falkland Islands	Male	Mercopress	
Report	Fine scaling the design of the Falkland Islands Marine Management Areas 2nd Burdwood Bank Research	Italian	Falkland Islands	Female		

	Cruise report 2020: Benthos and Cetacean Observations					
Report	JR18003 Cruise Report	Various (for the MMA project section Spanish/Italian)	Various (for the MMA project section Falkland Islands)	Male/Female		
Report	Fine Scaling of the Marine Management Area project First inshore expedition report	Spanish/Italian	Falkland Islands	Male/Female		
Report	Fine Scaling the design of the Falkland Islands Marine Management Areas: 2 nd inshore research expedition report	Spanish/Italian	Falkland Islands	Male/Female		

Annex 5

Darwin Contacts

Ref No	DPLUS071
Project Title	Fine scaling the design of Falkland Islands Marine Management Areas (MMA project for short)
Project Leader Details	
Name	Dr Paul Brickle
Role within Darwin Project	Project leader, grant proposal development, management of Project Manager
Address	
Phone	
Skype	
Email	
Partner 1	
Name	
Organisation	Fisheries Department; Directorate of Natural Resources; Falkland Islands Government
Role within Darwin Project	Director will sit on the Project Management Group (PMG) and will provide marine science and fisheries expertise to the project. The fisheries department holds key data useful to the project and also provides opportunity for sampling in the near shore.
Address	
Skype	
Email	
Partner 2 etc.	
Name	Dr David Barnes
Organisation	British Antarctic Survey
Role within Darwin Project	David Barnes provides support in identifying key areas of biodiversity and ecosystem functioning. He will also aid with interpretation of ecological vulnerability, indicator group patterns, monitoring design and metricising benthos response to change. These provide contextual support to marine spatial planning, sustainable coastal use and effectiveness of conservation areas. In particular he has experience leading benthic biodiversity research cruises on RRS James Clark Ross and running low impact benthic ecosystem assessment apparatus.
Address	
Skype	
Email	

Checklist for submission

	Check
Is the report less than 10MB? If so, please email to Darwin-Projects@ltsi.co.uk putting the project number in the Subject line.	
Is your report more than 10MB? If so, please discuss with Darwin-Projects@ltsi.co.uk about the best way to deliver the report, putting the project number in the Subject line.	X
If you are submitting photos for publicity purposes, do these meet the outlined requirements (see section 11)?	X
Have you included means of verification? You should not submit every project document, but the main outputs and a selection of the others would strengthen the report.	X
Do you have hard copies of material you need to submit with the report? If so, please make this clear in the covering email and ensure all material is marked with the project number. However, we would expect that most material will now be electronic.	X
Have you involved your partners in preparation of the report and named the main contributors	X
Have you completed the Project Expenditure table fully?	X
Do not include claim forms or other communications with this report.	