



# 18<sup>th</sup> Conference of the IHO Hydrographic Commission on Antarctica

## **National Report (United Kingdom)**

### **Agenda item 07.2A**



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# Survey and Charting Progress in Antarctica since HCA-17 (June 2021)

## Requirements

- Ascertain overall maintenance schedule of Aids to Navigation and an internal authority to take responsibility
- Holistically, progress made towards surveying region to modern standards and what is needed (eg, more tidal data) to expedite that progress



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# Survey Progress in Antarctica since HCA-17 (June 2021)

## UK Antarctic Campaign: OP AUSTRAL (2021-2022)



c500Nm<sup>2</sup> of Antarctic region data gathered including:

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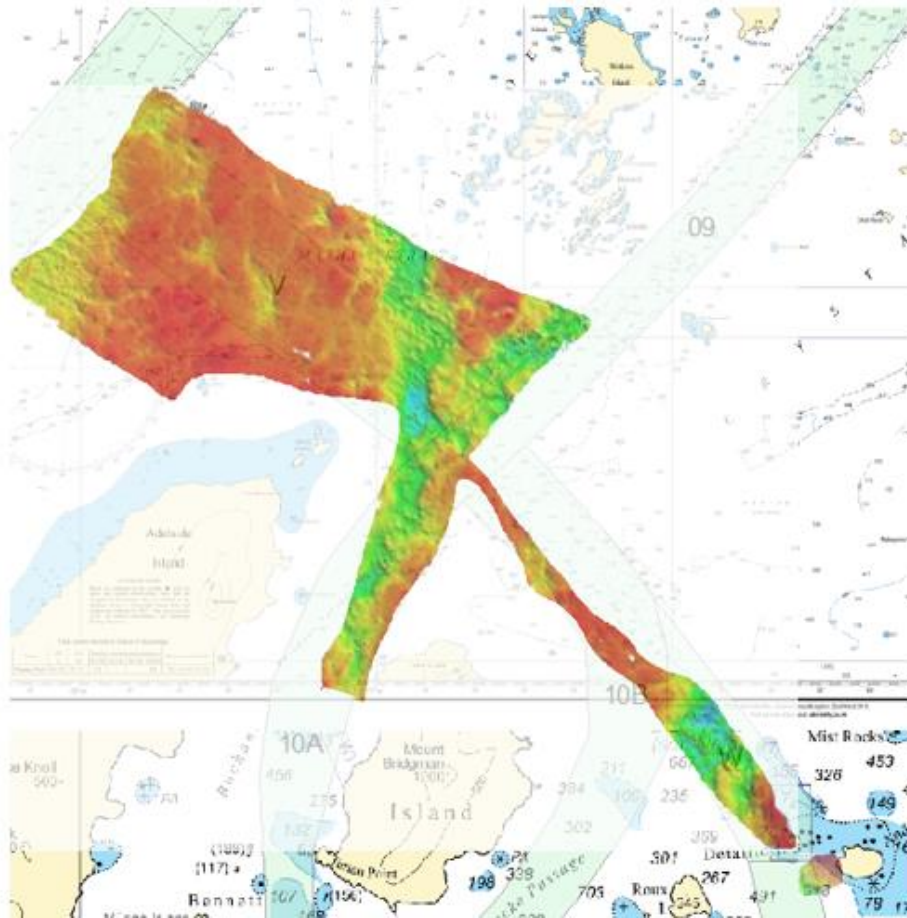


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# Survey Progress in Antarctica since HCA-17 (June 2021)

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## Branch Corridor 'V' Matha Strait (INT 9130)



146 Nm<sup>2</sup> including additional coverage of:

- MSR 10A, Buchanan Passage
- MSR 10B, Isacke Passage
- BC W, Detaille Island & Approaches



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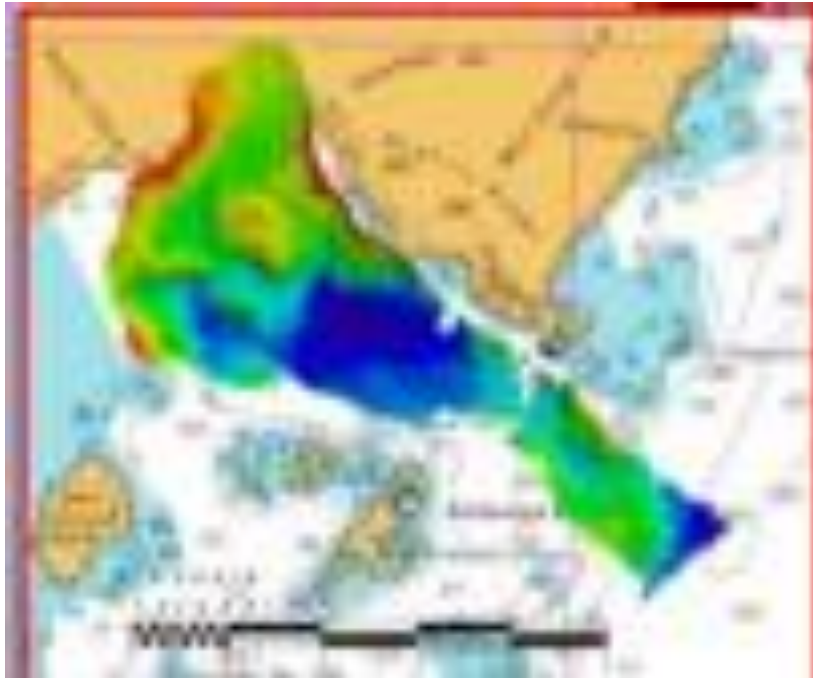
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# Survey Progress in Antarctica since HCA-17 (June 2021)

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## Branch Corridor 'Z' Rothera (INT 9109)

Survey of new wharf for RRV Sir David Attenborough  
for proposed INT chart coverage  
Additional 5Nm<sup>2</sup> coverage of Sheldon Cove to  
support BAS



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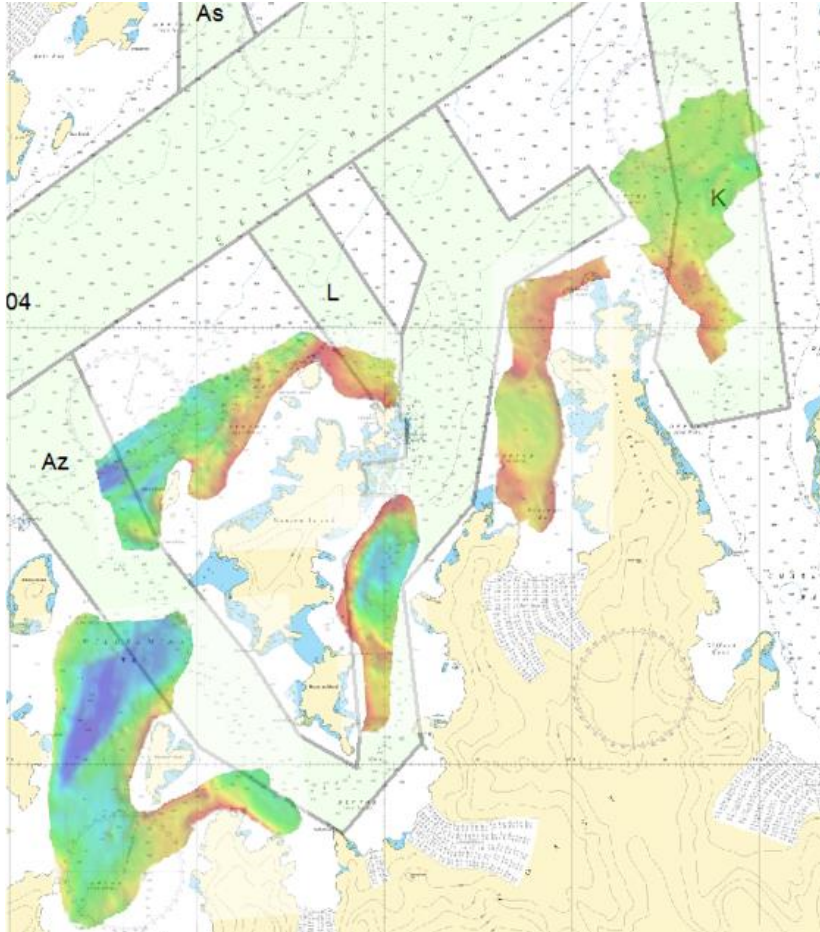


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# Survey Progress in Antarctica since HCA-17 (June 2021)

## Branch Corridor 'Az' Wilhelmina Bay (INT 9166)



58 Nm<sup>2</sup> including additional coverage of unsurveyed areas:

- Bancroft Bay and Bayly Glacier front (BAS requirement)
- Pelseneer Island
- Delaite Island
- BC 'K' Portal Point

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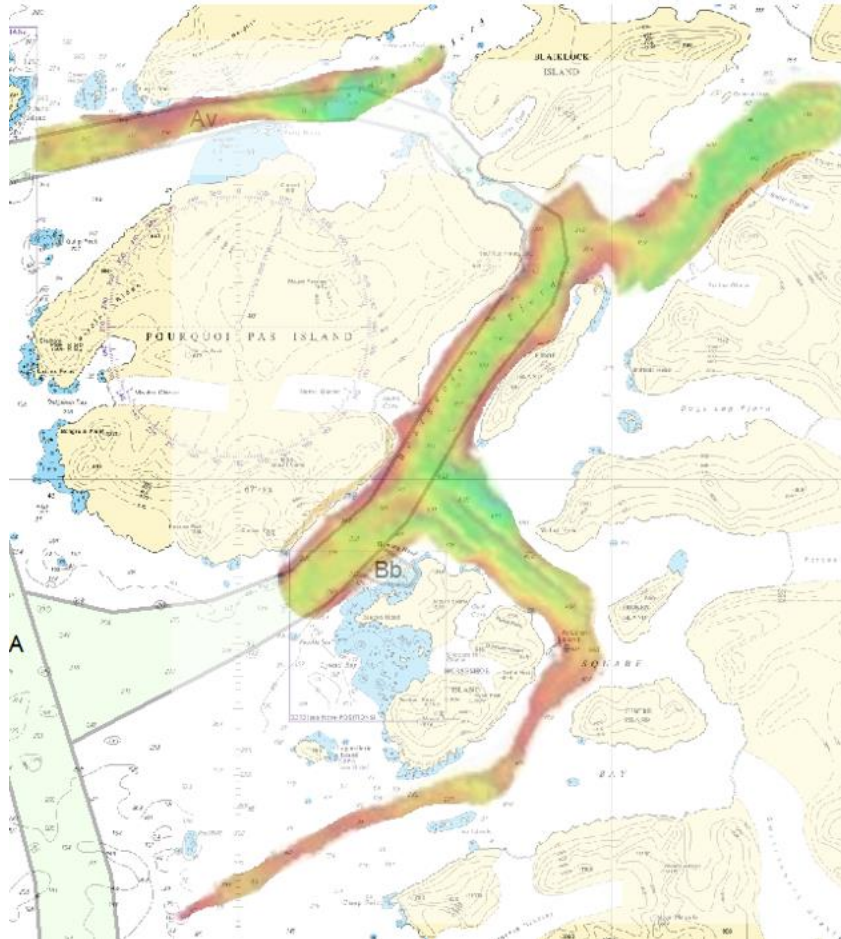


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# Survey Progress in Antarctica since HCA-17 (June 2021)

## Branch Corridor 'Av' Pourquoi Pas Island (INT 9136)



80 Nm<sup>2</sup> including additional opportunistic coverage of unsurveyed areas:

- Bigourdan Fjord
- East & South of Horseshoe Island

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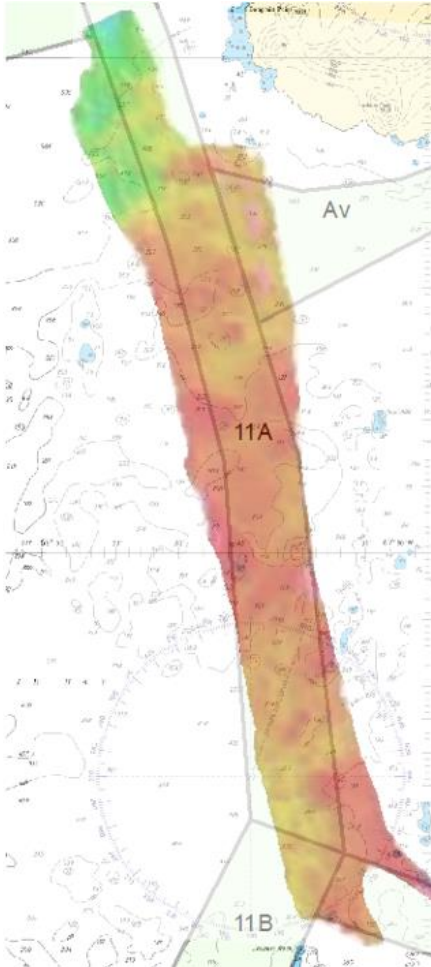


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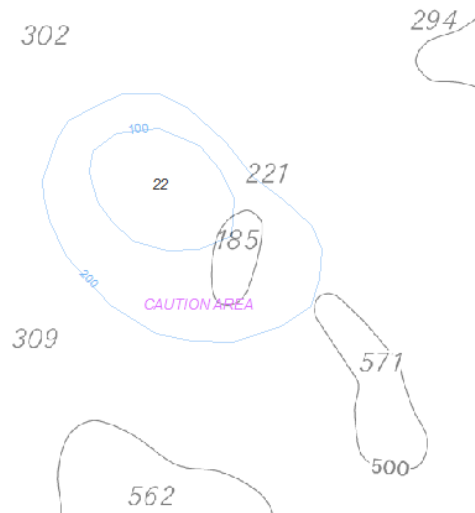
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# Survey Progress in Antarctica since HCA-17 (June 2021)

## Maritime Shipping Route '11' Marguerite Bay (INT 9136)



- 60 Nm<sup>2</sup> coverage in areas of 1966 (ZoC B) surveys
- Shoal depth investigation (RU2A1AD0)



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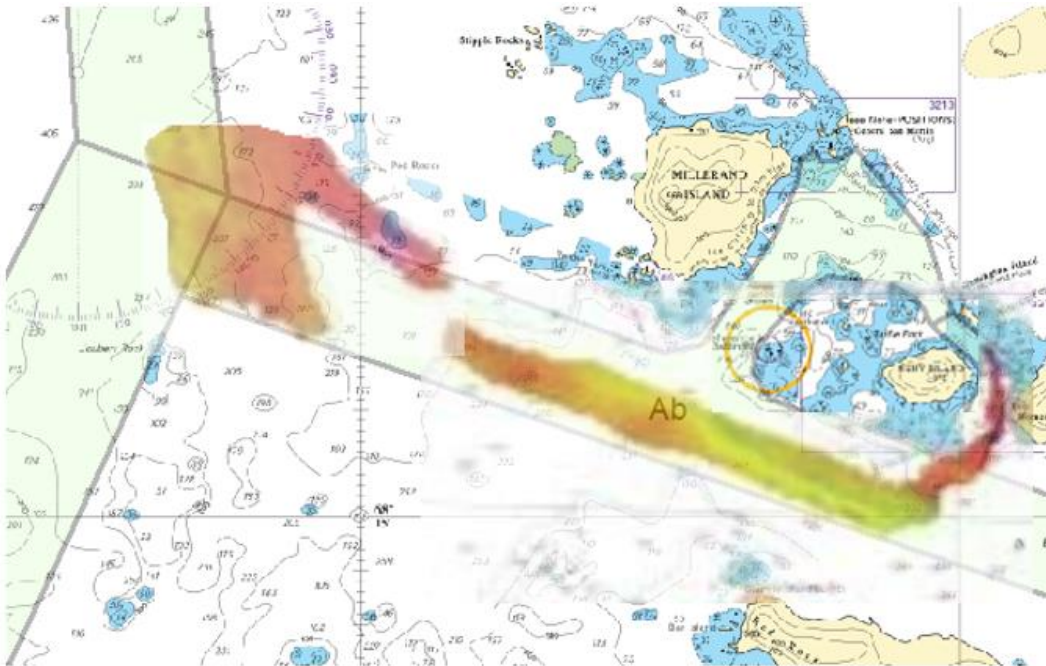
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## Branch Corridor 'Ab' Approaches to Millerand Island (INT 9136)

30 Nm<sup>2</sup> opportunistic data collect in areas of  
1966 surveys (ZoC B)



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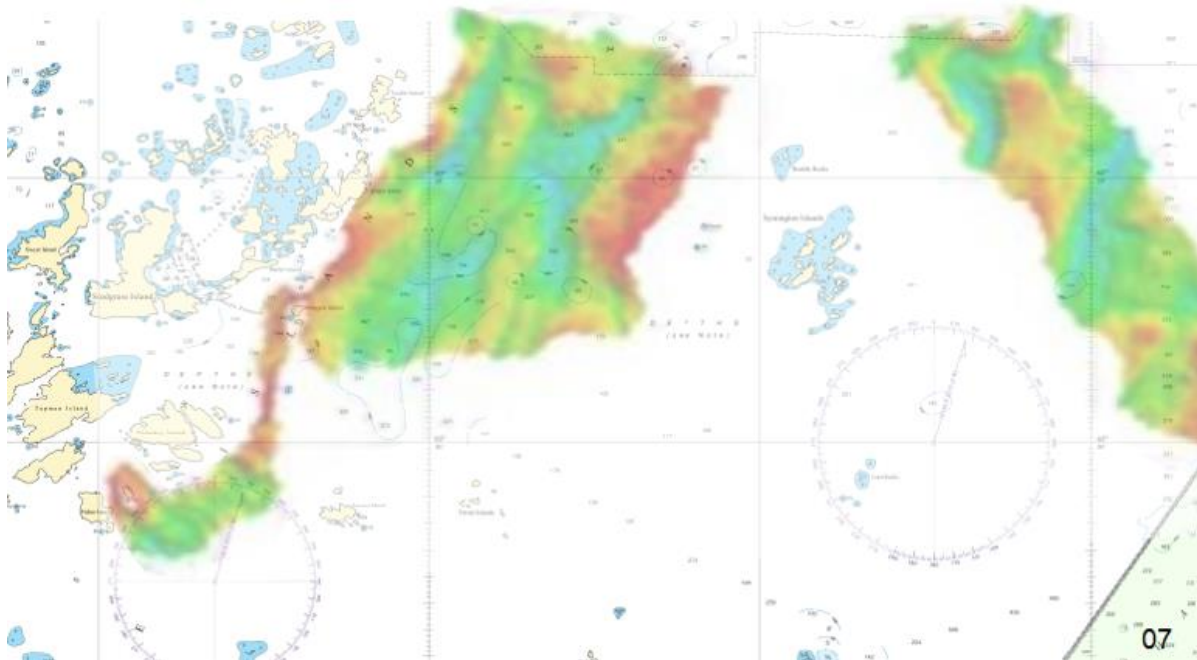


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# Survey Progress in Antarctica since HCA-17 (June 2021)

## Pitt Islands (INT 9132)



55 Nm<sup>2</sup> opportunistic data collect in unsurveyed areas



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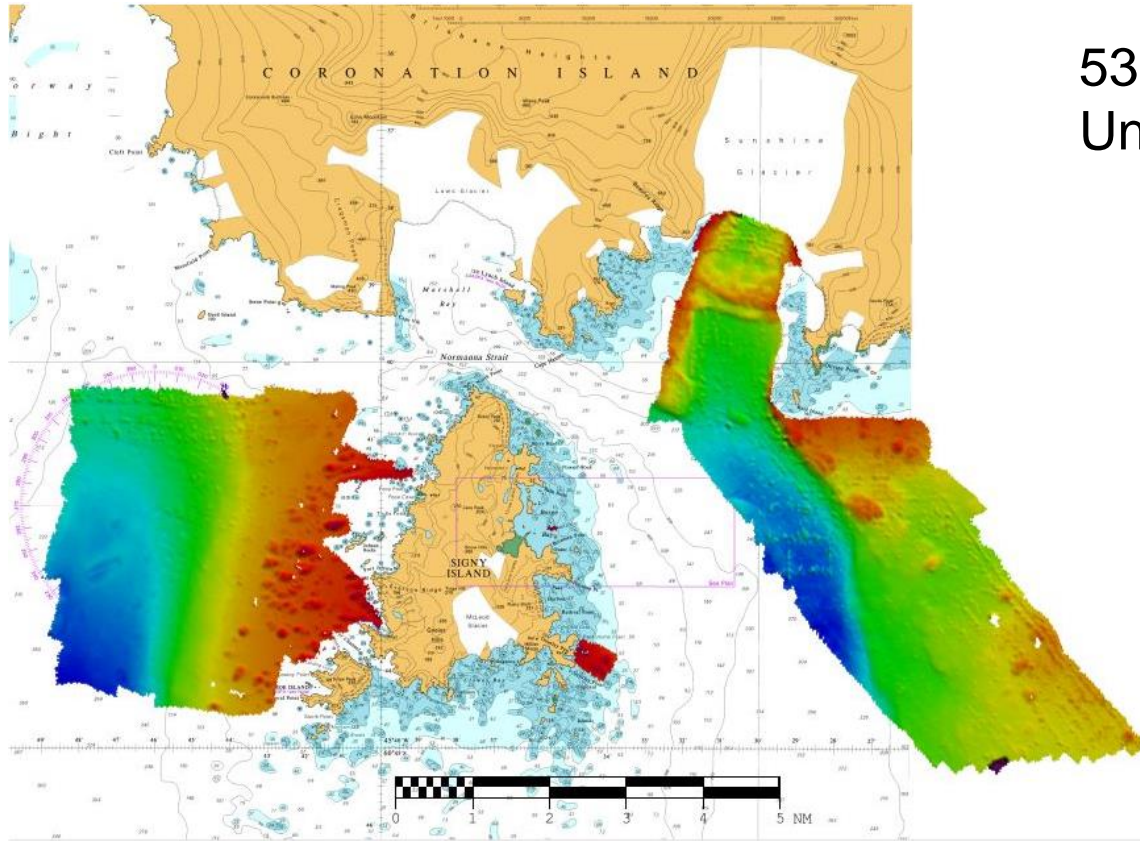


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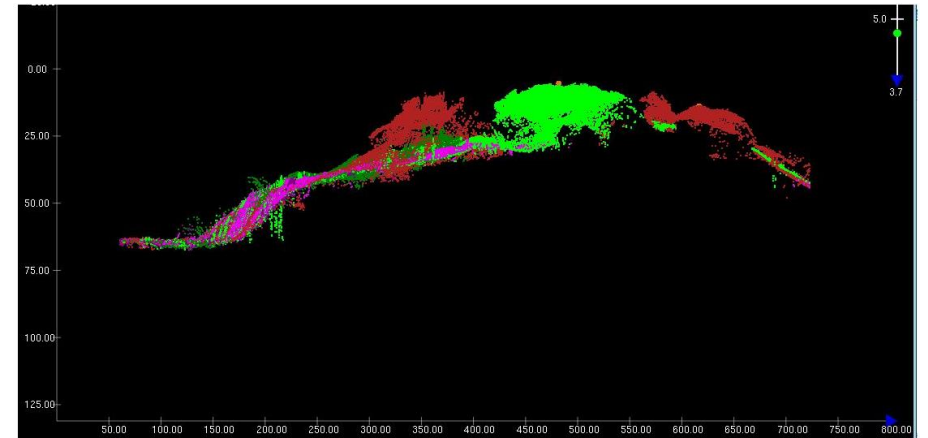
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# Survey Progress in Antarctica since HCA-17 (June 2021)

## South Orkney Islands - Signy Island (INT 9141)



53 Nm<sup>2</sup> to support BAS  
Uncharted shoal detected west of Signy



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# Survey and Charting Progress in Antarctica since HCA-17 (June 2021)

- **New charts produced** (INT, national, ENC) - Nothing to report
- **Risk assessment studies** - Continue to monitor survey priorities against traffic data and ZoC (via ZOC Working Group)
- **Impact of ATCM Resolutions (such as ATCM42, Resolution 6 (2019)\*) on surveys, data collection and sharing** - UK is complying with the spirit the recommendations on all fronts, notably greater surveying programme and cross government collaboration (easier said than done)

\*HCA Statutes, Appendix C3 refers

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# Relations with Other Organisations

## Scientific and Polar Institutes



**Natural  
Environment  
Research Council**

- British Antarctic Survey is the UK's focal point for Antarctic research and operations which employs around 500 personnel. Based in Cambridge it is part of the Natural Environment Research Council and has an annual budget of £50 million.
- UKHO working with BAS to improve standard of scientific data collection for charting purposes



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# Relations with Other Organisations

## British Antarctic Survey (BAS) – RRS *Sir David Attenborough* Maiden Voyage

- Replaces both RRC James Ross Clark & Ernest Shackleton
- SDA is fitted with Kongsberg EM122 and EM712 multibeam systems, the workboats has an EM2040 multibeam echosounder for shallow water surveys
- 2022/23 Antarctic season is already looking very busy; opportunistic bathymetric data will be collected whenever possible, especially in areas of poor coverage.



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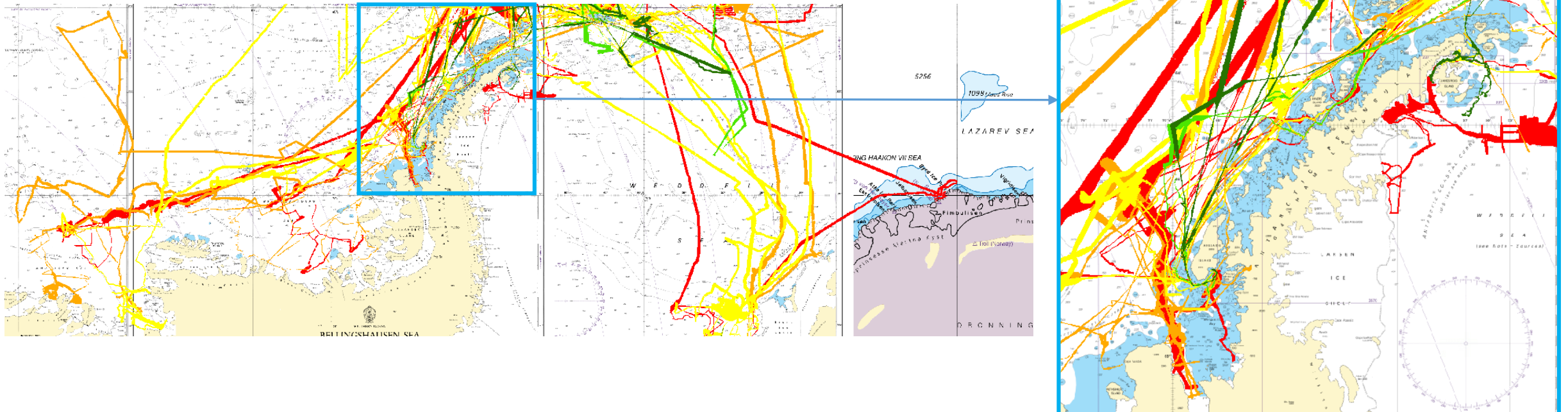


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# Relations with Other Organisations

## Hydrographic Data Received from other Organisations

- UKHO continues to acquire historical BAS datasets



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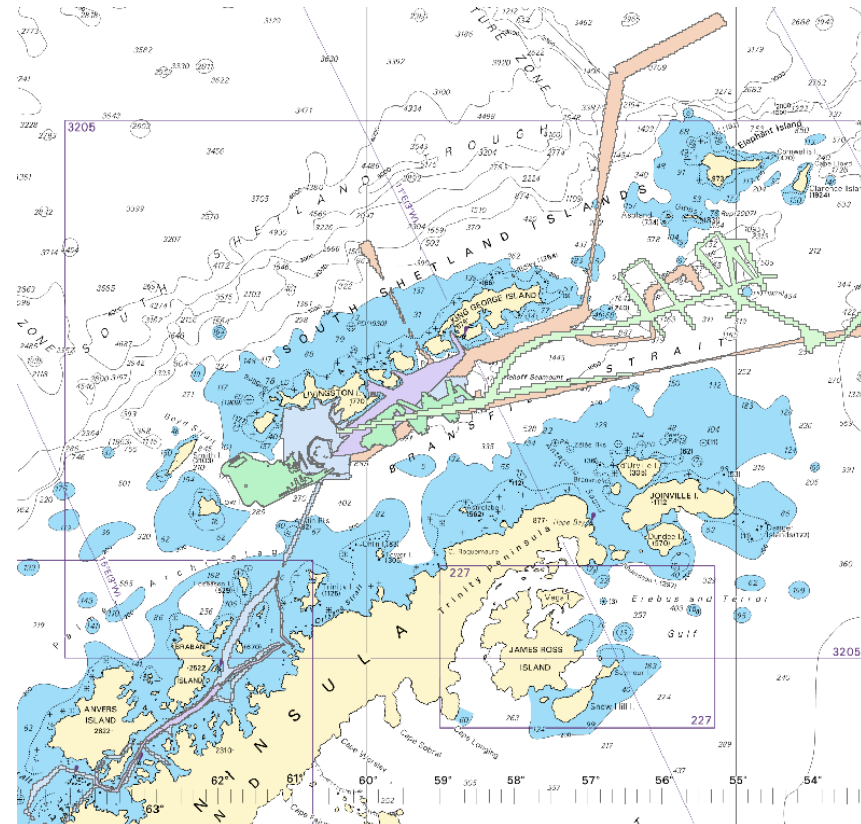
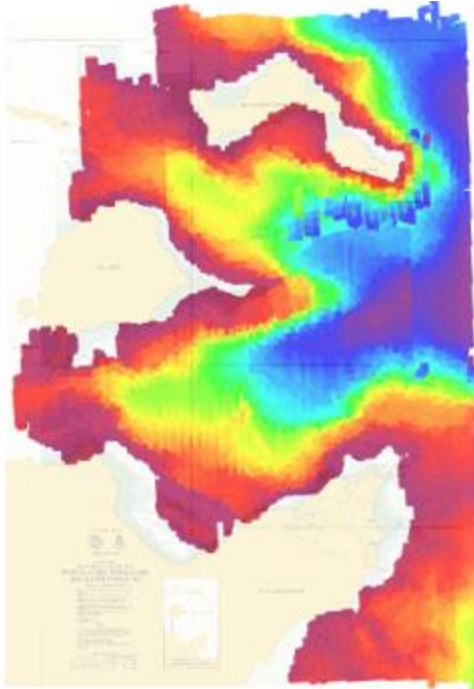


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# Relations with Other Organisations

## Hydrographic Data Received from other Organisations

- Survey reference limits received for HPWG planning from:
  - Spain (2016-21)
  - Ecuador



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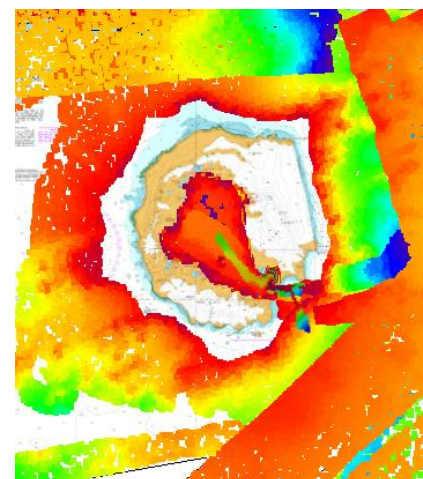
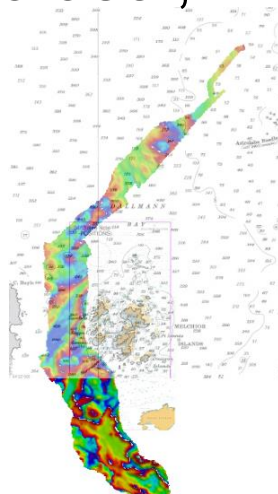
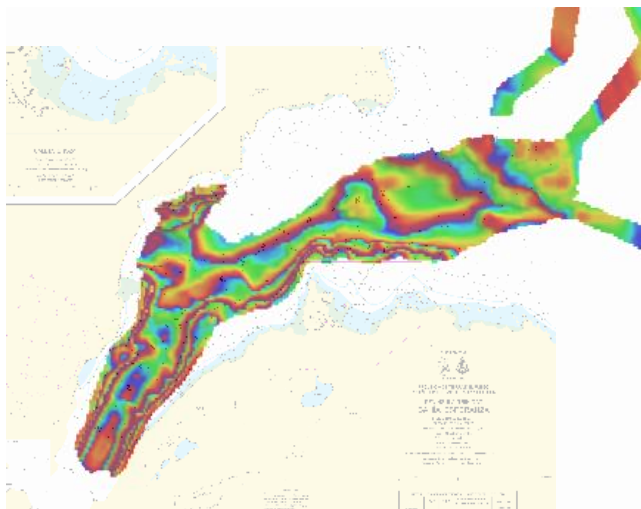
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# Relations with Other Organisations

## Hydrographic Data Provided to other Primary Charting Authorities

- The following surveys have been shared since our last National Report (HCA 16):
  - 16 Deception Island datasets, INT 9120 – Argentina
  - 1 Melchior Island dataset, INT 9170 - Argentina
  - 1 Hope Bay dataset , INT 9101 - Argentina
  - 1 McFarlane Strait dataset, INT 9317 – Spain



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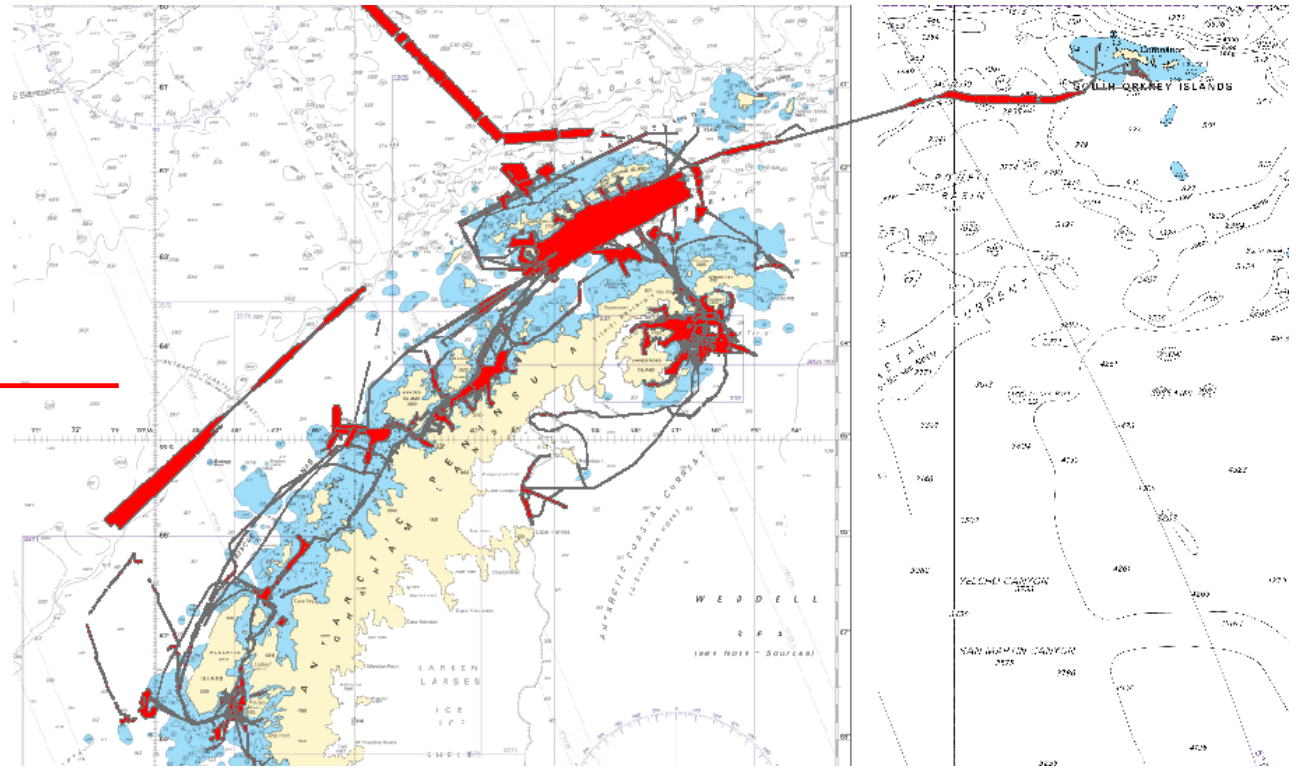
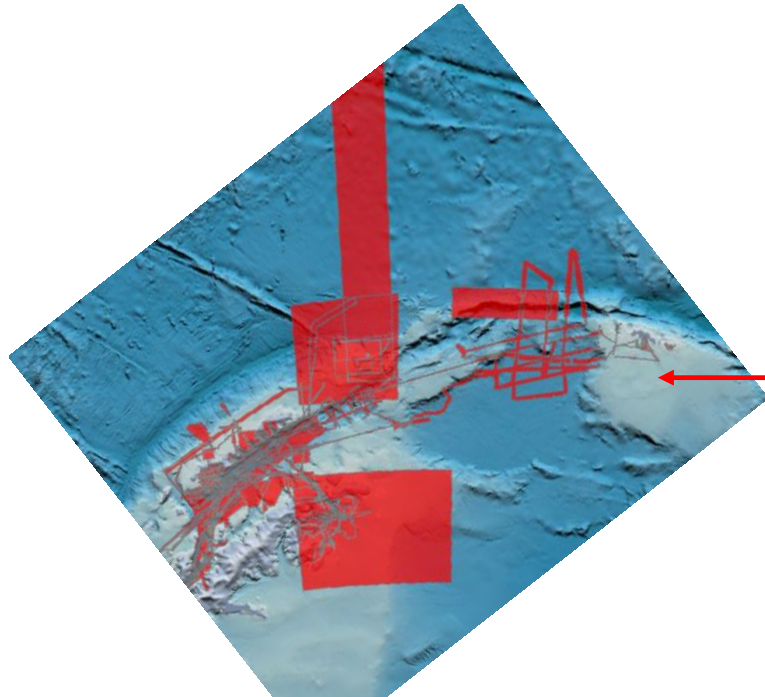


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# Relations with Other Organisations

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- UK hydrographic surveys (to 2021) are now visible within the HCA GIS application



IHO\_HCAGIS

updated in January 2022

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# Relations with Other Organisations

- GEBCO & Seabed 2030



*Peter Sparkes, Chief Executive at UKHO (left) and Jamie McMichael-Phillips, Seabed 2030 Project Director (right)*

- In March 2022 GEBCO Seabed 2030 Project and UKHO signed a memorandum of understanding which will see the parties work together to advance the industry's understanding of ocean bathymetry, and in support of the Decade of Ocean Science for Sustainable Development.
- As part of this partnership, the UKHO will provide bathymetric gridded map products to be used by within the GEBCO gridded bathymetric data set. UKHO will also share and promote methods and best practices in technological innovation, infrastructure, and solutions for ocean mapping and bathymetric data management.
- The UKHO have already begun sharing data as part of a data sharing trial in the Southern Ocean Region and will be looking to expand the data offering over the following months and years.

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# Planned Activities for 2022-2023

## UK data collect priorities & coordination for 2022/23

- HMS Protector prioritisation will remain aligned with the HCA HPWG survey priorities agreed at HCA18.
- Opportunistic survey and passage data will continue to be gathered in areas of operation to support INT charting.
- UKHO will continue to work with British Antarctic Survey to maximise survey capabilities of RRS *Sir David Attenborough*





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# Planned Activities for 2022-2023

## Planned Chart Activity

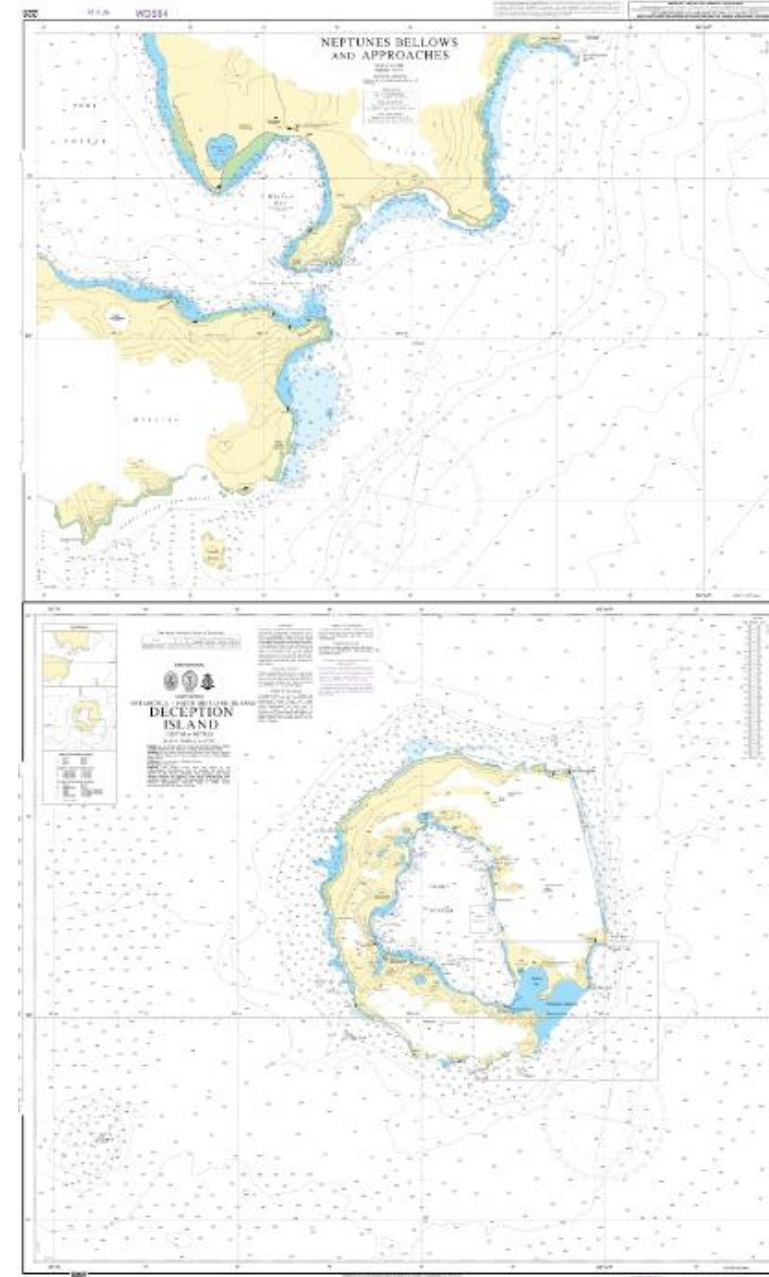
Readoption of INT 9120 – Deception Island

Subject to ICCWG approval:

New UB5 or 6 ENC of Biscoe Wharf, Rothera

Possible update/rescheme INT 9109 to include:

- schemed plan of Biscoe Wharf (INT 9113)
- Sally Cove (INT 9163)





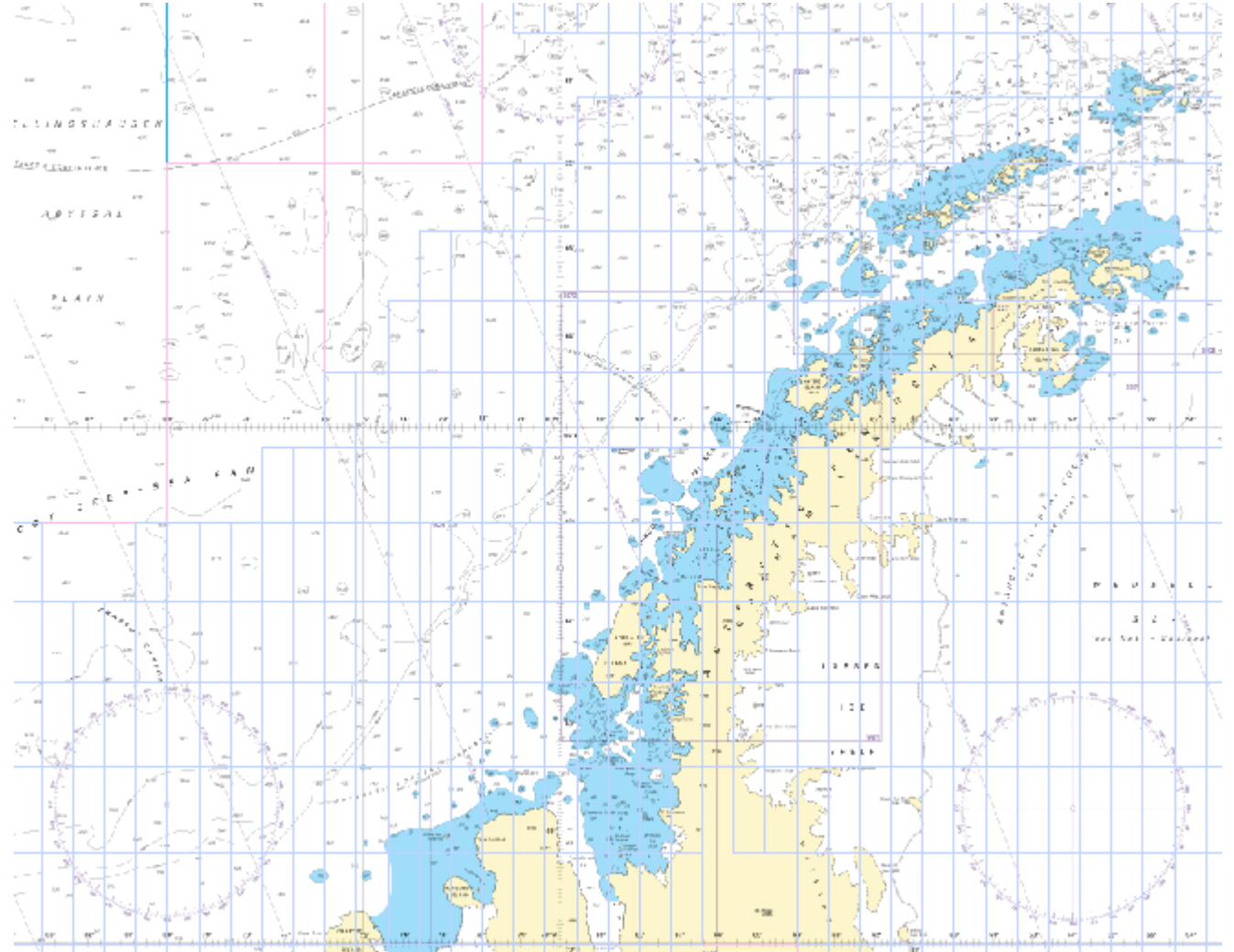
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# Planned Activities for 2022-2023

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- Further deployment of HMS PROTECTOR to conduct survey programme; some limited survey work by RSS SDA
- Coordinated development of S-100 services in the region; focusing on the detailed development of S-101 (Electronic Navigational Chart (ENC)), S-102 (Bathymetric Surface), S-104 (Water Level Information for Surface Navigation) and S-111 (Surface Currents)\*

\*Action WENDWG12/33 refers



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## Other matters of relevance to HCA

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- Note the report
- Recommend members use the HCA GIS to discover UK data for charting