



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

## **Report of the HPWG**

### **Agenda item 07.2A**

HCA-17, VTC, **14 June 2021**



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# Agenda

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## **Hydrographic Priorities Working Group Update**

- Survey Activity Update
- MSR Review
- Beacons Checklist

## **Actions to be considered by the HCA**



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# HCA Survey Activity Update

Data based on update provided by members AR, AU, BR, CL, CO, ES, FR, IN, IT, JP, NO, SA, US & UK.  
No updates from CN, EC, GR, RoK, NZ, PE, RU, UY & VE

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# HCA Survey Activity Update

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## Survey Activity since HCA 16 or last National Report

### SHN – Argentina

In progress:

1. Canal Active, Isla Dundee – [INT 9115 \(AR\)](#) & [9154 \(GB\)](#) – [MSR Ap](#)

Planned 2020-21:

1. Media Luna Island, Camara Antarctic Base. – [INT 9121 \(ES\)](#) & [9137 \(ES\)](#) [MSR Ae](#)
2. Esperanza Bay, Esperanza Antarctic Base. – Foca Point [INT 9101 \(AR\)](#) [MSR E](#)

### DHN – Brazil

Since HCA16:

1. Southern Ocean Passage
2. Livingston Island – [INT 9151 \(BR & CL\)](#)
3. King George Island – [INT 9152 \(BR & CL\)](#)

Planned 2021-22:

1. Further surveys to support the production of INT 9151 & 9152

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# HCA Survey Activity Update

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## Survey Activity since HCA 16 or last National Report

### IMM – Italy

Since HCA16:

1. Nothing to report.

Planned 2021-22:

1. Planed Terranova Bay - INT 9005 (IT)



Commission to note RV Laura Bassi is fitted with new multibeam which has shallow and deep water capability

### SHOA – Chile

Since HCA16:

1. Surveys postponed due to COVID

Planned 2021-22:

1. Deception Island (rock investigation) - INT 9120 (AR) vicinity of MSR17a and Ac

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## Survey Activity since HCA 16 or last National Report

### IHM – Spain

Since HCA16:

1. Geophysical Survey the North of Bransfield Strait and Power Basin.

Planned 2021-22:

1. Nothing further

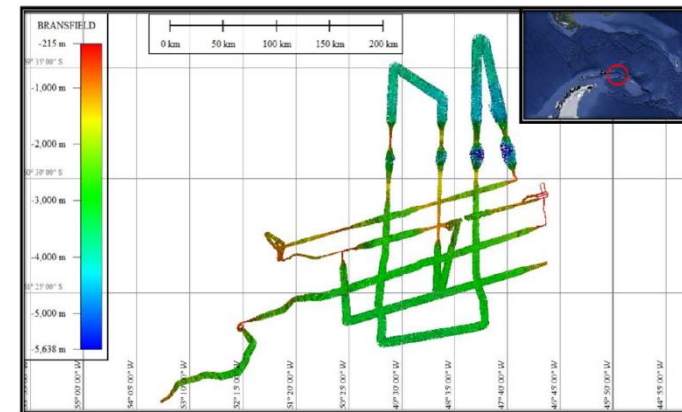
### HOD – Japan

Since HCA16:

1. Lutzow-Hombukta – [INT 75 \(GB\)](#)

Planned 2020-21:

1. Media Luna Island, Camara Antarctic Base. – [INT 9121 \(ES\)](#) & [9137 \(ES\)](#) [MSR Ae](#)
2. Esperanza Bay, Esperanza Antarctic Base. – Foca Point [INT 9101 \(AR\)](#) [MSR E](#)
3. Lutzow-Hombukta – [INT 75 \(GB\)](#)



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## Survey Activity since HCA 16 or last National Report

### UKHO – UK

Since HCA16:

1. Nothing to report.

Planned 2021-22:

1. Martha Strait [INT 9160 \(UK\)](#), [INT9172 \(RU\)](#), [INT9171 \(UK\)](#), [MSR V](#)
2. Rothera [INT 9109 \(UK\)](#) [9113 \(UK\)](#)



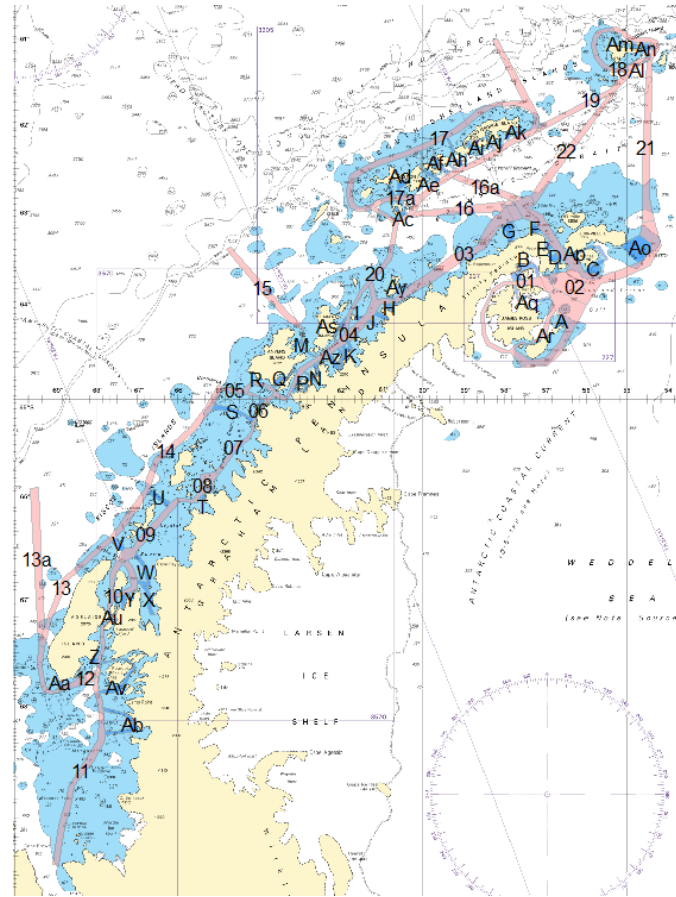
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# Antarctica Peninsula MSR Review



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# Peninsula MSR Review

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## Background

- In May 2021 the HPWG Chair undertook a comprehensive review of the 78 Antarctic Peninsula MSRs.
- This review is a comparison of the survey quality of published data using ENC Zones of Confidence against AIS data to inform decisions on the priority and coverage of Antarctic Survey requirement maintained in the Long and Short Term Survey Plans by the HPWG Chair.

### HCA LONG TERM SURVEY PLAN Updated to July 2019

#### Table of MSRs, base/site calls, usage category, and current survey category

Note: In the tables below, high priority surveys have been emphasized in **yellow**. Indications of planned surveys appear in **red**. Indications of surveys completed appear in **blue**.

#### I. ANTARCTIC PENINSULA

##### Categories

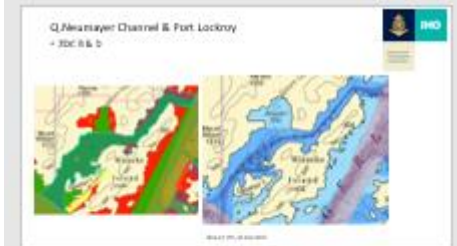
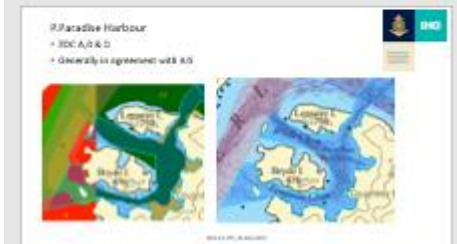
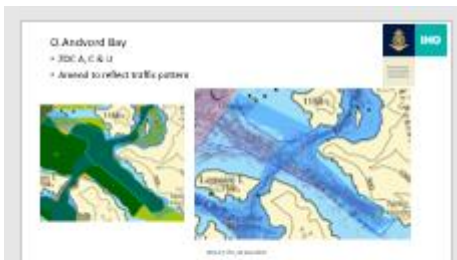
Category	Usage
A	Frequent
B	Regular
C	Infrequent

Category	Current survey status
A	Adequately surveyed
B	Requires re-survey at larger scale or to S-44 standard
C	Has not been systematically surveyed/Unsurveyed

#### Main corridors (see diagram on last page for MSR references)

MSR #	Name	Usage category	Survey category	Notes and INT chart coverage. Published and proposed.
1	James Ross Island circular route	B+C	A + C	Prince Gustav Channel & Eastern corridor 55% surveyed. 45% unsurveyed. <b>Blocks surveyed by UK 2005-07. Blocks planned by UK for future seasons.</b> INT 9153
2	Joinville Island circular route	A+B	A + C	45% surveyed (Antarctic Sound), 55% unsurveyed. <b>Blocks surveyed by UK 2005-17 and Uruguay &amp; Venezuela 2008. Blocks planned by UK for future seasons.</b> INT 9154
3	Orleans Strait to Antarctic Sound	B	B + C	INT 9155 <b>Blocks surveyed by Chile 2018. 10% complete</b>
4	<b>Gerlache strait</b>	<b>A</b>	<b>A + C</b>	97% surveyed. INT 9103, 9104, 9165, 9156 & 9157 <b>Blocks surveyed by Chile 2010-18, Colombia 2015, Spain 2016 &amp; UK 2005-17 also Flandres Bay 35% surveyed</b>
5	Bismarck Strait	A+B	A + B	Approaches to Palmer Station and Port Lockroy. INT 9158. <b>Block surveyed by UK 2005-06, 2011 &amp; Chile 2010, 2011, 2016</b>
6	Lemaire Channel	A	A+B	Petermann Is, Pleneau Is, Argentine Is, Yalour Is. 75% surveyed. INT 9106 INT9118. <b>Block surveyed by UK 2005/06 &amp; 2012/13 &amp; Xplore expeditions/SHOM 2013</b>
7	<b>Grandidier Channel</b>	<b>A+B</b>	<b>B</b>	INT 9158, INT9132 & 9159 15% surveyed. <b>Blocks surveyed by UK</b>
8	Cape Garcia to Jagged Island	B	C	15% surveyed. INT9107 & 9159 <b>Blocks surveyed by UK 2006/07</b>
9	Crystal Sound	B	B	INT 9160 <b>Blocks surveyed by UK 2017 60% complete</b>
10	Liard Island to Rothera	B	C	INT 9161, 9108 & 9163 <b>Blocks surveyed by UK 2018 10% complete</b>
11	Marguerite Bay	C	B + C	INT 9163 & 9164
12	Woodfield Channel	C	B	INT 9163
13	Woodfield Channel to Matha Strait	B	C	INT 9162 & 9160
13a	Northern transit from Adelaide Is.	C	C	INT 9162
14	<b>Matha Strait to Hugo Island</b>	<b>B</b>	<b>C</b>	INT 9160, 9159 & 9158 <b>Blocks surveyed by UK 2017 15% complete</b>
15	Exit from Melchior Islands	B	B + C	INT 9156, 9157 & 9158

\* MSR = Maritime Shipping Route. The figures / letters in this column are shown on the MSR diagram which is on the last page.



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# Peninsula MSR Review

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## Methodology

- 2019 & 2020 AIS data supplemented where necessary from other open sources.
- Used 100m resolution AIS for ECDIS regulated, non ECDIS regulated and unregulated vessels.
- ZoCs were used to indicate the quality of survey data.
- MSRs for the mainland and South Orkney were not reviewed.



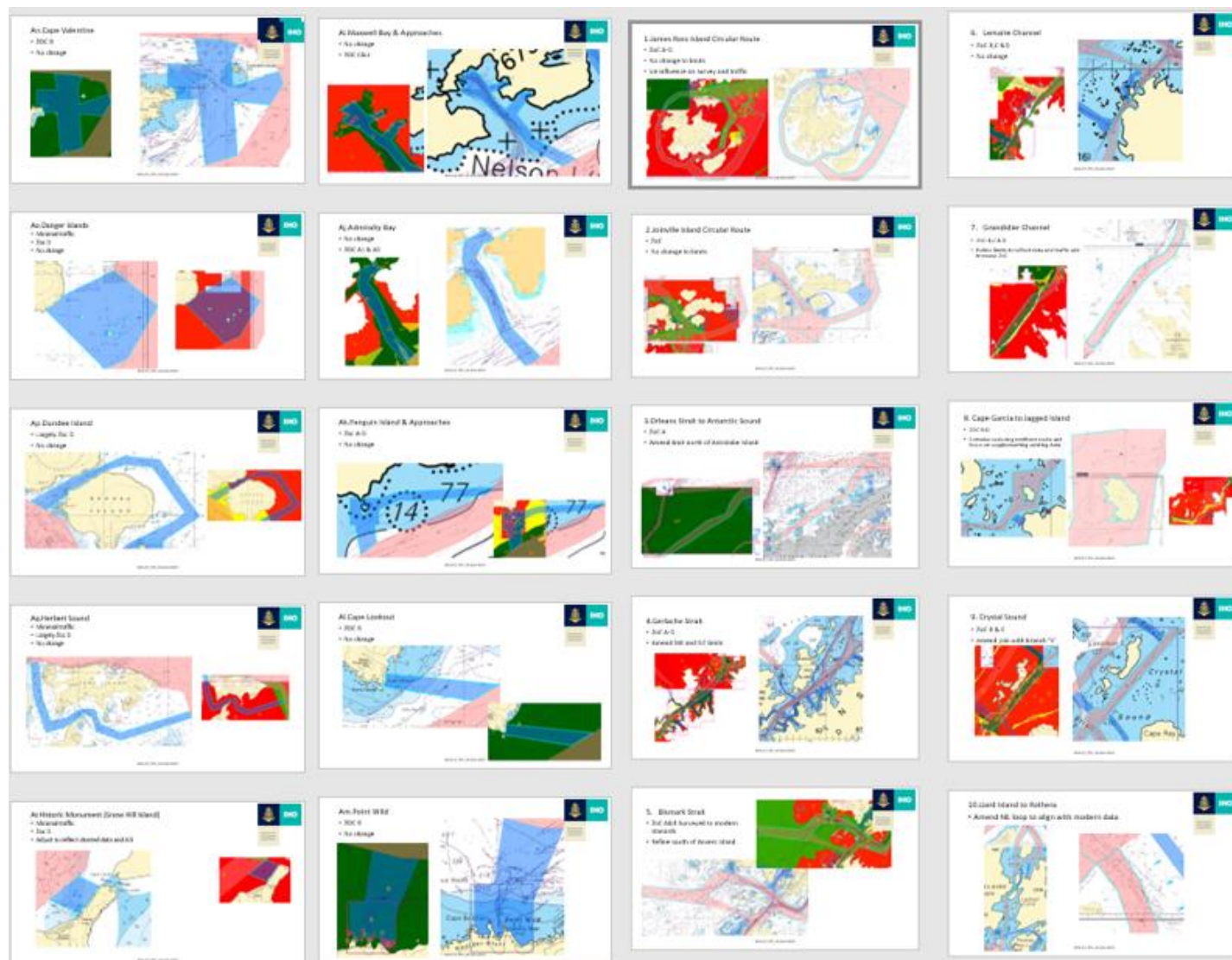
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# Peninsula MSR Review

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## Output

- The full review is contained in a separate document.
- Key findings are:
  - MSR needs refining due to published data affecting vessel routes
  - 18 amendments to MSRs
  - 19 amendments to BCs
  - Amends mainly include realignment but there are also deletions



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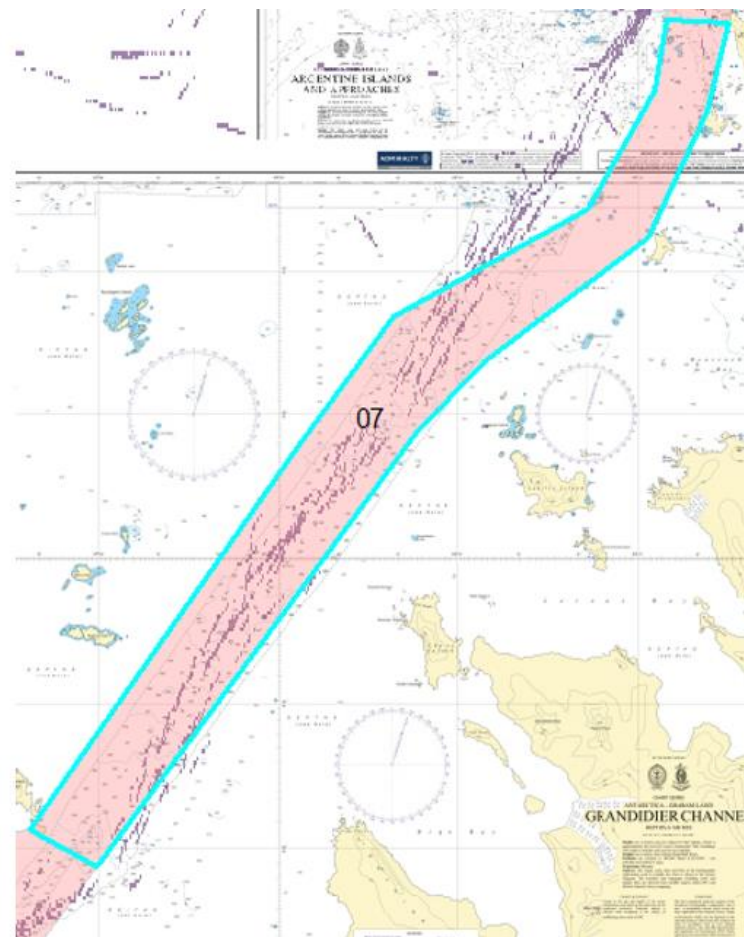
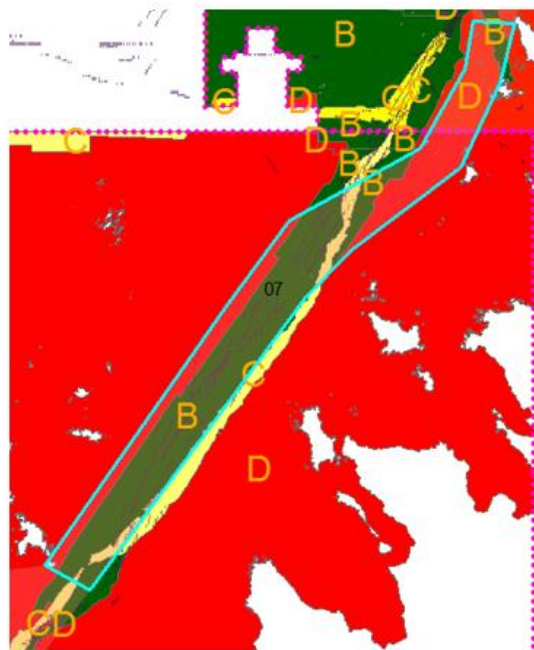
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## Example MSR 7 Proposal

### 7. Grandidier Channel

- ZOC B,C & D
- Refine limits to reflect data and traffic and increase ZoC



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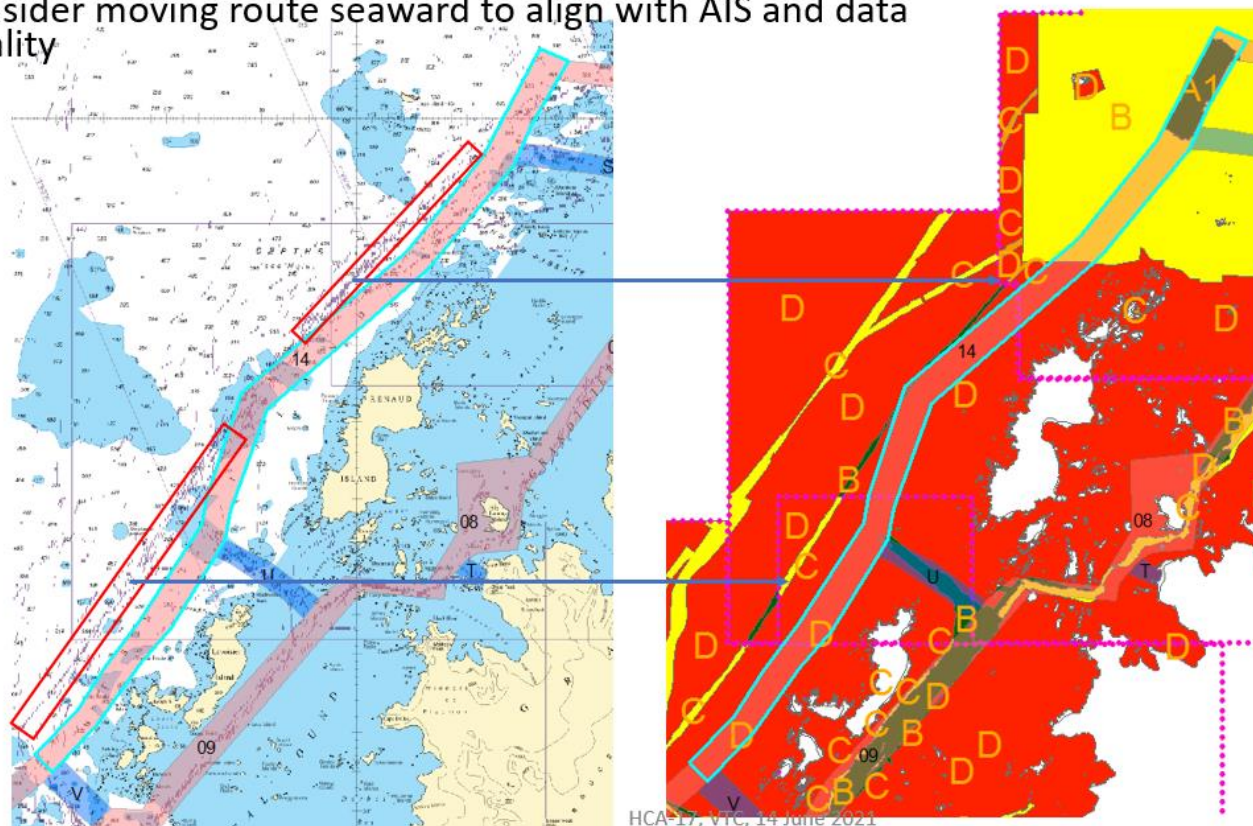
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## Example MSR 14 Proposal

### 14. Martha Strait to Hugo Island

- Amend southern limit (see MSR 13),
- consider moving route seaward to align with AIS and data quality



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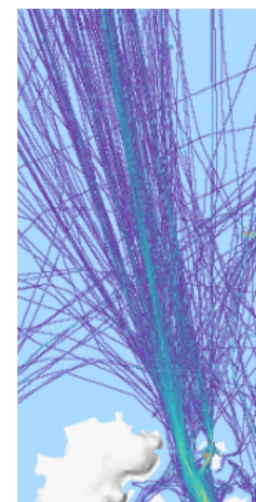
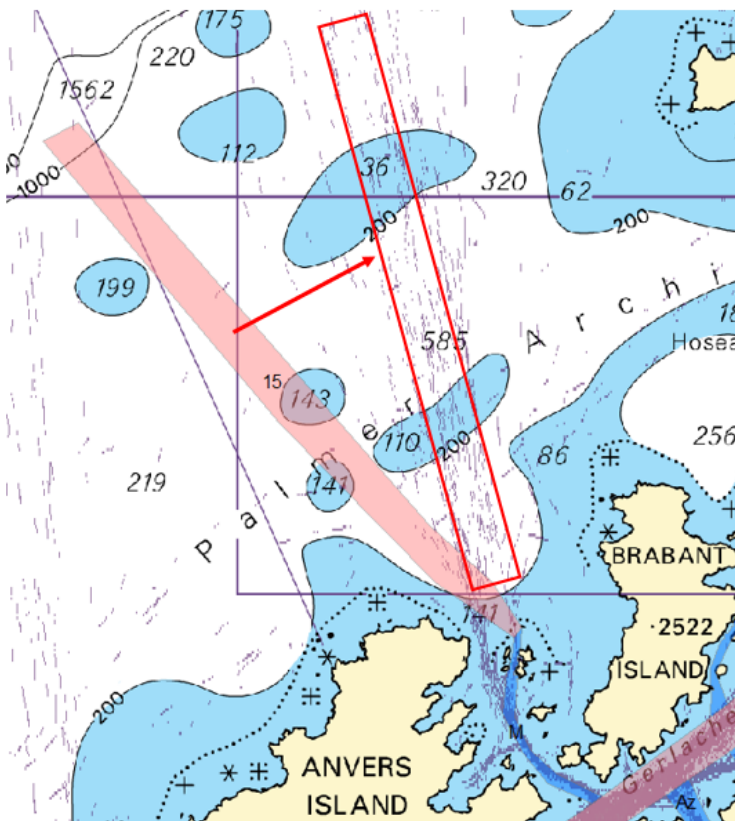
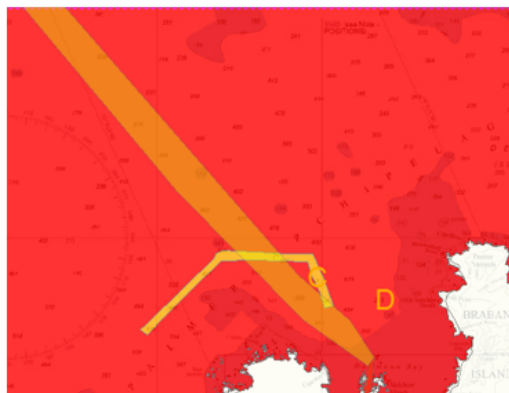
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# Peninsula MSR Review

## Example MSR 15 Proposal

15.Exit from Melchior Islands

- Amend to align with AIS Data



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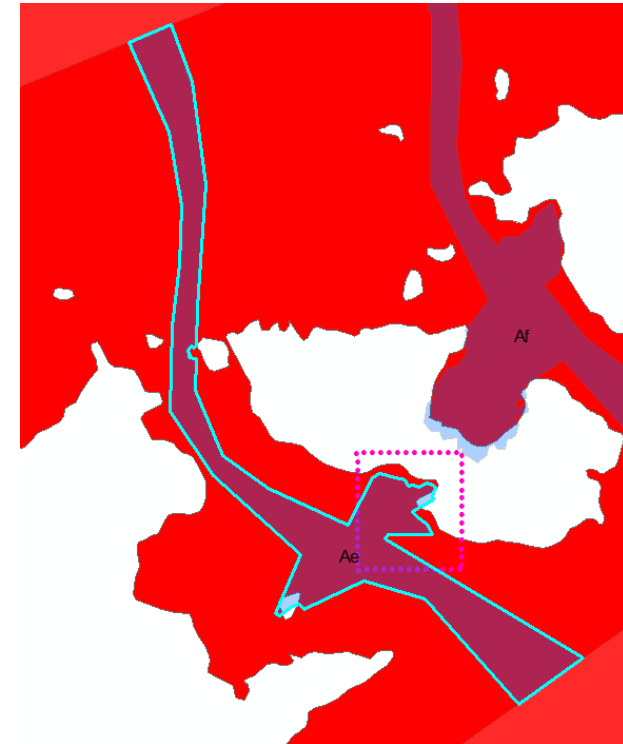
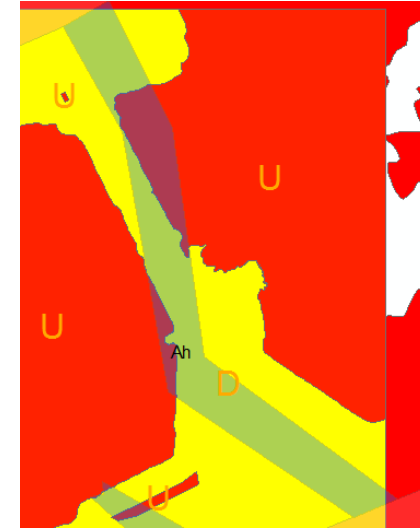
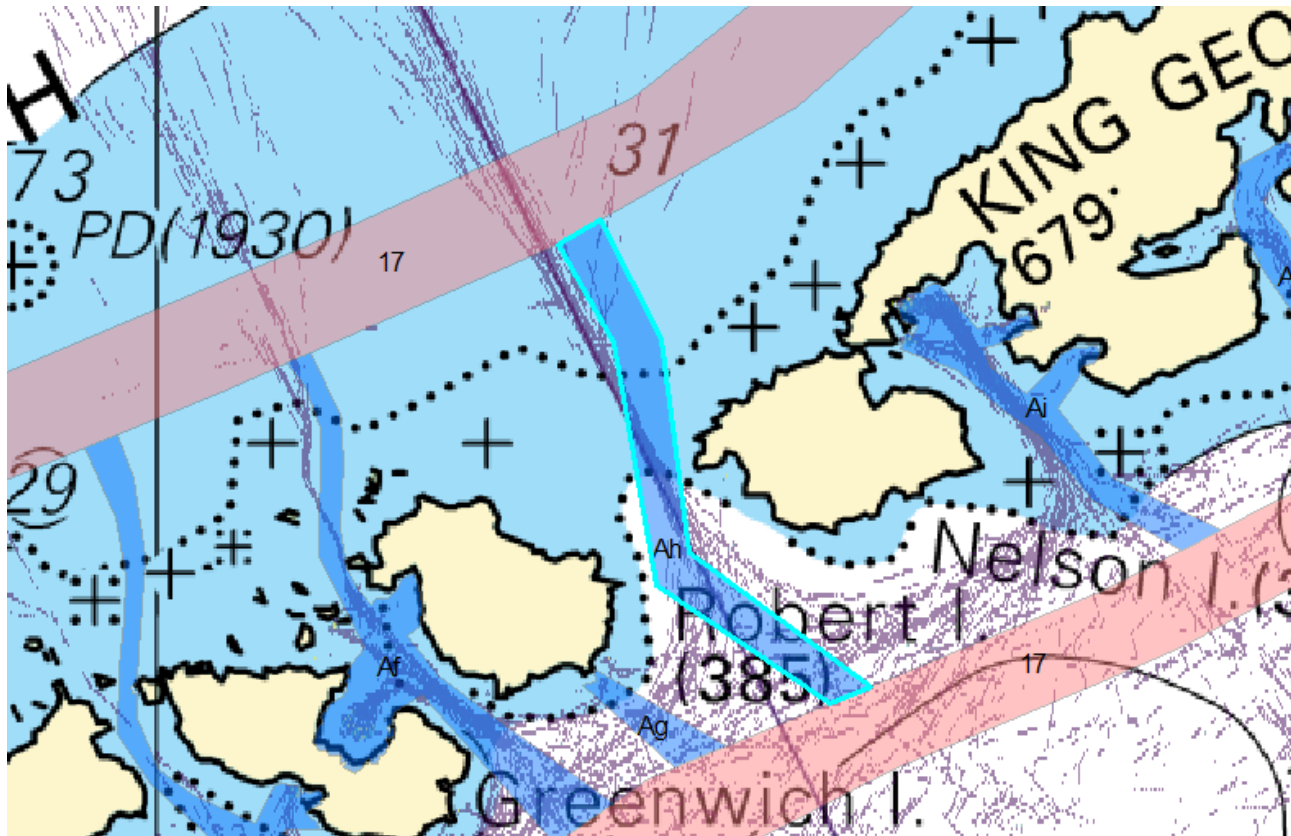


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# Peninsula MSR Review

## Example BC Ae, Ah & Af Proposals

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# **HCA Peninsula Beacon Checklist**

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# HCA Peninsula Beacon Checklist

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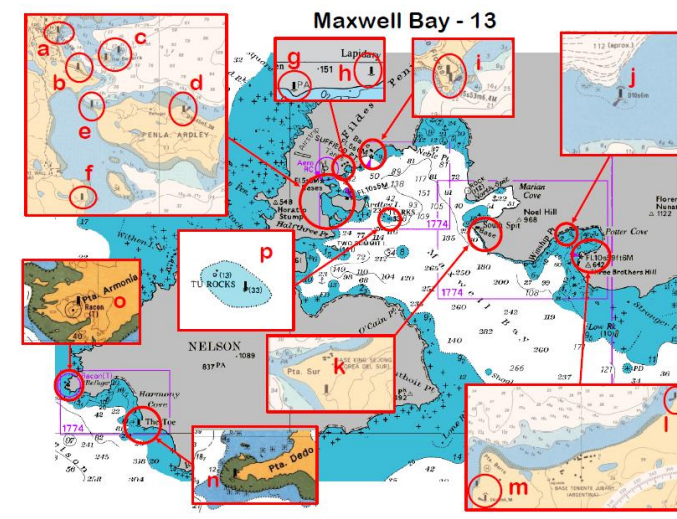
## Updates to the Peninsula Beacon Checklist

- List and supplementary graphic have been updated for latest observations
- Reformatted from .wrd to .xls
- Additional columns for locality and INT charts

Identifier	Area	Location	Description	Latitude	Longitude	INT Chart	Existence?	Position Checked?	Light Checked?	Photo?	Other Observations	Source (Year)
13K	Maxwell Bay	King Sejong	Beacon	62 13.60S	058 47.29W	9123 (CL 14211) 9124 (CL 14212)	Y				Red	James Clark Ross (2019)
13L	Maxwell Bay	Potter Cove	Light Fl.7s10m3M (G1387.7)	62 14.04S	058 39.28W	9123 (CL 14211) 9124 (CL 14212)				Y		L Truscott (2020)
13Ma	Maxwell Bay	Potter Cove - Jubani	Beacon	62 14.35S	058 40.79W	9123 (CL 14211) 9124 (CL 14212)				Y		L Truscott (2020)
13Mb	Maxwell Bay	Potter Cove - Jubani	Light Fl.4s18m6M (G1387.6)	62 14.40S	058 40.73W	9123 (CL 14211) 9124 (CL 14212)	Y			Y		L Truscott (2020)
13N	Maxwell Bay	Harmony Cove	Beacon	62 19.66S	059 09.99W	-						
13O	Maxwell Bay	Armonia Point	Beacon	62 18.35S	059 14.18W	-	Y		NA	Y	RW bands. Racon inoperative	A Willett (2020)



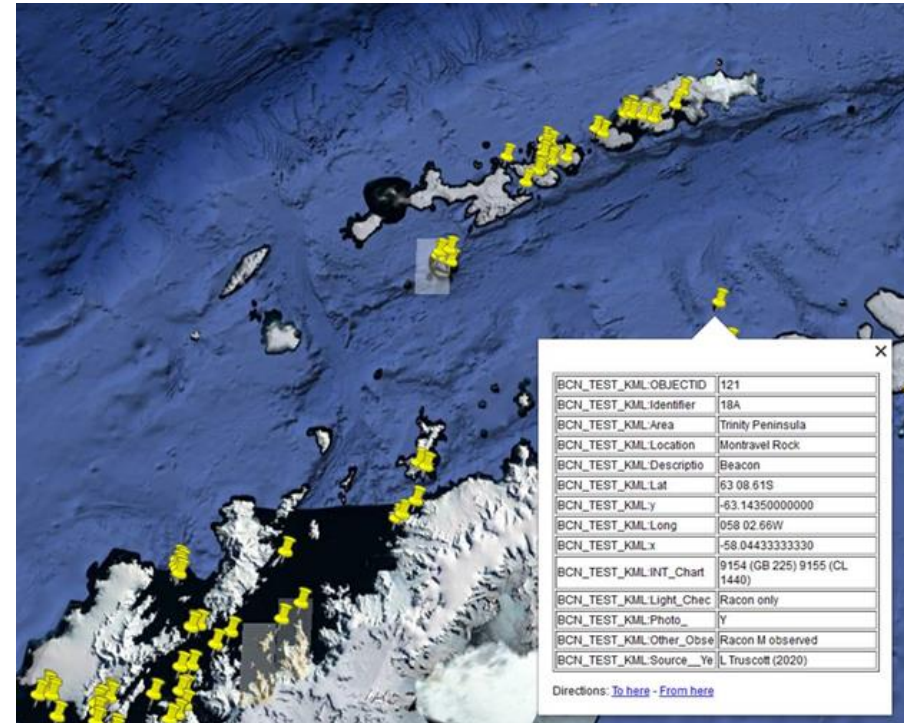
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- Extracted into .shp & xlm files for improved interoperability



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# **Actions to be Considered by the HCA**

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# Actions to be Considered by the HCA

Members are invited to:

- Provide any outstanding updates to incorporate in the report.
- Consult the HPWG/members regarding data during production of products.
- Refer to the MSR documents.
- Consult with producer nations to avoid duplication of survey activities
- Provide beacon checklist to vessels.
- Refer to the HCA Survey Plan and consult HPWG Chair prior to production of products to ensure the latest data is used to provide the most up to date information to the mariner.