



# Report into the Grounding of the reefer

## **'Frio Chikuma'**

Port William, Falkland Islands  
3<sup>rd</sup> April 2024



## NOTE

This report is not written with litigation in mind and, in pursuant to Regulation 14(14) of the Merchant Shipping (Accident Reporting and Investigation) Regulations 2012, shall be inadmissible in any judicial proceedings whose purpose, or one of whose purposes is to attribute or apportion liability or blame.

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## **GLOSSARY OF ABBREVIATIONS, ACRONYMS AND TERMS**

2O	Second Officer
3O	Third Officer
AAR	After Action Review
AHM	Assistant Harbour Master
AIS	Automatic Identification System
BFSAI	British Forces South Atlantic Islands
Ch	Channel
CRO	Chief Resilience Officer
DSC	Digital Selective Calling
ECMP	East Cove Military Port
ETA	Estimated Time of Arrival
FPV	Fishery Protection Vessel
FICZ	Falkland Islands Inner Conservation Zone
FIGAS	Falkland Islands Government Air Service
FIMA	Falkland Islands Maritime Authority
MD	Managing Director
GMDSS	Global Maritime Distress and Safety System
HM	Harbour Master
HoMA	Head of Maritime Authority
IMO	International Maritime Organization
IW	Inner Whiskey anchorage
JESIP	Joint Emergency Service Interoperability Program
JCR	Joint Control Room
JCRO	Joint Control Room Operator
JOC	Joint Operations Centre
JRCC	Joint Rescue Coordination Centre
Kts	Knots

KW	Kilowatt
m	Metres
MPC	Mount Pleasant Complex
MT	Metric Tonnes
nm	Nautical Mile
OW	Outer Whiskey anchorage
RT	Radio Telephony
RHIB	Rigid Hull Inflatable Boat
RFIP	Royal Falkland Islands Police
RYA	Royal Yachting Association
SAERI	South Atlantic Environmental Research Institute
SO2	Staff Officer 2
SOG	Speed Over the Ground
SSL	Stanley Services Limited
UTC	Coordinated Universal Time
VHF	Very High Frequency Radio
Z	Zulu – UTC

## SUMMARY

At 0115 (UTC-4) on 3<sup>rd</sup> April 2024, the reefer vessel *Frio Chickuma* dragged her anchor and ran aground during storm force winds and on a falling tide on the southwestern shoreline of Port William approximately 0.3nm from Navy Point, Falkland Islands. The wind at the time was storm force 10 (winds more than 50 Kts) from the North. The vessel was unable to free itself from the shoreline given the wind speed and the light condition of the vessel.

The vessel was refloated 24 hours later with the assistance of a British Forces South Atlantic Islands (BFSAI) tug and a local launch. The vessel remained upright, there were no injuries and no pollution.

After the vessel was refloated, an inspection team dived to inspect the underwater structure of the vessel. Their report was passed on to the ship's owner, the flag state of the vessel and to the classification society who permitted the vessel to start her transshipping operations and proceed to sea once complete.

The Chief Inspector of Marine Accidents investigated the grounding and identified the following:

- The vessel was anchored at the anchorage allocated to it prior to arrival at the reporting line which was considered sufficient for the type of vessel and the predicted weather conditions that had been forecast.
- The vessel's Master was familiar with the harbour of Port William and the weather conditions that were expected on the day of the grounding. This was not the master's first visit to Port William.

## SECTION 1 – FACTUAL INFORMATION

### 1.1 PARTICULARS OF *FRIO CHIKUMA*

<b>Ship Particulars</b>	
<b>Vessel name</b>	Frio Chikuma
<b>Flag</b>	Panama
<b>Callsign</b>	3FWG8
<b>Classification Society</b>	Nippon Kaiji Kyokai
<b>IMO Number</b>	9184536
<b>Type</b>	Refrigerated cargo ship
<b>Registered owner</b>	Sky Global Maritime SA - Lavinia
<b>Construction</b>	Steel
<b>Year of build</b>	1998
<b>Length overall</b>	135m
<b>Breadth</b>	20m
<b>Gross tonnage</b>	7367
<b>DWT</b>	8097
<b>Engine Type</b>	Mitsubishi
<b>Engine Power</b>	7060KW
<b>Builder</b>	Kyokuyo Shipbuilding & Iron works – Shimonoseki, Japan



*Frio Chikuma, under its previous name of Chikuma Reefer* Photo courtesy of Marine Traffic

## 1.2 NARRATIVE

### 1.2.1 Grounding



**0925** Local time (UTC -3) on the morning of 2<sup>nd</sup> April 2024, The *Frio Chikuma* crossed the Port William reporting line and passed her entry information to Stanley Port Control by Very High Frequency Radio (VHF) radio on Channel (Ch) 10. The vessel then proceeded to her allocated anchorage at IW2 and let go her Starboard anchor at 1000 to 6 shackles<sup>1</sup> in the water (**Figure 1**). The wind at the time, as recorded by the vessel, was northerly at 22kts<sup>2</sup>. There were two other vessels at anchor in Port William that day, the *Frio Marathon* at IW4 and the *Witney Bay* at IW7.

**1605** A routine broadcast was made by Stanley Port Control<sup>3</sup> on VHF Ch 10 and 16. This was a repeat broadcast from one made at 0830 earlier in the day. The broadcast included a gale warning for the Falkland Islands Inner Conservation Zone<sup>4</sup> (FICZ) issued by the Mount Pleasant Complex<sup>5</sup> (MPC) Meteorological Office. The forecast for Stanley Harbour showed that between midnight and 0300 the wind was expected to be gusting 30-40Kts and backing to the southwest 25-30Kts gusting 45–50 Kts.

**2000** The Third Officer (3O) took over the watch from the Chief Officer to commence his four-hour watch where he would be relieved by the Second Officer (2O) at midnight. The Master was on the bridge with the 3O for the duration of his watch given the wind expected that evening.

**2340** It was recorded that the wind had increased to North Easterly at 50 Kts gusting 50Kts+. It was at this time that the Master and the 3O ascertained that the vessel was not holding position and was dragging its anchor.

<sup>1</sup> Shackle – A measurement of anchor chain. One shackle is 27.5m

<sup>2</sup> Knots – Measurement mariners use to determine the velocity of a ship, wind and tide in nautical miles. One knot is equal to one nautical mile per hour or 1.852 kilometers per hour.

<sup>3</sup> Stanley Port Control is the radio call sign for the Falkland Islands Maritime Authority during office hours (0800 – 1630) or the Joint Control Room outside of office hours (1630 – 0800)

<sup>4</sup> FICZ – is an area around the Falkland Islands within the Exclusive Economic Zone that extends 150 nautical miles from the base line.

<sup>5</sup> Mount Pleasant Complex is a base operated by the Ministry of Defence in the Falkland Islands

**2350** The port anchor was let go to three shackles in the water. The vessel appeared to be holding ground and no longer dragging, but the Master and the 3O monitored the situation for some time to ascertain if the vessel was holding well.

At Midnight, the 2O took over the anchor watch from the 3O, the Master remained on the bridge.

**0030** The wind further increases and the weather conditions start to deteriorate. The vessel starts to drag anchor for the second time.

**0035** The vessel starts heaving on both anchors. Five minutes later, the port anchor is clear of the water. The port anchor chain was then disengaged from the windlass<sup>6</sup> to enable the starboard anchor to be retrieved, however the wind had further increased and the windlass could not take the strain and the ship was unable to heave on the starboard anchor.

**0045** The master makes a radio call to Stanley Port Control informing them of the situation and that the vessel is dragging its anchor and that they are coming close to the shoreline and are unable to recover their anchor.

**0055** Further attempts were made by the vessel to try and heave on the starboard anchor which now has five shackles of chain in the water. The vessel which was in a light condition has now been turned broadside to the wind creating a large windage area. Attempts are made to try to turn the vessel with the engines, but these are unsuccessful.

**0113** With the shore on the port side of the vessel, the master is unable to turn the bow of the ship to starboard into the wind and so makes the decision to stop the propeller to minimize damage in the shallow waters.

**0115** The vessel runs aground (**Figure 2**) on its port side with five shackles out on its starboard anchor. The anchor cable is caught around the bulbous bow and under the vessel (**Figure 5**). The Master makes a call to Stanley Port Control to advise them that the vessel is aground.

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<sup>6</sup> Windlass – is a built-in winch system, usually on the bow of the vessel, used to lower or raise anchor chain and to tighten and slacken mooring lines.

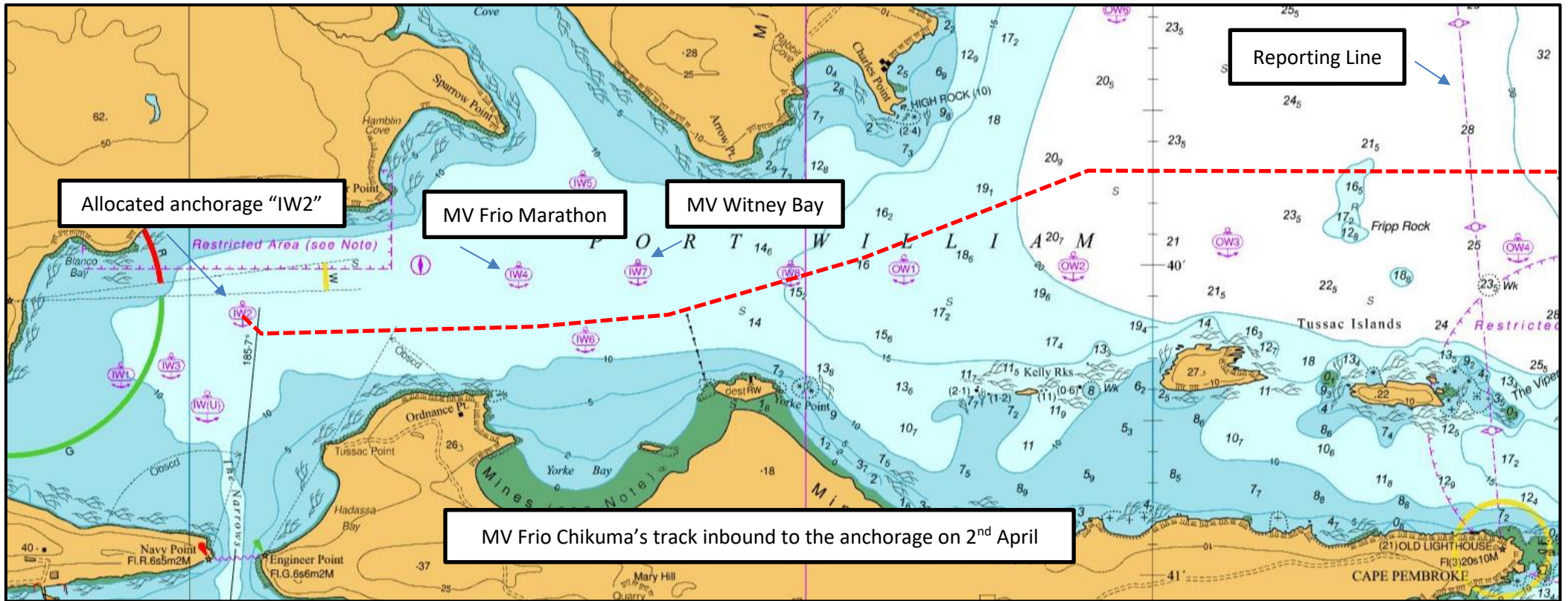


Figure 1: Port William anchorages overview

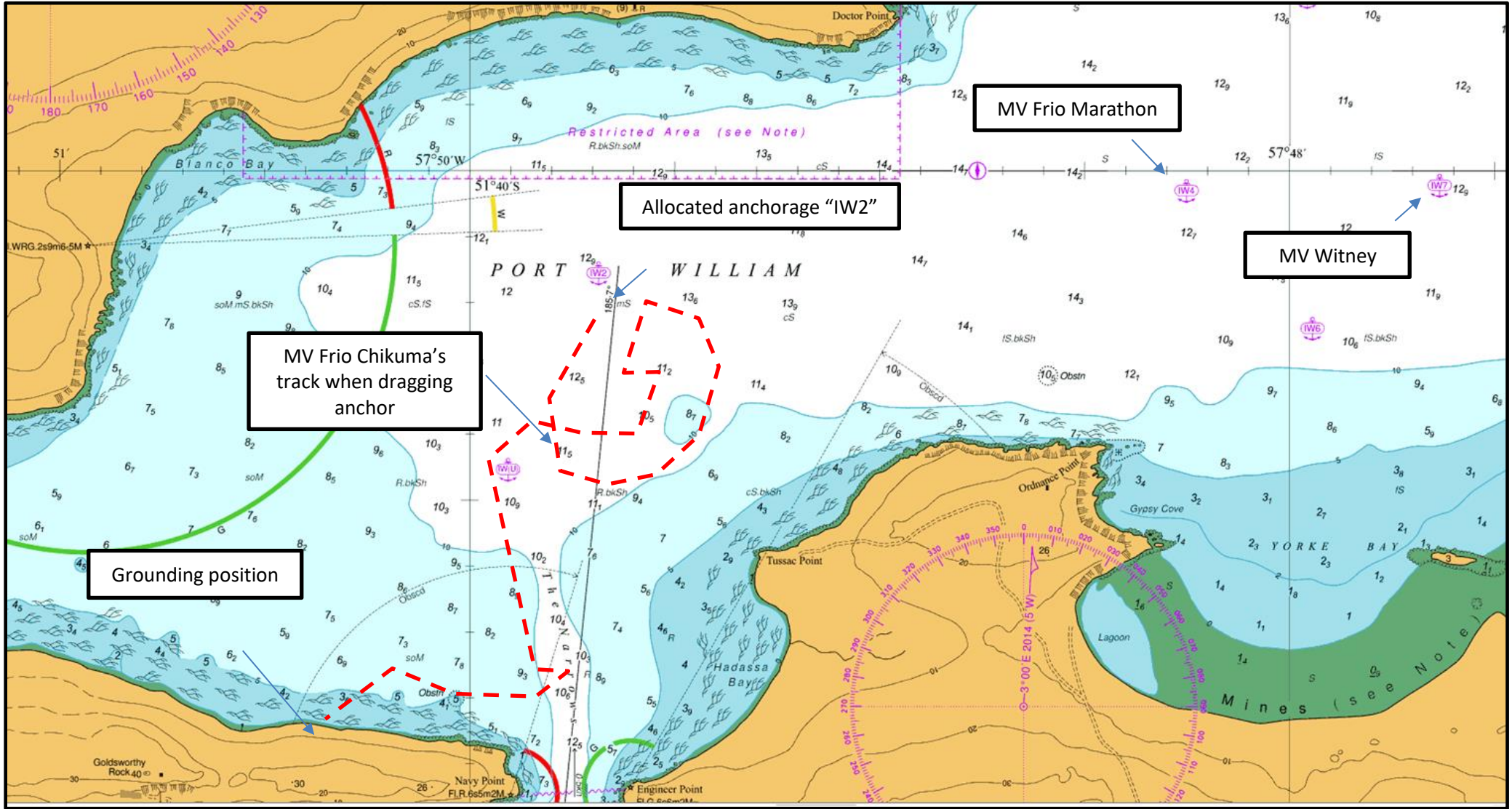


Figure 2: Port William Western anchorage



## 1.2.2 Events at the Joint Control Room

Upon receiving a radio call from the master of the *Frio Chikuma* that the vessel was unable to hold position and was close to running aground, the Joint Control Room Operator (JCRO) manning the desk at the Joint Control Room<sup>7</sup> (JCR) acknowledged receipt of the radio call and asked the Master of the vessel to stand-by. The JCRO then called the duty Assistant Harbour Master (AHM) on the duty phone. There was no response from the duty phone on the first call attempt at 0110 but the second attempt was successful a minute later.

## 1.2.3 Events at the FIMA Ops Room

At 0117, the AHM called the Harbour Master (HM) but there was no response. He then called the Head of the Maritime Authority (HoMA), but there was no response. The HM was called a second time at 0120 and was briefed of the situation. The AHM then relocated from his house to the FIMA ops room.

At 0125, the HM arrived at the FIMA ops room and was updated on the situation. The tidal information was checked at this point, and it was noted that the current height of tide was at 1.4m and falling with low water expected just before 0740 at 0.6m. The tidal graph was printed out and an incident board was started.

FIMA contacted the *Frio Chikuma* via VHF radio to acquire more details which included the vessel's draft which was reported to be 2.2m forward and 5.8m aft. FIMA asked if the main engine/generators, were still operable as there was a concern that the sea suction for cooling the engine/generators may be affected. The Master confirmed that they were not using their emergency generator and they still had power from their main engine/generators and that they were using the sea suction from the starboard side. It was also reported that the vessel had water ballast of 163MT in number 1 center and 107MT in the fore peak. Both of these ballast tanks are permanent water ballast. Sounding around the vessel was underway, there is no water reported in any cargo holds and there is no sign of pollution.

At 0128, *Clio FI* which is a local launch operated by the Falkland Islands Company called on VHF Ch 16 advising that it appeared that the *Frio Chikuma* was aground. This was acknowledged by the AHM and he advised *Clio FI* that FIMA were coordinating. The HM telephoned the HoMA Authority at 0133 on his house phone and updated him on the situation. The AHM called the Chief Resilience Officer<sup>8</sup> (CRO) at 0136 to advise her of the situation and to request her presence in the FIMA office.

At 0138, the AHM called to the Joint Operations Centre<sup>9</sup> (JOC) to inform them of the situation, but there was no answer on the phone. Another call was made and the AHM got through to the JOC and he updated them on the situation and the request for tug support was made. At 0143, the JOC telephoned FIMA office and spoke to the AHM requesting confirmation of the information passed to them.

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<sup>7</sup> Joint Control Room – a room at the Royal Falkland Islands Police station that deal with all emergency traffic including Maritime Radios outside of government office hours (1630 – 0800).

<sup>8</sup> The Chief Resilience Officer is responsible for the Falklands Major Incident Plan and for certain roles within the plan during a Major incident.

<sup>9</sup> Joint Operations Centre – Is the United Kingdom's Ministry of Defence manned centre operated by BFSAL.

At 0144, the Head of the Maritime Authority arrived in the FIMA office to assist with the coordination effort. At 0145, the HM called the Joint Rescue Coordination Centre<sup>10</sup> (JRCC) in Fareham UK to advise them of the situation and to explain what actions had been taken so far and if they had any recommendations or further advice. They were content with the actions taken thus far and no further advice was given.

FIMA received a call from the JOC at 0155 advising them that Staff Officer 2<sup>11</sup> (SO2) Maritime had been informed and was on his way to the JOC to assist where required. The AHM called the Coxswain of *Clio FI* on a mobile phone at 0206 and the Coxswain informed the AHM that the *Frio Chickuma* was 'high and dry', that the vessels' rudder was visible and that conditions for boarding the vessel from the launch were unsuitable.

The HM called the Stanley Services Lined (SSL) Agent on his mobile at 0210, but there was no answer. At 0212, the SO2 maritime called to confirm information passed to him regarding the situation and to advise FIMA that there was only 1 tug available as the other tug was being used to keep another vessel alongside the jetty at East Cove Military Port<sup>12</sup> (ECMP).

At 0220 the HM called the Managing Director (MD) from SSL (the agent for the *Frio Chikuma*). At 0223 FIMA received an email from the Coxswain of *Clio FI* with a photo of the grounded vessel (**Figure 4**).



**Figure 4:** *Frio Chikuma* aground – Photo courtesy of *Clio FI*, FIC

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<sup>10</sup> Joint Rescue Coordination Centre (ex NMOC) based in Fareham UK, is the UK's national maritime command and control centre which also provides assistance to overseas territories in the event of SAR and Marine Casualty events.

<sup>11</sup> SO2 Maritime is the lead Maritime officer within the JOC.

<sup>12</sup> ECMP is a port operated by the MoD.

At 0228, the HM called FPV *Lilibet*<sup>13</sup>, located in Berkeley Sound<sup>14</sup> at the time, to ask for the Master to be woken. A few minutes later, the Master made contact with FIMA. The HM asked the FPV *Lilibet* to proceed to Port William to provide an on-scene presence and to report back to FIMA of any changes to the situation and for any signs of pollution. FPV *Lilibet* confirmed that she was underway from Port William with an Estimated Time of Arrival (ETA) of 0345.

At 0323, the HM received a telephone call from the MD from SSL. He informed the HM that the vessel owners have been in communication with the *Frio Chikuma* and the company were enquiring about the use of a tug. The HM informed the MD that FIMA have been in contact with BFSAI for tug support and that the tug based at ECMP is mobilizing and should be departing ECMP soon.

At 0333, the AHM received a call from the JOC advising that the tug *Giessenstroom* has departed ECMP and will make best speed to Port William with an ETA of 1000. The HM contacted the *Frio Chikuma* on VHF Ch 10 to advise them that the tug was on its way and provided them with the ETA. The HM called the MD from SSL to update him with an ETA of the tug.

At 0400, a video call was established between FIMA at the FPV *Lilibet* via Whatsapp. Regular situation reports (sit-reps) were given including photos and videos from on scene. The FPV *Lilibet* also reported on the weather conditions. At 0439, the HM sent emails to the FIG Environment Department to inform them of the incident, that no pollution is apparent at this time, but that a thorough check will be made at first light. At 0446 the HM also emailed the Falkland Islands Government Air Service (FIGAS) to advise them of the situation and to request that during their first flight of the morning in daylight they take a photo of the vessel and also check the area for any signs of pollution coming from the vessel.

At 0515, the FPV *Lilibet* informed FIMA that the weather conditions in Port William were improving with observed wind speeds of 25 – 30Kts and that the *Frio Chikuma* remains upright.

#### 1.2.4 Post Grounding Events

During first light, the FPV *Lilibet* sent her Rigid Hull Inflatable Boat (RHIB) ashore to take some photos of the vessel and to check around the vessel for any signs of pollution (**Figure 5 & 6**).

The tug from ECMP arrived a little earlier than expected at around 0900. It was decided that on arrival the HM, MD from Stanley Services, Tug Master and Chief Pilot, who was also acting as the BFSAI Representative, would meet on the tug for a meeting to discuss the options for refloating the vessel.

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<sup>13</sup> The FPV *Lilibet* is the Falkland Islands Government Fishery Protection vessel.

<sup>14</sup> Berkeley Sound is a harbour to the North of Port William which is used for fishing vessel transshipment and commonly used for vessels to seek shelter from bad weather on the high seas.



**Figure 5:** Aft draft marks of *Frio Chikuma* while aground with an aft draft of approximately 4.6m – Photo courtesy of DNR, FIG



**Figure 6:** Starboard anchor chain caught under the bulbous bow – Photo courtesy of DNR, FIG

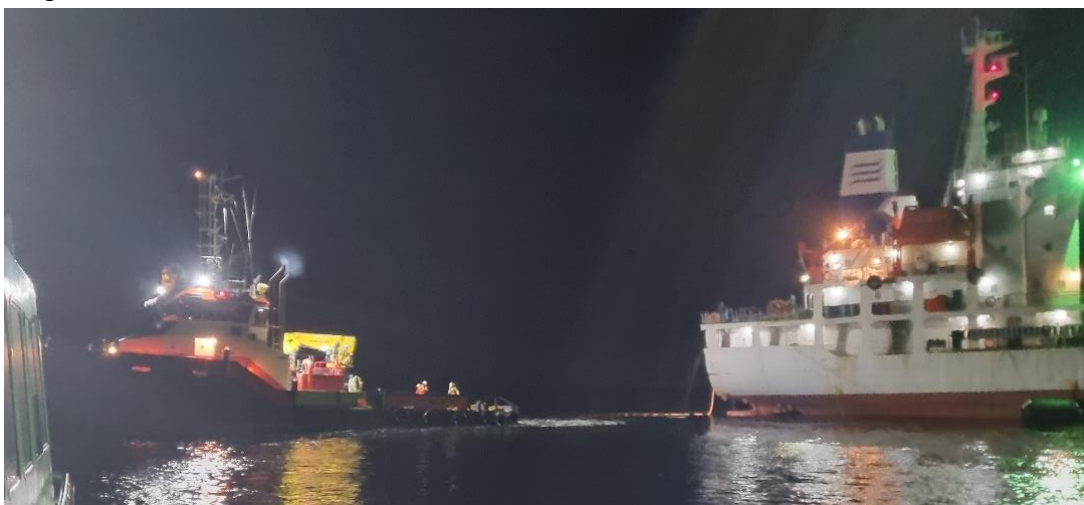
A concern was that the information displayed on the navigational chart 'Admiralty chart BA 1614' was scanty in relation to the shoreline where the vessel had grounded, however due to previous survey work that had been conducted of the area, it was suggested that this information may still be available, to better understand what was on the seabed and if there were rocks which could cause further damage if the vessel was towed off. The HM called the South Atlantic Environmental Research Institute (SAERI) who had been involved with survey works of the area to find out what he could about the seabed in this area.

Once information had been received regarding the seabed where the *Frio Chikuma* had grounded, the tides were reviewed and it was decided that an attempt to refloat would be made in the early hours on 4<sup>th</sup> April. Due to the mixed semi-diurnal tides experienced in the Falkland Islands, the next high water would be just before 1500 on 3<sup>rd</sup> April but the height of tide would only be 1.21m which would be 20cm lower than the height of tide when the vessel ran aground (**Figure 8**). It was agreed that the afternoon tide would be no good for a refloat attempt. There was a slight concern that the height of high water when the refloat attempt would be made (in the early hours of the morning on 4<sup>th</sup> April), was going to be 10cm lower than when the vessel went aground (**Figure 9**). An option would be to wait for the next high tide which would have been higher, however the next low water would have been lower which could have caused damage to the vessel.

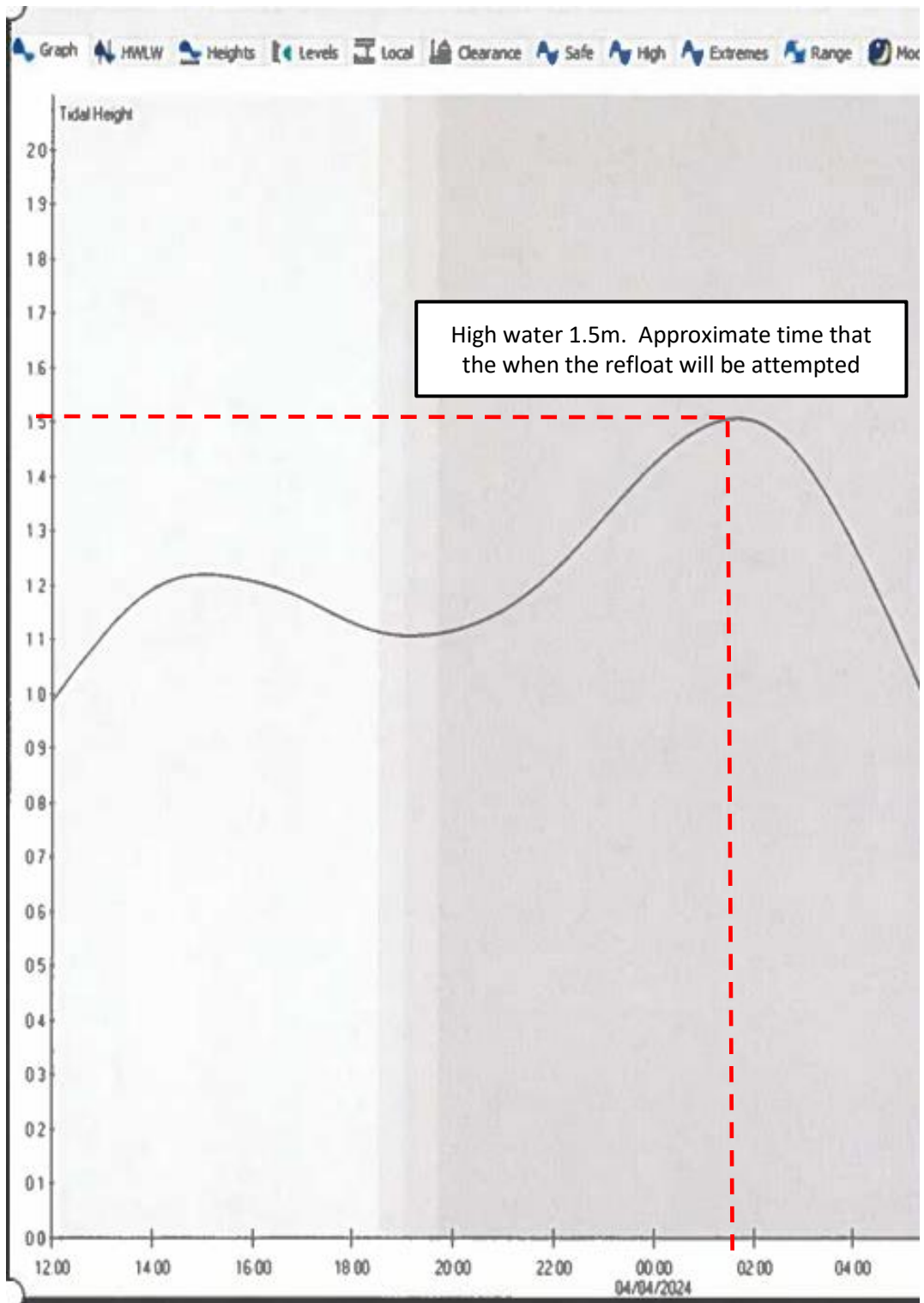
The *Frio Chikuma* provided FIMA with a copy of their International Maritime Organization (IMO) Approved emergency towing plan, their stability data, tank and general arrangement plans as requested.

The stability information supplied by the Master indicated that the vessel had some permanent ballast in the way of fresh water in their ballast tanks. It was considered that this may be used to lighten the vessel, however this permanent ballast was positioned forward in the vessel and so removing it would deepen the aft draft further.

Another concern was the expected wind conditions which, although they had abated during the day, were due to increase after midnight from the North around the planned time for the refloat. It was agreed that the refloat would take place at the high tide on the morning of 4<sup>th</sup> April. The tow line was established at 2340 on the 3<sup>rd</sup> April (**Figure 7**) in good time before high water. At around 0100 weight was applied to the tug's tow line and the vessel was reported to be afloat at 0110 where she was towed back to her anchorage.



**Figure 7:** Tug establishes towline with *Frio Chikuma*



**Figure 8:** Extract from Admiralty Tide tables showing height of tide and times on 4<sup>th</sup> April 2024

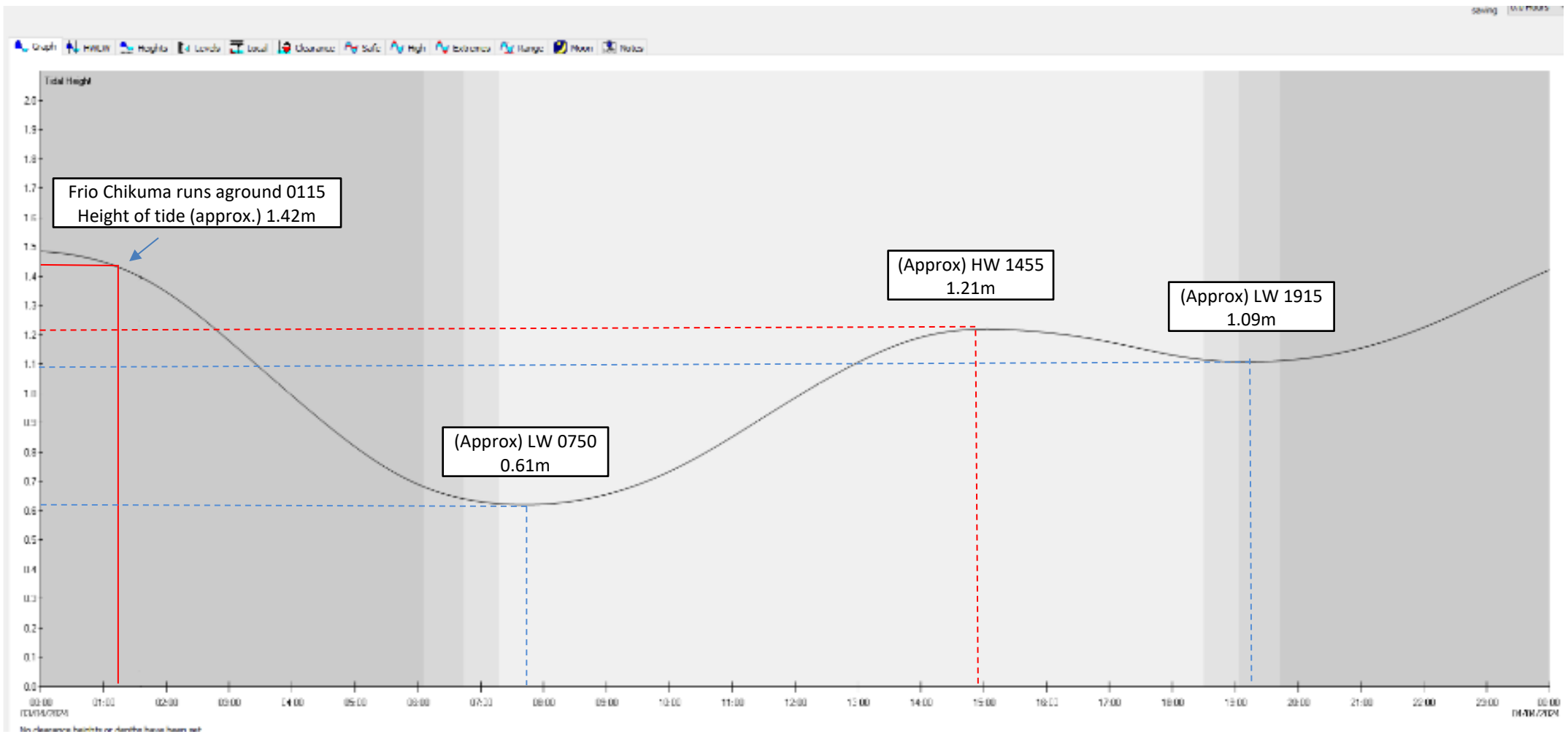


Figure 9: Extract from Admiralty Tide Tables showing approximate height of tides on 3<sup>rd</sup> April 2024

### 1.2.5 Inspection of vessel post Grounding

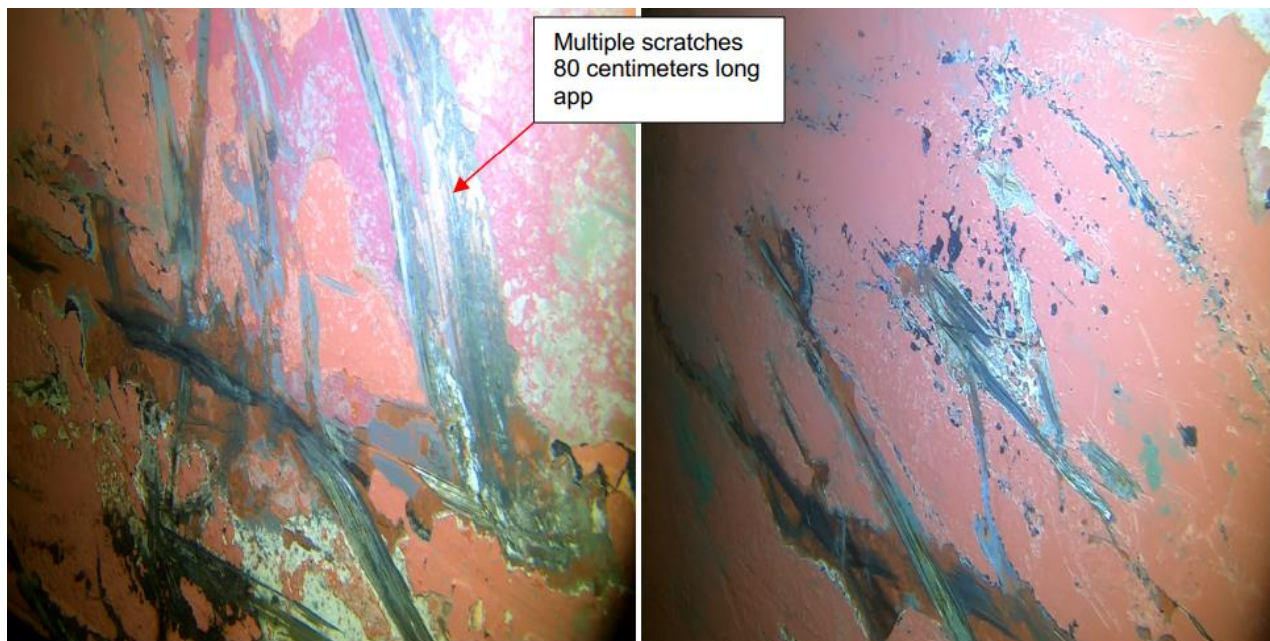
The company owners arranged for an in water survey of the vessel to satisfy the requirements of their flag, the classification society and FIMA. Divers were flown out from Chile on Saturday 6<sup>th</sup> April. Working around weather windows, the divers were able to inspect the under-water structure of the *Frio Chuikuma* and provided a comprehensive report into their findings.

The conclusion of their report was that the ship had multiple dents in the hull, specifically on the port fin and starboard stern sector. The sea chests were obstructed with algae. Although there were numerous scuffs on the underside of the hull, there were no penetrations to the hull structure as a result of the grounding.

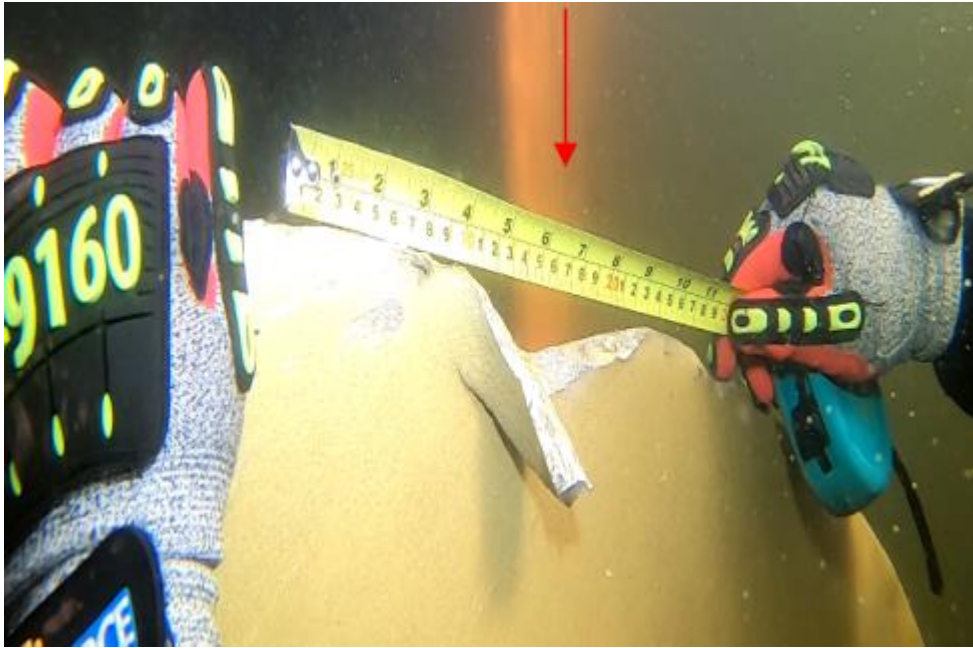
It was reported that the rudder had evidence of multiple bumps and scratches but had no significant damage and was in working order (**Figure 10**). Although it was reported that the Master took action to stop the propeller before the vessel ran aground, the propeller blades received damage.

The propeller on the *Frio Chuikuma* is a fixed pitch 5 bladed propeller. Each of the 5 blades had some damage on their leading edge (**Figure 11 & 12**).

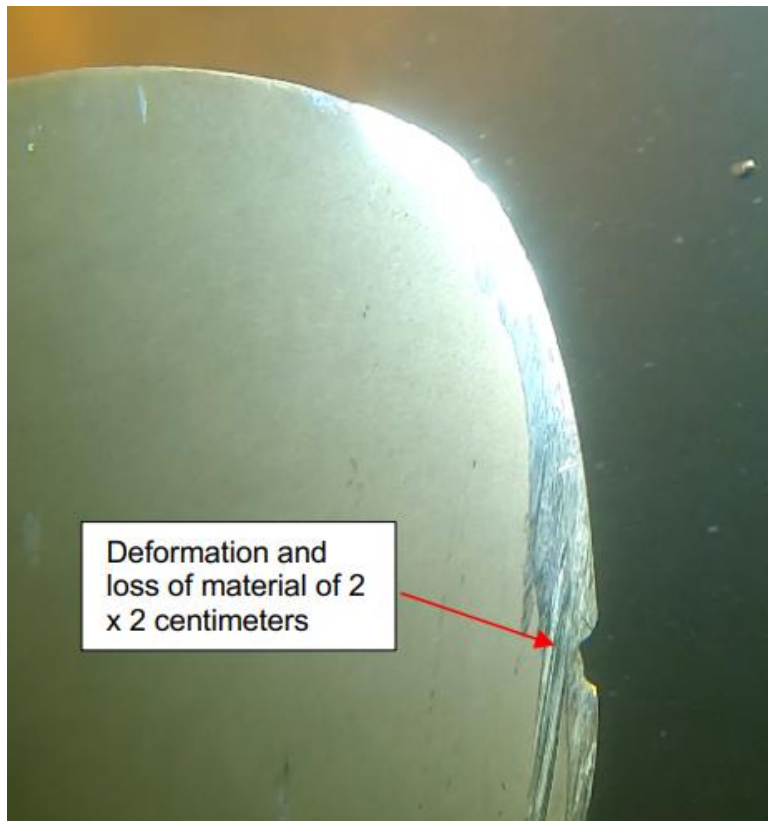
The buildup of kelp can be seen on the sea chest that had been sucked into the gratings which would have had an effect on the sea suction to some extent (**Figure 13**).



**Figure 10:** Port side rudder showing deep scratched paint work through to the steel



**Figure 11:** Damage to the tip of the propeller blade



**Figure 12:** Further damage to the tip of the propeller blade



**Figure 13:** Starboard sea chest heavily fouled with Kelp

## 1.3 FIMA OPS ROOM

### 1.3.1 Ops Room monitoring Equipment

FIMA's operations room, which is situated within their main office, is manned between the hours of 0800 to 1630 all year round. The office is fitted with a Sailor marine band VHF radio which provides radio coverage for Stanley Harbour, Port William and some parts of Berkeley Sound.

The office is also equipped with a GMDSS island wide VHF system which has Digital Selective Calling<sup>15</sup> (DSC) capability but at the time of writing this report is still in the commissioning stage and the DSC function is not yet online. The island wide Radio Telephony (RT) function is not yet at its full capability, but it has a larger range than that of the VHF standalone set. The harbours cannot be seen from within the building housing the ops room nor are there any cameras or harbour radar monitoring the traffic within the harbours.

The office is fitted with an Automatic Identification System<sup>16</sup> (AIS) unit which receives AIS information which is displayed on electronic navigational charts and also a web browser provided by the local communications company SURE, which provide vessel positions via AIS which is overlaid on Google maps.

### 1.3.2 Staffing

FIMA consists of five members of Staff:

- The Head of the Maritime Authority
- The Harbour Master
- The Deputy Harbour Master (on leave during the grounding)
- Two Assistant Harbour Masters

The staff at FIMA come from a maritime background namely, Royal Navy, Merchant Navy, HM Coastguard and the Royal Fleet Auxiliary. Although the HoMA is not part of the core operational staff, he provides support as required. All members have in date certificates which include Search and Rescue Coordination training provided by HM Coastguard, GMDSS and JESIP training.

The day-to-day harbour control operated by the AHM's include:

- Recording entry and exits of all vessels crossing the reporting line
- Allocation of vessels requesting anchorages in Port William or Stanley Harbour.
- Monitoring all traffic transiting in Port William, Stanley Harbour and Berkeley Sound.
- Harbour and shore patrols.
- Broadcasts of weather, navigational warnings and other traffic related information.
- Responding to general maritime enquiries.

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<sup>15</sup> Digital Selective Calling is a method of sending a digitally formatted distress message via radio.

<sup>16</sup> Automatic Identification System is an automatic ship tracking system that uses transceivers on ships to broadcast live navigational data to AIS terminals

<sup>17</sup> JESIP is the Joint Emergency Services Interoperability Program which is designed to improve the way emergency services work together when responding to major multi-agency incidents.

At 1600 daily, the FIMA Ops Room staff, perform a radio check with the JCR on VHF Ch 10 and 16 to ensure communications are working correctly before they hand over for the evening. Stanley Port Control, from the FIMA Ops room, broadcast the shipping forecast for the FICZ twice daily at 0830 and 1605 on VHF Ch 10. Before the broadcast is made, Stanley Port Control send out an all stations sécurité<sup>18</sup> broadcast on VHF Ch 16 to advise of a weather broadcast which is about to be made on VHF Ch 10. These broadcasts also include gale warnings and/or any navigational warnings in force.

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<sup>18</sup> Sécurité is a Procedure word used to warn mariners that a safety message is to follow

## 1.4 JOINT CONTROL ROOM

### 1.4.1 Joint Control Room monitoring equipment

The JCR is located at the local police station. Staffed by JCRO, these staff are responsible for (in no particular order):

- Monitoring maritime radio traffic and recording traffic entry/exit reports at the reporting line (these duties are carried out from 1630 to 0800 daily)
- Monitoring the 999 telephone system
- General Police enquiries
- Monitoring the Police radios and the local two-meter radio sets.

### 1.4.2 Staffing

There are a total of five full time JCROs and one casual worker who fills in work period gaps as and when required. The Senior Clerk of RFIP also stands in as a JCRO, as and when required. The shift pattern at the JCR works on the basis of five day shifts (0800 – 1700), three days off, five night shifts (2300 - 0800), four days off and five late shifts (1600 - 2400) and three days off.

### 1.4.3 Training (Maritime)

The JCROs receive training in the use of marine VHF radios by way of a course of 'Marine Radio Short Range' issued by the Royal Yachting Association (RYA). This training is further supplemented by continual training provided by FIMA. They are also trained in the procedures involved in the handover of maritime radios and reporting procedure for vessels entering and leaving the reporting line.

Between the hours of 1605 to 0800, the JCR monitor the marine VHF radio on channel 16 and 10, under the call sign of '*Stanley Port Control*'.

The JCROs do not have a view of Stanley Harbour or Port William and as such cannot see vessels at anchor or transiting within the harbour. The JCR is fitted with a Sailor Marine band VHF radio which is set to dual watch to listen on both VHF Ch 10 and 16. Ch 10 is the working channel for Stanley Port Control.

Monitoring of vessels in and around Stanley Harbour, Port William and Berkeley Sound is achieved by the JCROs having access to a web browser operated by SURE South Atlantic which overlays AIS targets onto Google Maps. This system is fitted with an audible alarm when vessels cross the reporting line inbound or outbound of Port William or Berkeley Sound. The AIS targets are displayed on an overlaid Google map as a triangle. If a vessel is underway, the target colour will change to either purple or yellow. When the vessel is stationary with a Speed Over the Ground (SOG) of zero, the colour of the triangle will be grey.

The JCROs are provided with a list of overnight expected movements from FIMA. This list shows the vessel details and their intentions. If the JCROs encounter a vessel which is not on this list, or they are in any doubt, they are instructed to call FIMA on the 24 hour mobile number.

## 1.5 PORT WILLIAM

At its entry point between Cape Pembroke and Mengeary Point, Port William is approximately 4 Nautical Miles (nm) in length with its narrowest part of 0.8nm between Ordinance Point and Doctor Point. The area has inner and outer anchorages, the Outer Whiskey anchorages (OW) are located in depths of water 20m (metres) or more and the Inner Whiskey anchorages (IW) are located in depths of water 10m or more.

Both the North and Southern shores of Port William have considerable amounts of kelp growth which extend approximately 0.1nm from the shoreline along the 5m isobath.

IW2 is located towards the western end of Port William to the West of the leading line for the entrance of Stanley Harbour, 0.4nm from the northern shoreline of Port William, 0.8nm from the Narrows entrance to Stanley Harbour and approximately 0.75nm to the southern shoreline of Port William.

The Narrows is marked by two navigational lights, Navy Point with a flashing red light every 6 seconds but has an obscured sector and is unlikely to be seen by a vessel at IW2. Engineer point has a green flashing light which flashes every 6 seconds and is visible from IW2. Both lights were operational on the night of the grounding.

To the West of IW2 there is a sector light in Blanco Bay which flashes White Red and Green every 2 seconds depending on its various sectors. IW2 is in its green sector.

## 1.6 ANCHORAGE ALLOCATIONS

Prior to arrival at the reporting line, FIMA require all vessels to provide them with notice of arrival for not less than 24 hours in advance. If the vessel is requesting an anchorage, the vessel is then allocated an anchorage at the master's discretion which is very clearly stated that *the anchorage position is at the masters discretion*.

The method used for allocating anchorages takes the following into consideration:

- Forecast wind speed and direction
- The draft and size of the vessel requiring an anchorage
- The type of vessel
- Vessel intentions
- Anchorage availability and any other considerations deemed necessary.

FIMA have a procedure for issuing anchorage allocation (Procedure No 6, Anchorage Allocations) which was last reviewed on 30/06/2023. At the time of writing this report, all FIMA procedures have been updated as per their annual review of risk assessments and procedures.

## SECTION 2 – CONCLUSIONS

1. The *Frio Chikuma* ran aground because the vessel was unable to hold its position at anchor in the strong winds which caused the vessel to drag its anchor and run aground on the southern shoreline of Port William.
2. Given the light condition that the vessel arrived in and during the strong winds at anchor, the effects of the forces of wind on the vessel were significant enough to overpower the holding power of her anchors.
3. FIMA's procedures for allocating anchorages to vessels did not consider large vessels in a light condition in strong winds.
4. The equipment used by Stanley Port Control for monitoring traffic within the harbour does not have alarms fitted to notify the watchkeeper if a vessel is running into danger.
5. Both FIMA and the JCR's capability to monitor ships at anchor from their respective offices rely solely on AIS information.
6. Communications issues experienced in the early hours of the morning prevented people being alerted during the first call to most mobile phones. A call was also made to one mobile phone to test if there was a problem with the phone. The mobile had full signal strength but yet still went to answerphone. Landline numbers were called where difficulty was had with mobile phones.
7. The AIS track of the *Frio Chikuma* shows that the vessel was drifting towards the Narrows, however, engine manoeuvres meant that the vessel ended up grounded to the West of the entrance to the Narrows. If the vessel had grounded at the Narrows this could have disrupted marine traffic exiting or entering Stanley Harbour which is a risk that has been identified in the Navigational Risk Assessment carried out by ABPmer in March 2023.
8. There is no tug provision in Stanley Harbour to assist with refloating of grounded vessels. Given the prevailing weather conditions and hazards involved, even if a tug had been available to tow the vessel off the shoreline after the vessel had grounded, it would have unlikely been tasked.

## SECTION 3 - ACTIONS TAKEN

### 3.1 ACTIONS BY THE FALKLAND ISLANDS GOVERNMENT

#### 3.1.1 Actions taken by The Falkland Islands Maritime Authority

FIMA have reviewed their procedures in line with their annual review of procedures and risk assessments. Changes have been made to procedure No 6, 'Anchorage Allocation Procedures' which is the procedure FIMA uses for allocating anchorages in Stanley Harbour and Port William. These changes include the mandatory departure of a reefer vessel if wind is forecast to be above 40Kts (from any direction) and the vessel is in a light condition.

FIMA has drafted a paper for Executive Council setting out the vulnerabilities, opportunities and options associated with a Stanley-based tug capability

#### 3.1.1 Actions Taken by the Chief Resilience Officer

In line with Government Policy, the CRO held an After Action Review (AAR) into the actions that were taken by agencies that were involved with the refloating efforts of the *Frio Chikuma*. The purpose of the AAR is to meet with the agencies involved and to discuss:

- What we set out to do
- What Actually Happened
- What went Well
- What can we do better next time
- Lessons identified

The AAR into the *Frio Chikuma* grounding was held on 26<sup>th</sup> April and was attended by all those involved in the refloating of the vessel.

### 3.2 ACTIONS BY VESSEL MAGEMENT COMPANY

Baltmed Reefer Services Ltd is the Management company for the *Frio Chikuma*.

#### 3.2.1 Actions taken by Baltmed Services Ltd

The emergency response team from Baltmed Services followed the actions as per the company's SMS shore based contingency plan during the incident and was in contact with the ship to provide support to the master.

The company utilized the technical support from the naval architects office 'Conmar' in order to calculate the damage stability of the grounded vessel and provided details calculations for the stability and the longitudinal strength so that the vessel could be refloated safety.

## SECTION 4 – RECOMMENDATIONS

1. **PROCEDURES.** FIMA have updated their procedures involving large vessels in a light condition at anchor. These vessels will no longer be able to anchor in Port William when the wind is above 40Kts from any direction. FIMA should consider what other vessels may be at risk given strong winds in Port William and amend their procedures accordingly.
2. **TUG PROVISION.** There is currently no tug provision in Stanley Harbour. Although there are two very capable tugs contracted to BFAI, these tugs are at least six hours steaming away from Port William / Stanley Harbour if available. It is recommended that the Falkland Islands Government recognize the risks associated by not having tug provision in Stanley and consider the options for mitigating these risks by the use of having tug availability to cover Stanley Harbour and Port William. If Stanley did have a tug capability, it is likely that it would have been placed at immediate notice, or even stationed in Port William, given the forecast weather. Such a tug could have, perhaps, averted the grounding in the first place.
3. **MONITORING.** The monitoring capability of both FIMA and the JCR is limited to AIS monitoring only. This is a single point of failure and there is no provision for monitoring vessel that are not fitted or transmitting on AIS. It is therefore recommended that FIMA/Falkland Islands Government seek to improve their monitoring capabilities of Port William and Stanley Harbour for both FIMA and the JCR under the obligations required by the International Maritime Organizations' Instruments Implementation Code.