MCIB
Marine Casualty Investigation Board
Bord Imscrúdú Taismí Muirí

REPORT INTO THE FATAL INCIDENT INVOLVING THE KILKEE IRISH COAST GUARD RIGID INFLATABLE BOAT AT KILKEE, CO CLARE 12th SEPTEMBER 2016

PART I

REPORT NO. MCIB/266
(No.7 OF 2018)

The Marine Casualty Investigation Board (MCIB) examines and investigates all types of marine casualties to, or on board, Irish registered vessels worldwide and other vessels in Irish territorial waters and inland waterways.

The MCIB objective in investigating a marine casualty is to determine its circumstances and its causes with a view to making recommendations for the avoidance of similar marine casualties in the future, thereby improving the safety of life at sea.

The MCIB is a non-prosecutorial body. We do not enforce laws or carry out prosecutions. It is not the purpose of an investigation carried out by the MCIB to apportion blame or fault.

The legislative framework for the operation of the MCIB, the reporting and investigating of marine casualties and the powers of MCIB investigators is set out in The Merchant Shipping (Investigation of Marine Casualties) Act, 2000.

In carrying out its functions the MCIB complies with the provisions of the International Maritime Organisation's Casualty Investigation Code and EU Directive 2009/18/EC governing the investigation of accidents in the maritime transport sector.

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PART I

The Marine Casualty Investigation Board was established on the 25th March, 2003 under the Merchant Shipping (Investigation of Marine Casualties) Act, 2000.

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GLOSSARY

DSC	Digital Selective Calling
GRP	Glass Reinforced Plastic
GPS	Global Positioning System
ILB	Inshore Lifeboat
N	Newton's of Buoyancy
VHF	Very High Frequency
PLB	Personal Locator Beacons

Report MCIB/266 (Part 1) published by The Marine Casualty Investigation Board. Printed 27th November 2018.

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1. SUMMARY

1.1 On the 9th September 2016, the Irish Coast Guard Station (CGU) at Kilkee was tasked by Maritime Rescue Sub-Centre (MRSC) Valentia to provide search and rescue volunteers for a missing person at the cliffs to the southwest of the town close to Foohagh Point. The Irish Coast Guard Station provided both cliff top search teams and boat crew on 9th, 10th, 11th and 12th September. On the morning of the 12th September the volunteers, from Kilkee and Doolin Coast Guard Units (CGUs), assembled at the Coast Guard Station and resumed operations, including a launch of the Delta Rigid Inflatable Boat (hereinafter referred to as the Delta RIB).

1.2 At approximately 13.11 hrs on the second tasking on the 12th September, and whilst searching a cove to the east of Foohagh Point, the Delta RIB capsized. The three crewmembers were thrown into the water. A search and rescue (SAR) operation commenced. One of the crewmembers was picked up by a privately owned RIB, a second crewmember was rescued by the SAR rescue helicopter R117. The third crewmember, the Casualty, who was a volunteer from the Doolin CGU, was recovered by SAR rescue helicopter R115.

Note all times are local time = UTC + 1.

2. FACTUAL INFORMATION

2.1 Vessel Characteristics

2.1.1 The Irish Coast Guard boat at Kilkee was a Rigid Inflatable Boat (RIB) of glassfibre reinforced plastic (GRP) material with Hypalon inflatable tubes manufactured by Delta Power Group of the United Kingdom. The Delta RIB was powered by twin Yamaha outboard engines rated at 115 HP each. The Delta RIB was fitted out to Irish Coast Guard specifications. It was delivered in January 2003 with a central control console, seating in two rows of two, with a stowage locker at the rear of the vessel (see Appendix 7.1 Vessel specification on delivery in 2003). During its service with the Irish Coast Guard the seats were converted to air suspension type, with additional fold down seats which could be used as required, and the stowage locker was moved forward in front of the centre console. Two towing poles were installed, one in the stern and one in the bow floor area. The Delta RIB had three stainless steel petrol tanks located under the decking. The electrical systems were 12 volt DC with batteries charged by the engines. An 'A' frame was fitted over the aft end to carry antennae, safety equipment and a manually operated self-righting bag.

2.1.2 Principal Particulars

Name:	Unnamed.
Flag:	Irish.
Port of Registry:	Unregistered.
Year and place of build:	2003, United Kingdom.
Type:	Delta Class 7.9X Range Patrol/Rescue Craft, Rigid Inflatable Boat.
Builder:	Delta Power Group, United Kingdom.
Hull Identification Number:	GB-DPS18530A303.
Construction:	GRP hull with Hypalon tubing.
Length Overall:	7.9 metre (m).
Beam:	2.5 m.
Engines:	Two Yamaha Outboard rated at 115 HP each.
Fuel:	Petrol.
Electrical:	12 volt DC, via battery bank.
Stated area of operations:	Up to six nautical miles offshore.

Capacity:	Minimum Operational: three persons. Optimum operational: four persons.
Casualty Capacity:	Four persons.
Weather Restrictions:	Daylight and unrestricted visibility only.
	Wind up to and including 27 knots.
Area of Operations:	Significant wave height limitation 2 m.
	Not permitted to operate in surf (see Appendix 7.2 Coast Guard Boat Operational Capabilities and Limits).
Navigation Aids:	Two Garmin chart plotters, linked to GPS satellite navigation units, with chart plotters using British Admiralty based charts and fitted with radar capability.
	Navigation lighting in accordance with the Collision Regulations.
Communication:	Two DSC type fixed VHF radio transceivers fitted to the vessel.
	Each crewmember on board had a hand held VHF transceiver.
	Most communications were on Channels 16 and 67, which could be recorded. There was a private Channel P4, which was not recorded.
	Some communications could also be carried on the TETRA (Terrestrial Trunked Radio) system, again un-recorded.
Safety Equipment:	Each crewmember was equipped with:
	Helly Hansen inner body suit, Helly Hansen drysuit, Gecko marine safety helmet, Mullion Rescue 400 Seaforce Vest, comprising a 275N single chamber inflatable lifejacket zipped onto an inherent (nominal 50 N) buoyancy foam equipment vest , personal locator beacon (PLB), knife, kill cord, lanyard, handheld flare and a safety line.
Ownership:	Irish Coast Guard, transferred from Dingle CGU to Kilkee in 2013 on formation of the Kilkee CGU.
Licencing:	Vessel unlicenced.
MMSI Number:	None assigned.

An EA-16 D-Class lifeboat (hereinafter referred to as the D-Class), based at Kilkee CGU, was also used in the later part of the Delta RIB crew rescue on the 12th September. The D-class is an inshore lifeboat (ILB), 4.95 m in length and powered by a 40HP Mariner outboard motor. These fast, light inflatable boats are suited to shallow water and confined locations close to cliffs, among rocks, or even in caves. The operation limits of this craft are mandated for wind up to and including Force five and significant wave height of 1.5 m (see Appendix 7.3 Coast Guard Boat Operational Capabilities and Limits). The Delta RIB and the D-Class lifeboat should hold passenger boat licences or load line exemption certificates.

2.2 Voyage Particulars

2.2.1 On the 12th September 2016, at approximately 10.30 hrs, the Delta RIB departed from Kilkee Harbour, Co. Clare. There were three crewmembers on board, two from the Kilkee CGU and one from the Doolin CGU. This tasking was the continuation of a search operation for a person reported missing on 9th September which was being conducted in conjunction with a Coast Guard cliff top search team (hereinafter referred to as Team Sierra). The Delta RIB proceeded towards Intrinsic Bay and then north of George's Head to Chimney Bay. To complete its search the Delta RIB entered a small cove north-east of Foohagh Point, close to Bishop's Island. It had been unable to do so earlier due to tidal conditions. It had indicated to the CGU at Kilkee that it was ready to return to base. As the RIB was travelling slowly approximately 20 m from the shoreline and preparing to leave the area the crewmembers became aware of a large breaking wave, directly on their starboard side. The CGU crew had no time to take any avoiding action. The Delta RIB was struck by this breaking wave and capsized immediately. All three crewmembers were thrown overboard. One crewmember, using a handheld VHF transceiver, made a 'MAYDAY' call on Channel 16, which was received by the Kilkee CGU base who relayed the distress message to MRSC Valentia.

In the SITREP (Situation Report) issued at 13.14 hrs on the 12th September 2016 the reported position of the capsize was 52° 40.76'N 009°39.56'W. At 16.42 hrs the position was amended to 52° 40.94' N 009° 39.62' W. The actual position of the capsize was identified as 52°40.53'N 009°41.28'W by visual observations of an eye witness and charting of the position, (see Appendix 7.4 Chart of area of incident).

2.3 Type of casualty

2.3.1 This was a very serious marine casualty. When the Delta RIB capsized all three Coast Guard volunteer crewmembers were thrown into the water. One crewmember was rescued by a privately owned RIB. The CGU search and rescue helicopters R115 and R117 rescued the other two crewmembers, one of whom subsequently died. The vessel was broken up by the surf at the base of the cliff.

2.4 Shore Response

2.4.1 The shore response was immediate. The Kilkee CGU alerted MRSC Valentia of the situation. The Shannon based SAR helicopter R115 was tasked immediately upon its crew becoming aware of what was happening. A Civil Defence team had just arrived with a drone to assist and was operational within ten minutes. The local fire service was also tasked to assist. The RNLI All Weather Boat was tasked from Kilronan on the Aran Islands, and Kilrush RNLI was put on standby (later tasked). A member of the Gardaí at Kilkee requested the owner of a private RIB to assist with the rescue operation. The private RIB proceeded to the scene with an IRCG Deputy Officer in Charge (DOiC) and three civilian crewmembers on board. All three had good local knowledge of the area. The Kilkee CGU, D-Class craft was also launched to assist.

2.4.2 All three crewmembers of the Delta RIB were recovered from the water and all units stood down at approximately 17.25 hrs. The boat was broken up by the surf against the cliff face and was recovered on 14th September 2016.

2.5 Tidal Conditions

2.5.1 The tidal predictions for the 12th September used by Kilkee CGU showed the predicted tides. Kilkee CGU used Admiralty Easy Tide (a web based tidal predication service by UK Admiralty) expressed as local time, as the source:

Low Water: 08.35 hrs High Water: 14.04 hrs

2.5.2 The tidal heights indicate that the tides were close to neap conditions, a tide that occurs when the difference between high and low tide is least.

2.6 Weather Conditions

2.6.1 The Met Éireann sea area forecast issued at 06.00 hrs on the 12th September predicted the following conditions for the area (see Appendix 7.5A Met Éireann Forecast and Terminology). Westerly winds of Force 3 to 5 decreasing Force 2 to 4 in the afternoon. Met Éireann also issues an essential sea area forecast terminology guide to read the sea area forecast (see Appendix 7.5A Met Éireann Forecast and Terminology). For example, this clarifies that a swell warning means 'When significant swell height of greater than four metres is expected.' Thus a 'Nil' under the heading of 'Warning of Heavy Swell' on the sea area forecast should not be interpreted to mean that there is no swell expected. The terminology defines significant wave height as the average height of the highest one-third of the waves. (It is very close to the value of wave height given when making visual observations of wave height.)

2.6.2 The official source documentation used is the Met Éireann Sea Area Forecast for that day (see Appendix 7.5A Met Éireann Forecast and Terminology). In addition Windfinder, Windguru and Magic Seaweed are used to refine that forecast for the

local area. It is unclear which sources were used for the section titled 'Possible Hazards and Risks?' for the 1st launch on 12th September (see Appendix 7.6 Pre-Launch planning document for 1st launch). There are no forecast details specified in that section for the second launch on that day (see Appendix 7.8 Pre-Launch planning document for 2nd launch).

The Windfinder output for period 12th September 2016, 01.00 hrs to 13th September 2016, 22.00hrs is set out in Appendix 7.5B. This illustrates wave heights initially 3.1 metres and staying above 2.0 metres throughout the period 12th Septmeber 2016.

The specific Windfinder forecast used by Kilkee Coast Guard on the day, indicated the following sea conditions for the area:

07.00 hrs - sea 2.6 m 10.00 hrs - sea 2.4 m

13.00 hrs - sea 2.4 m (see Appendix 7.5B Windfinder Forecast)

2.6.3 The Met Éireann Weather Report for 06.00 hrs to 12.00 hrs states wind Force 3 on Beaufort scale increasing to Beaufort Force 4 (see Appendix 7.5C Met Éireann Weather Report). Significant wave height ranged from 2.8 m to 3.3 m, period 8 second, swell direction 250 degrees.

2.6.4 The Met Éireann Weather Report for 12.00 hrs to 18.00 hrs states wind Force 2-3 Beaufort. Sea state, significant wave height 3.0 m to 3.5 m, period 8.2 seconds. Seas overall described as rough (see Appendix 7.5C Met Éireann Weather Report).

2.6.5 The IRCG Kilkee Boat Operations and Pre-Launch Planning document for the 12th September at 08.15 hrs, completed for the first launch, indicated that waves of up to 3 m were expected (see Appendix 7.6 Pre Launch Planning Document for first launch).

3. NARRATIVE

3.1 The Irish Coast Guard

The Irish Coast Guard (IRCG) is a Division of the Department of Transport, Tourism and Sport. It operates as a marine emergency service and provides a nationwide maritime emergency organisation as well as a variety of services to shipping and other government agencies. The IRCG has responsibility for Ireland's national system of marine communications, and emergency management in Ireland's Exclusive Economic Zone (EEZ) and certain inland waterways. It is responsible for the response to, and coordination of, maritime accidents which require Search and Rescue and also for Counter Pollution and Ship Casualty operations. It also has responsibility for vessel traffic monitoring.

The IRCG has three primary functions:

- Pollution prevention, casualty intervention and response;
- Search and Rescue;
- Volunteer Services and Training.

3.1.1 The current structure of the Irish Coast Guard Service was set up in 2000. The Irish Coast Guard operates within the parameters set out by the International Maritime Organisation (IMO), specifically the guidelines set down in the International Aeronautical and Maritime Search and Rescue (IAMSAR) manual volumes I, II and III. A new issue of Volume III was published in July 2016. The IRCG Voluntary Services and Training Coast Guard Code states the IRCG core activities are:

- To provide a national marine search and rescue response service;
- To provide a coastal and, where appropriate, cliff search and rescue service;
- To provide a post-emergency body search and recovery service and relative liaison;
- To develop and co-ordinate an effective regime in relation to marine pollution;
- To provide a response to marine casualty incidents and to monitor/intervene in marine salvage operations;
- To provide a safety awareness and public information service in relation to the discharge of the functions set out above;
- To provide a maritime safety communications service;
- To provide a maritime assistance service and single point of contact to shipping, fishing, commercial and leisure traffic.

3.1.2 The Director of the IRCG is supported functionally by an Assistant Director, IRCG Managers, Operations and Training Officers and Coast Unit Sector Managers (CUSM). The IRCG coordinates Search and Rescue (SAR) through its Maritime

Rescue Coordination Centre (MRCC) in Dublin and Maritime Rescue sub-centres (MRSC) at Malin Head, Co. Donegal and Valentia Island, Co. Kerry. Each MRCC or MRSC is responsible for SAR operations and the day to day running of its allocated division.

3.1.3 The CUSM based in Castlebar is responsible for an area which includes Kilkee and Doolin GCUs. When a Coastal Unit or station is tasked during an incident, the adjacent stations are deemed to be flank stations. For Kilkee Coast Guard Station, the flanked stations are Ballybunion and Doolin. A tasked station would request assistance from the MRCC who would then direct a flanking station to assist the tasked station during an incident.

Coast Guard Units are organised in the following way:

Officer in Charge (OiC):	Selected by HQ.
Deputy Officer in Charge (DOiC):	Selected by HQ.
Team Leader:	Selected by OiC.
Administration Officer:	Selected by OiC.
Training Officer:	Selected by OiC.
Education Officer:	Selected by OiC.
Equipment Officer:	Selected by OiC.

3.2 Kilkee Coast Guard Station

Kilkee CGU is one of the Coastal Units operated by the Irish Coast Guard. The unit was formed in 2013 by combining the existing CGU cliff rescue unit and the previous locally operated marine rescue service which had operated for approximately 30 years. Many of the original volunteers from this local marine rescue unit were retained as volunteers by the Irish Coast Guard.

Kilkee CGU Operational Readiness Audit, carried out on 29th February 2016 certified the unit as 'fully operational'. Both the Delta RIB and D-Class vessel were inspected as part of an audit carried out on 3rd November 2015. This audit stated that the Delta RIB was 'in excellent overall condition; some minor historic damage noted on Port side midships in way of the hull chine and adjacent hulls action. Bilges clean and dry. Hull and fixtures and fitting at a high standard of cleanliness. Standing rigging in good order. Overall the vessel in excellent condition and well maintained'.

3.3 The Role of the Officer in Charge (OiC) and the Deputy Officer in Charge (DOiC)

The OiC and the DOiC have a central role in the operation of the volunteer Coast Guard operations and are selected by IRCG HQ. On a day to day basis they are responsible for maintenance of equipment, training of volunteers, keeping records and team building of the unit. When there is an incident they

are required to make decisions on the effective deployment of resources and planning the search operation. The OiC is party to the 'Triple Lock System'of making the decision to launch the Coast Guard Boat (CGB). OiCs are usually drawn from current unit members. Members are advised of an available post and the applicants are selected after interviews. On appointment there is informal training on IRCG administration procedures.

The Irish Coast Guard Boat Operations Manual states that:
'The OiC, in consultation with the designated Boat Cox, is responsible for considering the capabilities of the CGB in relation to operating conditions and probable tasks to be encountered prior to designation.

'The OiC, in consultation with the designated Boat Cox, is responsible for considering the capabilities of the crew prior to designating roles of operation.'

On the evening of 9th September 2016, the Voluntary Services and Training (VS&T) Manager from headquarters travelled to Kilkee and announced at a meeting with volunteers at the Kilkee Coast Guard Station that the OiC was being replaced. The DOiC was to be appointed interim OiC until a permanent replacement was appointed. The impending changes were deferred to give Headquarters time to advise MRSC Valentia (Coast Guard Radio Station for the area) of the personnel changes. The appointment of the DOiC as interim OiC was scheduled to happen on the 12th September 2016. For the avoidance of doubt, in the remainder of this document and during the period covered by this report the OiC and the DOiC were the incumbent post holders.

3.4 The Role of the Coxswain

The coxswain (Boat Cox) is the person who commands the Coast Guard Boat (CGB) and is normally helmsman of the boat. The boat cox is party to the 'Triple Lock System' which decides to launch the CGB. The boat cox makes the operational decisions when the boat is on the water. In addition to the basic requirements to navigate and handle the boat, the boat cox also needs intimate local knowledge of the coastline around which the boat operates. The basic knowledge in boat handling and navigation is covered by the training provided by the IRCG. The local knowledge of the coastline is usually covered by the fact that the boat cox is involved with local fishing or water sport activities. This type of information is imparted by discussion between the boat cox and crew. It is part of local CGU training, where dangerous areas of coastline are identified and navigational strategies developed to use when navigating them.

The Irish Coast Guard Boat Operations Manual states that:
'The designated Boat Cox, in consultation with the CGB crew, is responsible for considering capabilities of the crew prior to allocating tasks during an operation.'

The Boat Cox of the Delta RIB at the time of the incident was qualified in accordance with the requirements of IRCG.

3.5 Triple Lock System

The Irish Coast Guard Boat Operations Manual describes the pre-launch procedure which must take place before every launch. Part of this procedure is the 'triple lock system' described in the manual as:

'A triple lock pre-launch decision making process must be adhered to every time a CGB is launched, whether for a response or routine operation.

This triple lock process involves the:
- *Rescue Co-ordination Centre.*
- *OiC (or authorised representative).*
- *Designated Boat Cox.*

The CGB may only be launched if approval is obtained from all three parties.' (see Appendix 7.7 Triple Lock System).

3.6 Training

Boat crewmembers were given training under the National Powerboat Scheme to the level of Advanced Powerboat Certificate. In 2013, the Irish Coast Guard commenced further training in SAR for boat coxswains. The records provided show that the two Kilkee crewmembers involved in the incident had completed Basic SAR skills and coaching. There were no records of SAR training provided for the Casualty. In addition, all crewmembers are required to attend unit training sessions on a regular basis.

3.6.1 The Coast Guard provides a Personal Survival Training and RIB capsize course. This is a bespoke course for the IRCG using the equipment provided by IRCG. The trainees use IRCG Personal Floatation Devices (PFD), drysuits and helmets during the course. The three crewmembers in the Delta RIB at the time of the incident had all attended this course. Of the three only one had attended using the current issue drysuit and survival equipment.

3.7 Radios

The Delta RIB had two VHF transceivers fitted to the centre console. One was set to Channel 16 and the other to Channel 67. Evidence from crewmembers states that there had been difficulties with the on board radio which had been preset to Channel 16. Because of this, one crewmember had her personal hand held radio locked to Channel 16.

Due to the localised transmitting capabilities of these hand held radios, only Kilkee Coast Guard station could converse with them on this frequency. Subsequent information was relayed by telephone from Kilkee to Valentia.

INCIDENT CHRONOLOGY

3.8 9th September 2016

At approximately 23.00 hrs on Friday 9th September 2016, the Kilkee unit was paged requesting assistance in the search for a missing person in the Kilkee area. Kilkee CGU and Coast Guard helicopter R115 were tasked. The parameters of the search area were the bay north of George's Head to Foohagh Point. The DOiC was in command. Only a land search on the cliff top took place that evening. Search operations were stood down for the night at 02.00 hrs.

3.9 10th September 2016

On Saturday 10th September 2016 the CGU operation resumed at approximately 06.30 hrs with a cliff top search. This involved three teams from Kilkee CGU with the DOiC in command. Following sightings of objects in the water offshore, the operation was re-assessed at the CGU base. The Delta RIB crew was gathered and the boat was launched at 09.30 hrs. Kilkee CGU was assisted by R115, Doolin CGU and the Civil Defence drone in the morning. The Delta RIB was retrieved and re-launched a second time later on 10th September 2016. The OiC arrived at the station at approximately 12.00 hrs and was briefed on the ongoing situation. It was noted that the operation of depth sounder on the Delta RIB was 'intermittent'.

3.10 11th September 2016

The CGU operation during Sunday the 11th comprised a further cliff top search and the launch of the Delta RIB on two occasions. Neither the OiC nor the DOiC were in attendance for the first boat launch and the most senior member in the station was in command of the CGU for the period. The OiC was in attendance at the station prior to the second launch. The search focused on the area between Chimney Bay, north of George's Head, and south of Bishop's Island, which is to the south of Kilkee. It was noted after both launches that the radio scanning and the depth sounder were "acting up". On the 11th September 2016, at approximately 17.57 hrs, personnel were sent a text by the OiC requesting them to assemble at the station for 06.45 hrs on 12th September 2016.

3.11 12th September 2016

On Monday the 12th September 2016 both land and boat crews gathered to commence searches. The DOiC was in command. The day's plans were discussed between the station and MRSC Valentia. MRSC Valentia was requested to ask for assistance from the Doolin Station, due to a shortage of available suitably qualified boat crew.

For the first launch of the Delta RIB, the 'Triple Lock System' was completed using the IRCG Boat Operations and Pre Launch Planning Form (see Appendix 7.6 Pre-Launch Planning document). The planning focused on the prevailing weather forecasts. The official weather forecast used is the Met Éireann forecast. In addition Windfinder, Windguru and Magic Seaweed are used by the Coast Guard to refine that forecast. The information contained within the 'weather/sea state' section is taken from the Met Éireann Sea Area Forecast, which should be read in conjunction with the Met Éireann Sea Area Forecast terminology (see Appendix 7.5A). The wave height in 'Possible hazards and risks' states 'waves up to 3 metres this evening'. This information is not contained in any of the weather forecast sources that appear to have been used. The times do not reflect the pre-launch planning period. The wave height is included in the 'possible hazards and risks' section rather than the 'weather/sea state' section. There were no records of visual observations of sea conditions in the proposed search area.

The forecasts in Appendix 7.5A and 7.5B were as follows:-

Met Éireann: Winds - Westerly 3 to 5, decreasing in afternoon from 2 to 4

Wind Finder:

Time	07:00	10:00	13:00
Av wind speed Kts	11	9	8
Gusts kts	16	13	9
wave height m	2.6m	2.4m	2.4m

3.11.1 The operational limits for the Delta RIB are set out in the Irish Coast Guard Boat Operations manual. In brief this states that the limits were daylight and unrestricted visibility only, wind up to and including Force 6/27 kts and significant wave height of 2 m. Maximum distance from coastline is six nautical miles. This boat was not permitted to operate in surf.

The following faults were present in the Delta RIB prior to the first launch on 12th September 2016:

- Radar was not operational;
- There was water ingress into the GRP hull during operations;
- There was air leaking from the air suspension in starboard aft seat C3. The seat was taped off and not in use.

On return from the first launch the coxswain reported the following additional faults:

- The echo sounder was not operational;
- One fixed VHF transceiver was not operational.

3.11.2 The second launch at approximately 10.30 hrs, with a crew of three, the Boat Cox, a second Cox and one crewmember (the Casualty), appears to have been authorised with less formality, discussion and risk assessment. The IRCG Boat Operations and Pre Launch Planning Form for the previous launch appears to have been used again with the notation 'continued from this morning' in the top right hand corner. There were no records of visual observations of sea conditions in the proposed search area. This implies that consensus had been reached that the first launch had not encountered any problems and that wind and sea conditions were the same.

3.11.3 It could not be determined whether any consideration was given to terminate the search operation at any point over the weekend. Irish Coast Guard SAR Emergency Checklist contains search termination criteria for the guidance of operational crews (see Appendix 7.9 Irish Coast Guard SAR Emergency Checklist).

3.11.4 Prior to launching, one crewmember had her personal handheld VHF secured to the upper part of her PFD, locked to Channel 16, close to her ear to provide the second VHF cover. This was the crewmember who issued the 'MAYDAY' call on Channel 16 following the capsize of the Delta RIB.

3.11.5 The transcript of radio traffic shows radio communication problems between MRSC, Valentia and the Delta RIB. At times it was necessary for the Kilkee Base to relay communications between the Coastal Radio Station and the Delta RIB. This was due to line of sight and distance issues for VHF radio communications.

3.11.6 The last radio communications between Team Sierra, the clifftop CGU team, and the Delta RIB was at 11.56 hrs. At 12.20 hrs the Delta RIB reported to Kilkee Station that it was just south of Bishop's Island. At 12.37 hrs it reported it was heading back to Chimney Bay, north of St. George's Head. At 13.06 hrs the CGB reported "we are just off the back of the Pollack Holes. We will just do one search around underneath the shelter and we will head in". At 13.11 hrs a 'MAYDAY' call was picked up by the Kilkee Base. The call was made by one of the crew using her hand-held radio on Channel 16. This call was not picked up by MRSC, Valentia. A member of the public phoned the Kilkee Station and reported an incident involving the Delta RIB. Kilkee station contacted MRSC Valentia on Channel 67 and by telephone to let them know what had happened and asked them to task the SAR helicopter. At the time both the OiC and DOiC were at the station.

3.11.7 The Delta RIB appears to have been capsized by a large breaking wave striking it beam on to starboard. The three crewmembers were thrown clear of the vessel and all three crewmembers lost their helmets during the incident. The crew were unable to conduct the Coast Guard post RIB capsize instructions due to the severity of the incident and the conditions. A wave righted the vessel shortly after the capsizing. The RIB's manual self-righting system was not

activated and subsequent inspection found the gas cylinder intact and fully charged.

3.11.8 The second Cox managed to swim offshore. The Boat Cox was swept inshore, into a small recess in the cliff and clung to rocks until rescued by Coast Guard rescue helicopter R117. The third crewmember was washed inshore under the cliff with the RIB. Civil Defence drone video footage, which commenced at 13.24 hrs, shows the third crewmember holding on to the port bow section but she was repeatedly washed off by the waves. After approximately three minutes the Casualty lost her grip and was next sighted lying face down in the water and drifting freely with the seas.

3.11.9 From later inspection of the drone footage none of the PFDs had been operated to inflate the airbladders. This was later confirmed by inspection of the PFDs. None of the Personal Locator Beacons (PLB's) had been activated. No hand flares were set off.

3.11.10 At the cliff top, several teams from different emergency services had assembled. These included Gardaí, Civil Defence and the Fire Service. There were also onlookers on the cliff top who were not members of the emergency services.

3.11.11 The outgoing OiC arrived at the station sometime between 12.30 hrs and 12.50 hrs on the 12th September 2016. There is conflicting evidence as to whether he was briefed on the on-going search operation or had called to return equipment. In and around this time the Delta RIB reported that it was heading back to Chimney Bay and was quickly followed by the 'MAYDAY' call. On becoming aware of the distress call the OiC made his way with another colleague to the cliff top to assess the situation and took charge of the incident liaising with other agencies and the Coast Guard helicopter. The DOiC instructed that the D Class inshore boat be launched to assist, this was subsequently launched when additional personnel became available a short time later.

3.11.12 At this time, a privately owned RIB was being prepared to launch with the intention of assisting in the search. The RIB owner was asked by a member of the Gardaí to await the arrival of the DOiC. The DOiC boarded the RIB and departed for the scene of incident. This vessel got close enough to rescue the second Cox who had been able to swim offshore. At approximately 13.44 hrs the rescued second Cox was brought to the pier at Kilkee where an ambulance was on standby to take her to hospital.

3.11.13 At 14.17 hrs Coast Guard helicopter R115 winched the Casualty out of the water and landed on an adjacent cliff top where paramedics attended to her. They brought the Casualty to Limerick University Hospital where she was pronounced dead at 16.05 hrs.

3.11.14 Following the departure of Coast Guard helicopter R115, Coast Guard helicopter R117 continued with the rescue effort. The cliff top rescue teams, a mixture of personnel from the different services present, abseiled down the cliff face and managed to get a line to the Boat Cox. They were able to reassure the Boat Cox and brief him on the situation. The Boat Cox was recovered by helicopter R117 at 17.25 hrs and brought to hospital.

POST INCIDENT CHRONOLOGY

3.12 The post mortem report of 13th September 2016 on the deceased Crewmember indicated the cause of death was drowning. "The skull injury might have been a contributary factor but on its own this injury would not have been fatal" (Autopsy report). The autopsy report conclusions are provisional at the time of publication of this report. It is the role of the Coroner's Office to determine the cause of death.

3.13 The Gardaí collected equipment from the Coast Guard Station and placed it in plastic bags, with seals attached. These were handed over to the MCIB on the 14th September 2016. The equipment and all other contents of the bags were examined on the 3rd October 2016. On completion of the examination, the equipment was returned to the IRCG at their depot in Ballycoolin on 13th October 2017. At that time two lifejackets, identified as being worn by crew on the day of the incident were inflated. Both operated and fully inflated.

3.14 Each waistcoat had a red flashing light unit, activated by immersion in water, a GME Accusat PLB; whistle on lanyard, a kill cord, a penknife, a handheld signal flare, a safety line with stainless steel snap-on clamps and a handheld ICOM VHF transceiver. Of the equipment retained by the Gardaí and returned to the MCIB, there was only one handheld VHF, which was thought to be the unit used to issue the 'MAYDAY' call. PLB's three, four, five and eight were missing. Lifejacket eight was missing.

3.15 The safety helmets were examined. At the scene of the incident, on the 14th September when the vessel remnants were recovered, it was noted that one helmet had been crushed. All other helmets examined were intact, but on two the inner air bladder was missing.

3.16 The Casualty's drysuit was cut away by the Paramedics attending to her immediately after the incident. The remains of this suit were later inspected by the MCIB. It was so damaged that no conclusive determination could be made concerning its condition prior to the incident.

3.17 After the incident the search operation was taken over by the Civil Defence. The body of the missing person was found on the 24th September 2016.

4. ANALYSIS

Search and Rescue and Recovery Operations

4.1 In Ireland the overall framework for search and rescue (SAR) is established in the Irish National Search and Rescue Framework document which was issued by the Minister for Transport in March 2010[1]. This document addresses SAR but it does not provide adequate clarity regarding rescue and recovery operations and in particular when a search and rescue mission becomes a search and recovery operation. The framework document does not provide any guidance on any intermediate stages between rescue and recovery operations.

4.2 This incident occurred on the third day of an operation in respect of a person who had been missing since 9th September. Sightings of objects in the water had led to the launch of the CGU boats on 10th September. The likelihood of a rescue rather than a recovery from the sea was severely reduced by the 12th September. There seems to have been no clear analysis as to when the operation changed from rescue to recovery or even whether it had been changed. A recovery operation would require a commensurate analysis of the risks involved and should have resulted in a different strategy being adopted. The teams were not provided with adequate guidance on these considerations.

Decision to launch the Delta RIB.

4.3 The decision to launch a CGB is made by three people under the 'Triple Lock System' as described in paragraph 3.5. There are four criteria which must be satisfied as set out in Appendix 7.2. These are:

- Daylight and unrestricted visibility only;
- Wind up to and including force 6/27 knots;
- Significant wave height 2 m;
- The Boat Cox is not permitted to operate the CGB in surf.

The manner in which this is implemented is outlined in section 1, Chapter 4 of the Irish Coast Guard Boat Operations Manual (see Appendix 7.7). The investigation found that the pre-launch planning document for the 1st launch addressed the visibility and wind criteria. This document also stated a possible hazard as 'waves up to 3m this evening'. It is unclear where this wave height information was sourced from. Kilkee Coast Guard Station was using the Met Éireann forecast with refinements from Windfinder but neither of these documents state this wave height. There was no wave height indicated for this launch. The document did not address the surf criteria. However, it is noted that the box indicating that it was within permitted limits was ticked 'yes'. There was no record that a visual confirmation from the cliff tops had been made as to the swell and wave heights.

1. Link to SAR framework: www.dttas.ie/maritime/english/irish-national-maritime-search-and-rescue-sar-framework

Thus the findings indicate that the 'Triple Lock System' was not adequately adhered to before the 1st launch of the Delta RIB on the 12th September.

The pre-launch planning document for the 2nd launch at 11.30 hrs on the 12th September has no comment on any of the four criteria mentioned above. It does contain a note 'continued from this morning' in the margin. This form is not fully filled in and the vessel to which the document refers is not identified. Thus the findings indicate that the 'Triple Lock System' was not adequately adhered to before the 2nd launch of the Delta RIB on the 12th September. There were no records for either launch of visual observations of sea conditions in the proposed search area.

4.4 Additional factors which do not appear to have been considered included:

- The necessity for launching a CGB;
- The effectiveness of the Delta RIB on a lee shore in breaking swells;
- The operational status of the vessel and functioning of all equipment;
- A co-ordinated plan of searching;
- The risk of personal injury to the crew of the Delta RIB given the operational conditions;
- The availability of a drone as an appropriate search tool;
- The risk of personal injury to the crew of the Delta RIB given the likelihood of recovery rather than rescue if the missing person had been in the sea since 9th September.

4.5 The IRCG does not distinguish between 'search and rescue' and 'search and recovery' operations and does not have a priority rating on CGB callouts. The Search Termination Criteria Document states:

'A SAR search should continue until the possibility of success is no longer reasonable and all hope of rescuing survivors is past. If after consultation with those involved, it has been determined that a further search would be of no avail, the SMC (search mission co-ordinator) must consult the On Call Officer before terminating the search.'

The capsize incident on the 12th September

4.6 The incident occurred in a small cove at the base of a cliff to the north and east of Foohagh Point. The area is covered by the chartlet as shown in Appendix 7.4. Local knowledge is that the seabed in the area rises in sharp cliff faces rather than a gradual shelving of the seabed. This can cause a sudden uprising in certain sea conditions and large swells can appear as if from nowhere.

4.7 The cliffs at Foohagh Point are approximately 49 m in height above sea level. The cove where the incident occurred shelves very steeply from 29 m to 11.6 m and

then dries. There are numerous rocky shoals in the area, some of which dry. The innermost part of the cove is located at 52° 40.37'N 009° 41.16'W.

4.8 Over the period of the original operation on the 12th September, the weather conditions were not favourable with high swells and strong winds forecast. This does not appear to have been adequately considered during the launch planning. The wave heights, as per the Met Éireann weather report at 06.00hrs of 2.8 to 3 m swells exceeded the operational limit for the RIB which was 2 m. In addition the internet based forecasting used by the Coast Guard unit indicated wave heights of 3.1 m and staying above 2 m until 22.00 hrs on the 13th September.

4.9 The Boat Cox lived locally and had undertaken all of the relevant training for boat coxswain. The cove was not searched earlier in the day because there was insufficient water due to the state of the tide. The track taken by the RIB when traversing the cove resulted in it being placed beam on to the direction of the swell at slow speed. The Delta RIB was brought close inshore into the breaking waves where it capsized.

4.10 The three crewmembers lost their helmets during the capsize. The investigation was unable to establish definitively how the helmets were lost. The security of the helmet in use depends entirely on it being properly fitted/inflated and secured according to the manufacturer's instructions (see Appendix 7.10 Coast Guard Marine Safety Helmet Fitting and Handling Instructions). The post-mortem on the Casualty identified a trauma to the side of the head in a position which should have been protected by the helmet.

4.11 The PFD would only support an unconscious person in a face up position when it was fully inflated. The PFDs inflation mechanism was manual to prevent inadvertent automatic activation. During the incident, none of the three casualties inflated their PFDs. During post incident examinations two of the three PDFs were activated so difficulties in activating the PFDs during the incident may have arisen from difficulty in finding the activation toggle, or a decision by the wearer not to inflate their device.

4.12 In this incident the crewmembers were thrown well clear of the boat during the capsize and were some distance apart. They found themselves in heavy seas which righted the boat again. The Boat Cox was washed inshore and clung to the rocks until winched off by the helicopter. The second Cox swam offshore and was rescued by boat. She had ingested water and required medical attention once brought ashore. The Casualty was washed inshore with the boat on to a rock ledge that was awash under the cliffs. She clung to the grab line on the port bow of the boat, but was repeatedly washed off and went under water. After three minutes she was washed off and did not swim back to the boat. The video footage showed her face down with her PFD uninflated. The Casualty expended energy holding on to the boat, would have ingested water and probably received the impact to the head during one of the periods when she was submerged. Following the 'MAYDAY'

message the D-Class Coast Guard Boat was launched from Kilkee. There is no record of any pre-launch risk assessment of the D-Class launch. This boat was launched in similar sea and wind conditions as the Delta RIB. These conditions were outside the operational capabilities and limits of both of these craft.

Operational Issues

4.13 The IRCG manages approximately 900 volunteers which requires dedicated resources and systems. While not within the scope of this report, which is focused on the capsize incident on the 12th September 2016, it is reasonable to conclude that the capacity of the Coast Guard to manage such a large number of volunteers places a strain on its ability to manage the day to day operations of the coastal units.

4.14 Prior to the incident, the Irish Coast Guard had been subject of two recent separate reports:

- Value for Money Report published in 2012. This report made recommendations with respect to human resources and training of personnel (see Appendix 7.11 Extract from Value for Money Report).
- Report issued by Maritime SAR Limited following an incident where the Dingle CGU RIB capsized in August 2014. This report made 20 recommendations (see Appendix 7.12 for detail).

4.15 The investigation in 2014 did not find any formal recognition of the skills required for OiCs and DOiCs or specific training program for these key personnel. The report into the 2014 Dingle incident identified the high workload and responsibility of the OiC as factors in the incident.

4.16 This current investigation found that there were management issues in the Kilkee CGU. A number of coxswains with local knowledge had left the unit. There was no local area Coast Unit Sector Managers (CUSM) for a period and the situation had escalated to the point that IRCG headquarters had intervened as detailed below.

4.17 During the course of this investigation the following facts were established:

- Headquarters managers became aware of management issues at the station and held a meeting with the volunteers in July 2016.
- A further meeting was held at the station only hours before the first call out on 9th September 2016. It was announced that the OiC was to step aside and undertake another position with the IRCG. The proposed handover was deferred until 12th September 2016 to allow for notification of the personnel changes to MRSC Valentia and other relevant parties.

4.18 It is normal practice for a Coast Guard Unit to call for assistance from flanking stations, through MRCC, when additional volunteers are required. Doolin responded to this request on the 12th September, which was a Monday, a normal

working day. The deceased crewmember was from Doolin and had brought her drysuit and helmet with her. She was supplied with a PFD from the Kilkee station.

Safety Management and Volunteers

4.19 The IRCG consists of full time staff with headquarters in Dublin and with further staff based in the radio centres in Valentia and Malinhead. However, in circumstances such as those described in this report the IRCG is dependent on the role of volunteers who are based in the 55 Coast Guard stations around the coast. This structure of full time staff managing volunteers leads to complexity in the overall system.

4.20 The relevant legislation in relation to safety, health and welfare at work in Ireland is the Safety, Health and Welfare at Work Act, 2005. The Health and Safety Authority is carrying out its own investigation into the incident.

4.21 An effective Safety Management System has at its core a feedback mechanism which reviews operations and analyses them. It uses accident reports and other non-compliances to review procedures and to constantly seek improvement. The IRCG has experienced incidents previously and most notably a Delta RIB capsized in Dingle on the 25th August 2014. The IRCG carried out an internal accident investigation report, the recommendations of which are annexed to this report. This incident in 2014 has many attributes similar to the present case and a Safety Management System should ensure that the recommendations would be reviewed and implemented. It is apparent that not all of the recommendations were implemented. The IRCG needs to implement an effective and functioning Safety Management System.

4.22 In March 2018 the International Standards Organisation (ISO) adopted the International Standard ISO 45001:2018 Occupational Health and Safety Management Systems. The main elements of this standard are as follows:

- Integration with other management systems;
- Provide an integrated approach to organisational management;
- Ensure the organisation establishes clear policies which are compatible with the overall strategic objectives and direction of the organisation;
- Promote continual improvement across the organisation;
- Enable the organisation to address and manage risk in the workplace;
- Context of the organisation;
- Understanding the needs and expectations of the worker and other interested parties;
- Leadership, culture and commitment;
- Polices linked to overall strategic objectives and direction of the organisation;
- Participation and consultation;

- Risk and opportunities;
- Performance evaluation;
- Evaluation of compliance;
- Management review.

Equipment and Training

4.23 The volunteers were supplied with a safety helmet, a drysuit, an inflatable PFD which had pockets for a handheld VHF transceiver, a flare, a Personal Locator Beacon (PLB), a knife and a safety lifeline.

4.24 In 2013, new helmets and drysuits were provided to both Doolin and Kilkee CGUs. There was no evidence of formal instruction or training in the use of this equipment. Full instructions for use and care of this equipment was available to IRCG staff and volunteers on an internal Extranet.

4.25 Each safety helmet had an inner air bladder which is designed to be inflated to ensure a proper fit on the wearer's head. The helmet manufacturer's instructions confirm that inflation of the bladder is essential to a proper fit of the helmet and that the strap assembly must be properly secured and adjusted (see Appendix 7.10 Coast Guard fitting and handling instructions). All three crewmembers lost their helmets when they were thrown from the Delta RIB. Two of the helmets recovered after the incident did not have the inner air bladder. The Casualty suffered a head injury during the incident which may have contributed to her inability to return to the vessel after being washed away.

4.26 The Marine Safety Helmet documentation states that it complies with Publicly Available Specification PAS 028:2002 for marine safety helmets. This specification specifies the requirements for marine safety helmets for use by occupants of small, fast craft. Also included in this specification are mandatory requirements that are specific to the marine environment for the helmet to be positively buoyant.

4.27 The inflatable PFDs that were supplied to the IRCG were Mullion 'Rescue 400 Seaforce Vest' model. These comprised a waistcoat type jacket with two types of buoyancy. Non-inflated, the jacket provided 50 Newtons of buoyancy. The standards to which the lifejackets conformed were EN ISO 12402-5 (non-inflated) and EN ISO 12402-6 (inflated) as a Special Purpose PFD. None of the crewmembers inflated their lifejackets for maximum buoyancy after they were thrown in the water. A fully inflated lifejacket can adversely affect swimming and manoeuvrability and may have been a factor in the wearers' decisions not to inflate.

4.28 All IRCG boat crew must attend the bespoke personal survival skills and capsize course. Although all the crew had attended this course, only one of the surviving crewmembers had done so recently using the current Personal Protective

Equipment (PPE) and survival equipment. At present IRCG crews are required to attend this course only once. As this is specialised training and hard to replicate during routine training on the bases, there is a case to be made for frequent refreshers particularly when new equipment is introduced.

Boats Used

4.29 The IRCG Delta RIB was being used to carry three volunteers in what was initially a search and rescue operation. At no stage on the 12th September was the nature of the mission clearly defined. The carriage of personnel on boats is regulated in Ireland by means of the Merchant Shipping Acts. The status of the people being carried depends on the nature of the mission. It can be considered that during a SAR operation that all efforts must be made to save life commensurate with the safety of the rescue boat crew. However, the IRCG boats are not vessels of opportunity as they are dispersed throughout the coast in a planned manner to be readily available for such uses. Therefore, they should be safe and comply with all applicable statutory requirements.

The Merchant Shipping (Load Lines) Act, 1968[2] ('The Load Lines Act') requires all vessels, registered or un-registered (per Section 14 of the Load Lines Act) to comply with statutory technical requirements.

'Section 14 (1) Subject to the next following subsection, and to any exemption conferred by or under this Act, a ship to which this Act applies, not being a registered ship, shall not proceed to or attempt to proceed to sea from any port in the state unless –

(a) The information required by those rules to be provided as mentioned in section 3 (4) of this Act is provided for the guidance of the master of the ship in the manner determined in accordance with the rules.

(b) The ship complies with the conditions of assignment; and

(c) The ship is marked with a deck-line and with load lines in accordance with those rules;

(d) The ship has been surveyed in accordance with the load line rules;

(2) The preceding subsection does not apply to a ship in respect of which a valid Convention certificate is produced.

(3) If any ship proceeds or attempts to proceed to sea in contravention of the preceding provisions of this section, the owner and master of the ship shall each be guilty of an offence and liable on summary conviction to a fine not exceeding one hundred pounds and on conviction on indictment to a fine not exceeding two hundred pounds.

(4) Any ship which in contravention as is mentioned in subsection (1) of this section, not being a ship in respect of which a valid Convention certificate is produced, does not comply with the conditions of assignment, then –

2. The Merchant Shipping (Load Lines) Act, 1968

(a) If the ship is a foreign ship, section 462 of that Act shall have effect in relation to the ship as if she were unsafe by reason of one of the matters specified in that section.' These requirements are set out in the Load Line Rules[3], made under the Load Lines Act.

(b) If the ship is an Irish ship, she shall be deemed to be unsafe for the purpose of section 459 of the Merchant Shipping Act 1894, or,

The only relevant exemption to the requirement is set out in 3(f) of S.I. No. 416/2002 – Merchant Shipping (Load Lines) (Exemption) Order 2002[4] (as amended by Regulation 2 in S.I. 190/2003 – Merchant Shipping (Load Lines) (Exemption) (Amendment) Order 2003), which states: 'vessels in respect of which passenger boat licenses specifying the limits beyond which the vessel shall not ply are in force and which operate solely within those limits.' Therefore these boats should hold passenger boat licences or load line exemption certificates. In this case, as they were being used for search operations, they could have held passenger boat licences. The operator's training, undertaken by the RIB Cox, does not equate to a statutory operator's licence as required by S.I. (2005) 649 Merchant Shipping (Passenger Boat) Regulations, 2005.

4.30 It was noted in this investigation that the fixed VHF radio installation on the Delta RIB was not operational. The volunteers were aware of this and carried a handheld VHF on Channel 16. However, all vessels fitted with a VHF radio installation must hold a ship's radio station licence and the operators must hold the appropriate operators certificate. Additionally, the IRCG Delta RIB could have held a passenger boat licence and this would require the radio installation to be correctly installed, fitted and operational.

New Technologies

4.31 The decision to launch the Delta RIB and to deploy cliff teams was based on traditional ways of carrying out search and rescue missions and recovery operations. Using boats and teams places volunteers in hazardous situations and requires extensive risk management and safety procedures. A fundamental tenet of safety management systems is to seek to avoid taking a risk if possible. New technologies such as drones may provide alternative means of searching, particularly in recovery operations where they could be an effective way to reduce risks to volunteers and other emergency services. In this incident, the missing person had been reported missing from the cliffs on 9th September and the likelihood of a rescue from the sea, rather than a recovery situation, was very limited.

3. S.I. Load Line Rules.
4. S.I. No. 416

5. CONCLUSIONS

Search and Rescue and Recovery Operation

5.1 The Irish National Search and Rescue Framework does not provide adequate clarity in relation to search and recovery operations as to when a search and rescue operation becomes a search and recovery operation or at any of the intermediate stages.

5.2 The criteria for determining the response to recovery operations as opposed to search and rescue and the appropriate responses were not clearly defined. This is especially the case in incidents where search and recovery operations take place close to cliffs and in surf conditions.

5.3 The need to deploy, and the activities to be carried out by, the cliff search teams and boats in search and recovery operations was not adequately considered.

5.4 The use of new technologies or alternative means of carrying out search and recovery operations was not adequately considered.

5.5 The criteria for oversight of Kilkee station to ensure that it met pre-determined operational readiness were not established. There was no evidence of any effective management system in place with associated oversight to ensure that it met these criteria before the operation was tasked.

5.6 The 'Triple Lock System' to decide on launching a boat was not adequately set out. Neither the roles and responsibilities, nor the acceptance criteria for launching before each launch were adequately documented.

5.7 The Delta RIB was used outside of the IRCG's own defined operational limits.

Delta RIB Issues

5.8 The Delta RIB was not licensed or certified in accordance with the statutory requirements[5] for the activities in which it was engaged.

5.9 The Delta RIB did not hold the required ship's radio station licence.

5.10 The Delta RIB Boat Cox did not hold the required statutory operator's licence. This is a mandatory statutory qualification and is separate to any training provided by the IRCG.

5. Load line Act. Merchant Shipping Act 1992.

Safety Management Issues

5.11 The capsize of the Kilkee Delta RIB occurred within a wider context of safety management in the Coast Guard as a whole. While this investigation report focuses on the specific Kilkee Delta RIB casualty it is necessary to consider some of the wider context within which it occurred. It is clear from the analysis that there are a number of specific issues which contributed to the Delta RIB capsize. Each of these issues requires to be addressed as well as addressing the overall wider systemic issues.

5.12 The IRCG does not have an effective Safety Management System as demonstrated by recent incidents and the resulting recommendations which remain outstanding.

5.13 On 12th September the Coast Guard Boat (CGB) was launched in conditions which were outside the operational limits of the vessel. Insufficient consideration was given to the necessity and effectiveness of a boat operation. There were critical deficiencies with the boat's communication and navigation equipment.

5.14 The IRCG did not factor in the priority nor necessity of launching a CGB for a recovery operation in the circumstances described in this report, nor did it consider the effectiveness of a CGB in the search.

5.16 All Coast Guard operational instructions and procedures are available to all volunteers on the Coast Guard's Extranet system.

6. SAFETY RECOMMENDATIONS

6.1 The Minister for Transport, Tourism and Sport should review the Irish National Search and Rescue Framework to ensure that:

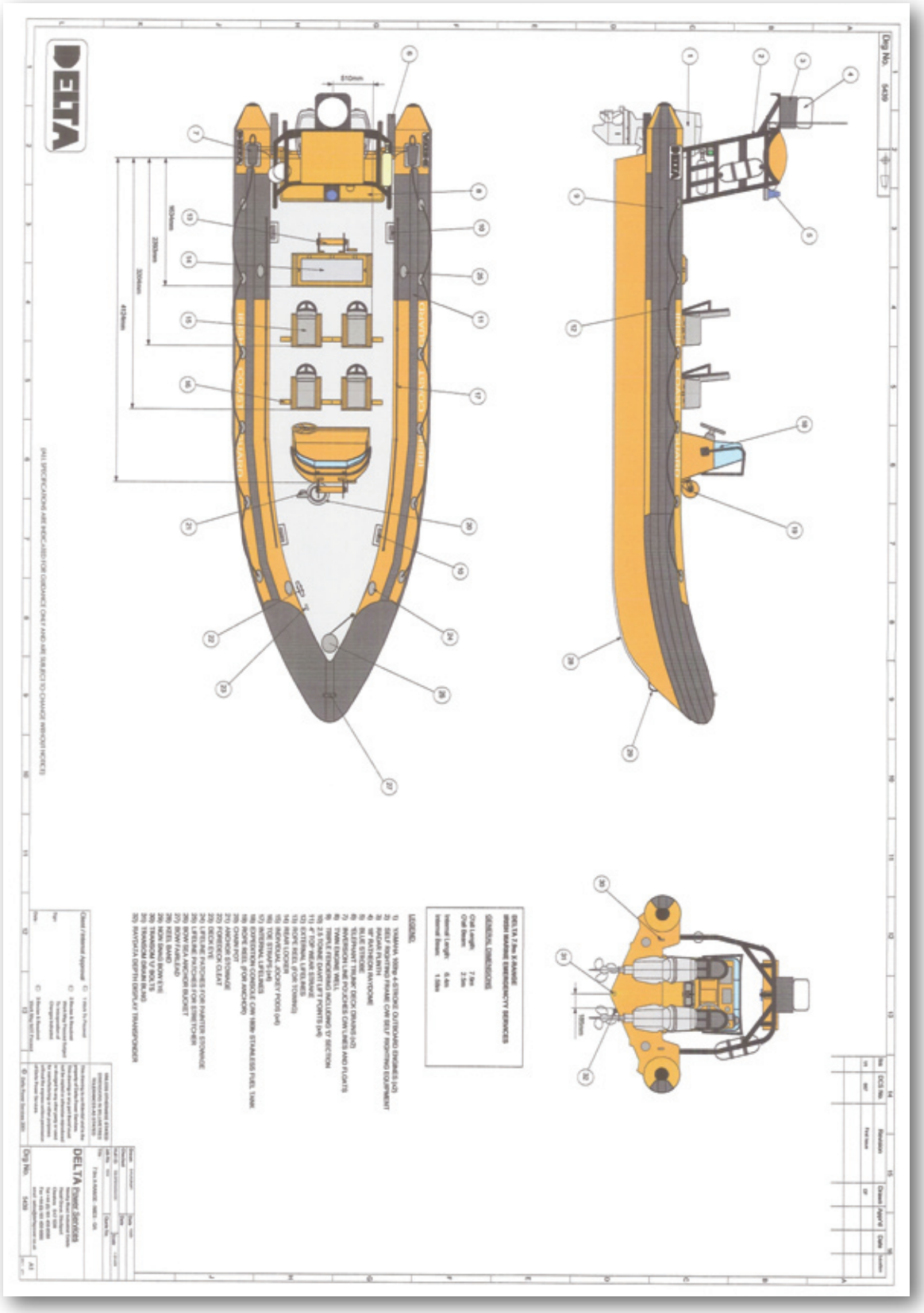
- The criteria for determining the response to recovery operations, as opposed to search and rescue, is clearly defined and the appropriate responses to developments during an operation should be set out clearly.
- The criteria for tasking and launching Coast Guard boats is reviewed and clearly documented.

6.2 The IRCG should:

- Ensure that the Irish National Maritime Search and Rescue Framework is embedded in the operation of all activities within the IRCG.
- Implement a comprehensive Safety Management System to address the safety management issues identified in this report. This should comply with the appropriate international standards and should address all aspects of the management of the IRCG including volunteers, their management, appointment and training.
- Undertake regular audits and governance reviews of the Management System.
- All vessels operated by the IRCG should comply with the statutory requirements of the Merchant Shipping Acts including crew qualifications.

7. APPENDICES

Appendix 7.1 Vessel specification on delivery in 2003.



Appendix 7.2 Coast Guard Boat Operational Capabilities and Limits (Delta RIB).

Delta Rib (7.9m)

Specification 7.9m

Length overall:	7.9m
Beam:	2.5m
Propulsion: Twin	115hp (4 stroke)
Speed (max):	36kn
Speed (cruising):	30kn
Range @ full speed:	3.5 hours
Impact seating:	x6
Passenger License:	Pending

Delta 7.9m Operating Limits

Crewing levels and Crew Compliment:

Minimum Operational Crew: 3

1 x Boat Cox
1 x Deputy Boat Cox (or Trainee Boat Cox)
2 x CGB Crew (or a role above)

Optimum Operational Crew: 4

1 x Boat Cox
1 x Deputy Boat Cox (or Trainee Boat Cox)
2 x CGB Crew (or a role above)

Maximum Personnel to be carried: 6

Additional Operational Crew or Trainee Crew

Casualty Capacity (in addition to max crew) **4**

Environmental Conditions:

- Daylight and unrestricted visibility only
- Wind up to and including Force 6 / 27kn
- Significant wave height 2m

Areas:

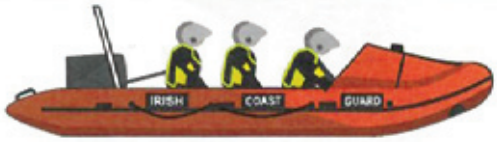
☒ The Boat Cox is not permitted to operate the CGB in surf.

- Up to 6NM from coastline

Appendix 7.3 Coast Guard Boat Operational Capabilities and Limits (D-Class).

(1) 3.7 Operating Limits by CGB Specification

D Class



D Class Specification

Length overall:	4.9m
Beam:	2m
Propulsion:	40hp (2 or 4 stroke)
Speed (max):	20kn
Speed (cruising):	18kn
Range @ full speed:	3 hours
Passenger License:	No. No seating.

D Class Operating Limits

Crewing levels and Crew Compliment:

Minimum Operational Crew: 2*

*Only where operating in conjunction with a CGB

1 x Boat Cox
1 x Deputy Boat Cox (or Trainee Boat Cox)

Optimum Operational Crew: 3

1 x Boat Cox
1 x Deputy Boat Cox (or Trainee Boat Cox)
1 x CGB Crew (or a role above)

Maximum Personnel to be carried: 4

Either 1 x additional Operational Crew
or 1x Trainee Crew

Casualty Capacity (in addition to max crew) 3

Environmental Conditions:

- Daylight and unrestricted visibility only
- Wind up to and including Force 5 / 21kn
- Significant wave height 1.5m

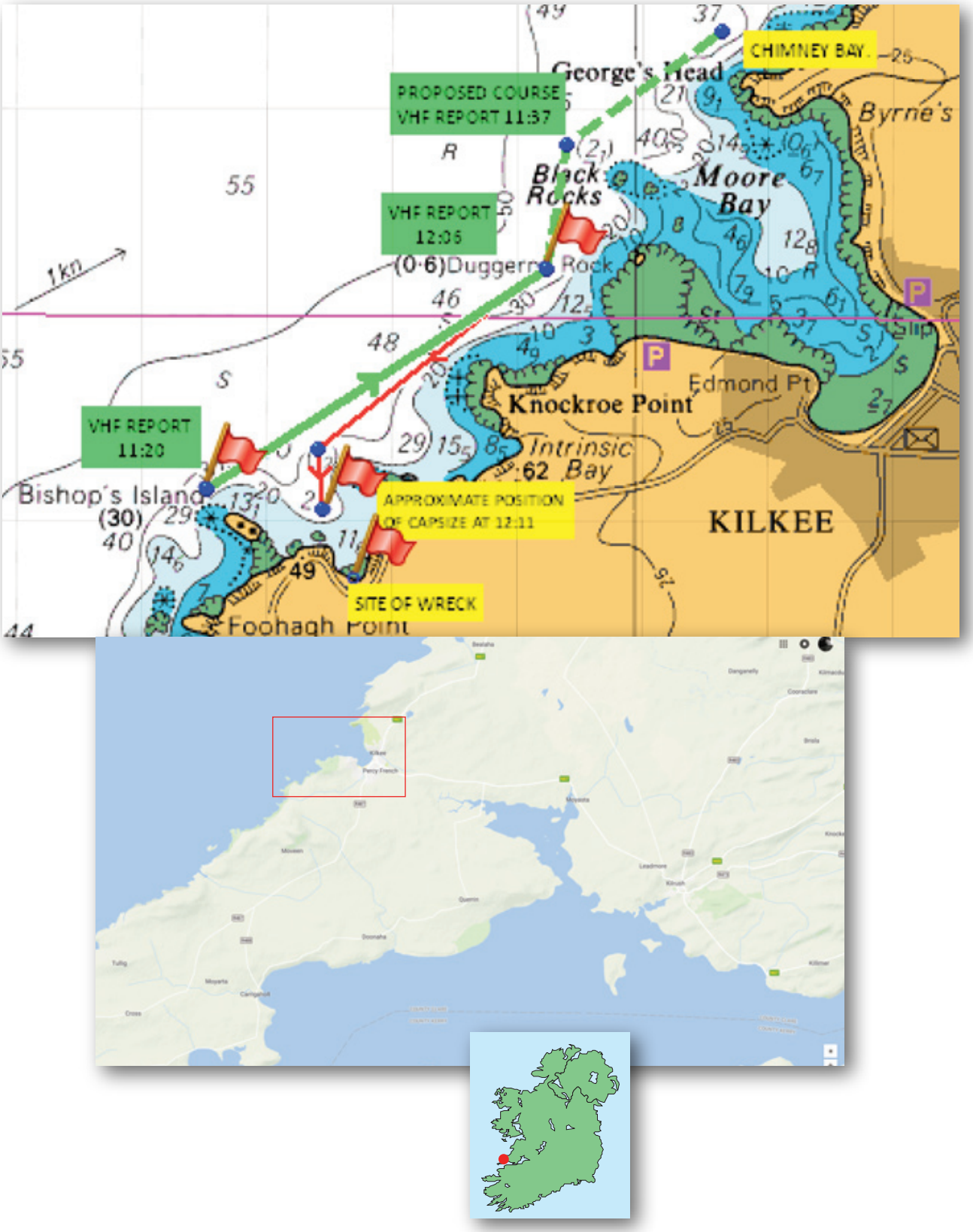
** Areas:

☒ **The Boat Cox is not permitted to operate the CGB in surf.**

- Up to 2NM from coastline **& / or Inland waters

**Delete as approved by VS&T

Appendix 7.4 Chart of area of incident.



Appendix 7.5A Met Éireann Forecast and Terminology.

MET éireann

Weather Forecast From Met Eireann

24-hour Sea Area Forecast

Updated at 0000 / 0600 / 1200 / 1800

Sea Area Forecast until 0600 Tuesday, 13 September 2016
Issued at 0600 Monday, 12 September 2016

1. Gale warning: Nil
Small craft warning: In operation

2. Meteorological situation at 0300: A depression of 972 hPa to the northwest will track further northwards. The associated frontal trough at the west coast will gradually move eastwards today. Ahead of the front a strong southerly flow is present.

3. Forecast for Irish coastal waters from Belfast Lough to Howth Head to Roche's Point and for the Irish Sea

Wind: Southerly force 6 to 7 and gusty this morning, decreasing force 5 to 6 during the afternoon, becoming variable force 2 to 4 overnight.

Weather: Scattered outbreaks of rain, turning more persistent later today with fog patches.

Visibility: Moderate to poor in rain, otherwise moderate to good.

Forecast for Irish coastal waters from Roche's Point to Slyne Head to Belfast Lough

Wind: West force 3 to 5, further decreasing force 2 to 4 in the afternoon and becoming variable this evening.

Weather: Outbreaks of rain, heavy at times with fog patches, becoming mainly fair from the west during the day.

Visibility: Moderate to poor, becoming mostly good in the west today.

Warning of Heavy Swell: Nil

4. Outlook for a further 24 hours until 0600 Wednesday 14 September 2016: Light to moderate north to northwest winds, becoming strong in the east and south on Tuesday night. Outbreaks of rain, heavy and persistent at times in the east.

Appendix 7.5A Met Éireann Forecast and Terminology.

MET éireann

Weather Forecast From Met Eireann

Text of Gale Warning
Nil

Text of Small Craft Warning
Southerly winds will reach force 6 or 7 today on Irish coasts from Malin Head to Howth Head to Roche's Point.

Coastal Reports	5 AM Monday, 12 September 2016
Malin Head Automatic	South-Southeast, 24 Knots, Gust 37 Knots, Cloudy, 26 Miles, 994, Falling slowly
Dublin Airport	South, 15 Knots, Recent rain, 16 Miles, 999, Falling
Buoy M5 51° 41'N 6° 42'W	South-Southeast, 23 Knots, Wave ht: 4 m, The visibility at Tuskar is 3 Miles, 1001, Falling slowly
Roches Point Automatic	South-Southeast, 28 Knots, Gust 35 Knots, Mist, 2 Miles, 998, Falling slowly
Sherkin Island Automatic	South, 25 Knots, Gust 34 Knots, Light rain, 1.8 Miles, 997, Falling slowly
Valentia Automatic	South-Southwest, 13 Knots, Gust 33 Knots, Heavy drizzle, 1.8 Miles, 995, Rising slowly
Mace Head Automatic	South, 21 Knots, Gust 32 Knots, Mod drizzle, 1.1 Miles, 993, Falling slowly
Belmullet Automatic	West-Southwest, 6 Knots, Heavy drizzle, 2 Miles, 991, Steady
Buoy M1 53° 8'N, 11° 12'W	Report not available
Buoy M2 53° 29'N, 5° 26'W	South-Southeast, 23 Knots, Gust 35 Knots, Wave ht: 3.1 m, 1001, Falling
Buoy M3 51° 13'N, 10° 33'W	Southwest, 14 Knots, Wave ht: 5 m, 996, Rising slowly
Buoy M4 55° 0'N 10° 0'W	West-Southwest, 9 Knots, Wave ht: 5.1 m, 990, Rising slowly
Buoy M6 53° 4'N 15° 56'W	West-Southwest, 17 Knots, Gust 28 Knots, Wave ht: 4.1 m, 992, Rising slowly

Disclaimer: buoy locations are approximate and are not for navigational purposes

Sea Crossings	State of sea until 0600 Wednesday 14 September 2016
Dublin - Holyhead	Rough, decreasing moderate on Monday night
Rosslare - South Wales	Rough, decreasing moderate on Tuesday
Cork - South Wales	Rough, decreasing moderate on Tuesday
Rosslare - France	Rough, decreasing moderate on Tuesday
Cork - France	Rough to very rough, decreasing moderate on Tuesday

Next update before 1300 Monday, 12 September 2016

A detailed forecast may be obtained by dialing ***Weatherdial*** on 1550 123 855.

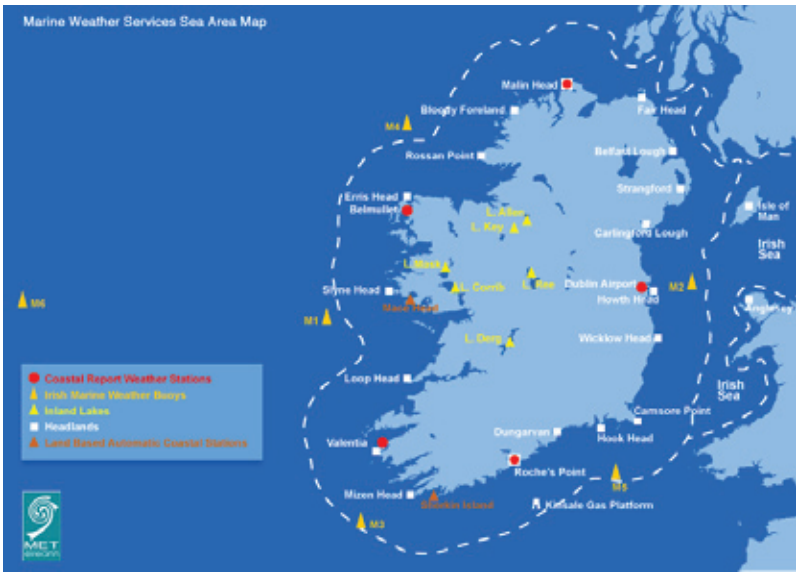
[redacted]

Appendix 7.5A Met Éireann Forecast and Terminology.

SEA AREA FORECAST TERMINOLOGY

The Sea Area Forecast

The Sea Area Forecast issued by Met Éireann covers Irish Coastal Waters out to 30 nautical miles, and also includes the Irish Sea area as shown in the map



Marine Map

The Sea Area Forecast issued by Met Éireann contains the following standard elements:

Meteorological or General Situation

A description of the meteorological situation over Ireland at the stated time and of adjacent weather systems, e.g. depressions, anticyclones or frontal troughs, which are expected to have an influence on the forecast areas during the following 24 hours. Explanation of some terms used here are:-

Imminent: within 6 hours

Soon: between 6 and 12 hours

Later: between 12 and 24 hours

The speed of movement of pressure and frontal systems is described as follows:-

Slowly: up to 15 knots

Appendix 7.5A Met Éireann Forecast and Terminology.

Steadily: 15 to 25 knots

Rather quickly: 25 to 35 knots

Rapidly: 35 to 45 knots

Very Rapidly: greater than 45knots.

The general forecast follows giving wind, weather and visibility for all coastal waters and the Irish Sea.

Wind:

The wind strength is given in Beaufort Force (https://www.met.ie/about-us/faq#collapsewhatisthebeaufortscale) and wind direction using the 16-point compass.

Weather:

The following are some terms used in the Forecast and coastal reports:-

Fine: Dry, mainly sunny day. Clear after dark.

Fair: Dry, good sunny or clear spells(cloud no more than 3 – 5 okta of medium or low cloud or 6 – 8 okta of high cloud).

Cloudy: 6 – 8 okta of low or medium cloud.

Mist: Visibility restricted by water droplets.

Haze: Visibility restricted by dust or smoke.

Other terms such as rain or hail shower are self explanatory.

Visibility:

descriptions of visibility mean the following:-

Good: more than 5 nautical miles (9km)

Moderate: 2 – 5 nm (4 – 9 km)

Poor: 0.5 to 2 nm (4km)

Fog: less than 0.5 nm (1,000m)

Swell Warnings:

When significant swell height of greater than 4 metres is expected.

Outlook:

A brief outlook is given for the 24 hours following the period covered by the forecast.

Appendix 7.5A Met Éireann Forecast and Terminology.

Coastal Reports

(from a selection of the following stations):

Malin Head
Dublin Airport
Roches Point Automatic
Valentia
Belmullet
M2 buoy
M3 buoy
M4 buoy
M5 buoy
M6 buoy

The coastal reports include:

(a) wind direction on the 16 point compass and speed in knots
(b) weather
(c) visibility in nautical miles and tenths of,
(d) pressure in hectopascals (millibars)
(e) pressure tendency, which describes the change in pressure over the past 3 hours, according to this scale:

0.0 – 0.4hPa = steady

0.5 – 1.9hPa = rising/falling slowly

2.0 – 3.4 hPa = rising/ falling

3.5 – 5.9 hPa = rising or falling rapidly

6.0hPa or greater = rising or falling very rapidly

Sea Crossings

Wave Heights / State of Sea
The wave height is the vertical distance between the crest and the preceding or following trough. The table below gives a description of the wave system associated with a range of Significant Wave heights. The Significant wave height is defined as the average height of the highest one-third of the waves. (It is very close to the value of wave height given when making visual observations of wave height.)

Sea State (Descriptive)	Significant Wave Height (in metres)
Calm	0 – 0.1
Smooth(Wavelets)	0.1 – 0.5

Appendix 7.5A Met Éireann Forecast and Terminology.

Sea State (Descriptive)	Significant Wave Height (in metres)
Slight	0.5 -1.25
Moderate	1.25 – 2.5
Rough	2.5 – 4.0
Very rough	4.0 – 6.0
High	6.0 – 9.0
Very High	9.0 – 14.0
Phenomenal	Over 14.0

Individual waves in the wave train will have heights in excess of the significant height. The highest wave of all will have a height about twice the significant height.

Gale Warnings

- Gale warnings are issued by Met Éireann for Irish coastal waters, which are regarded as extending 30 miles out from the coastline, and the Irish Sea or part thereof.
- Gale Warnings are issued if winds of Beaufort Force 8 are expected.
- Strong Gale Warnings are issued if winds of Beaufort Force 9 or frequent gusts of at least 52 knots are expected.
- Storm Force Warnings are issued if Beaufort Force 10 or frequent gusts of at least 61 knots are expected.
- Violent Storm Force Warnings are issued if Beaufort Force 11 or frequent gusts of at least 69 knots are expected.
- Hurricane Force Warnings are issued if winds of greater than 64 knots are expected.

Small Craft Warnings

Small Craft Warnings are issued if winds of Beaufort Force 6 (min. mean of 22 knots) are expected up to 10 Nautical miles offshore.

Media and Commercial Availability of Sea Area Forecasts

Sea Area Forecasts are issued and broadcast live from Met Éireann's General Forecasting Division on RTÉ Radio 1. Any gale warnings are also included on hourly news bulletin on RTÉ Radio.

The Irish Coast Guard (ICG) Coast Radio Stations.

ICG Coast Radio Stations make a prior announcement of weather forecasts on Marine VHF Radio Ch16 and then broadcast the forecast on the named relevant VHF Radio working channel. Sea Area Forecasts are broadcast every 3 hours beginning at 0103 local time.

Appendix 7.5A Met Éireann Forecast and Terminology.

i.e. broadcast times are:- 0103, 0403, 0703, 1003, 1303, 1606, 1903, 2203 local time.

Gale Warning broadcasts are also preceded by an announcement on Marine VHF Ch16. They are broadcast on receipt and are repeated at the next one of the following times:- 0033, 0633, 1233 and 1833 local time.

Web

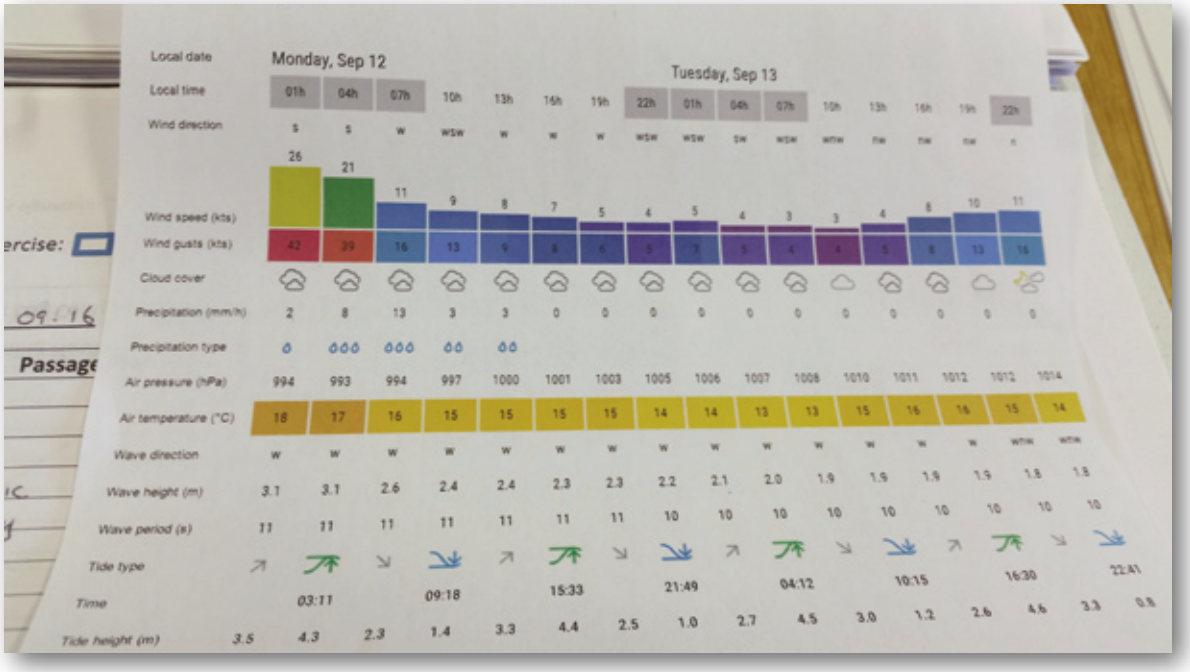
The latest Sea Area Forecast, Small Craft Warning and Gale Warnings (if any) are available on this site.

(https://www.met.ie)

(http://www.housing.gov.ie/housing/housing)

(https://www.met.ie/srcforecasts/worldweather)

Appendix 7.5B Windfinder Forecast.



Appendix 7.5C Met Éireann Weather Report.

Delta Coast Guard Base

MET ÉIREANN
The Irish Meteorological Service

MCIB,
Leeson Lane,
Dublin 2.

20-September -2016

Our Ref. **WS 3018/2_16418**
Your Ref. **MCIB/12/266**

Re: Estimate of weather conditions off Kilkee, Co Clare at position 52 40.94N 009 39.62W from 06:00 hours to 12:00 hours and from 12:00 hours and 18:00 hours on the 12th of September 2016.

Dear Sir/Madam,

Please find enclosed the above report. Attached please find Appendices of Beaufort Force, Sea States and Sea Area Maps. Also supplied is the Sea Area Forecast issued at 06:00 hours on the 12th.

Yours sincerely,

[redacted]

Appendix 7.5C Met Éireann Weather Report.

MET ÉIREANN
The Irish Meteorological Service

20-September -2016

Our Ref. **WS 3018/2_16418**
Your Ref. **MCIB/12/266**

Re: Estimate of weather conditions off Kilkee, Co Clare at position 52 40.94N 009 39.62W from 06:00 hours to 12:00 hours and from 12:00 hours and 18:00 hours on the 12th of September 2016.

General Meteorological Situation at 6:00 am: *A fresh southerly airflow covered Ireland, ahead of an advancing cold front approaching the west coast.*

From 06:00 hours to 12:00 hours. 12th September 2016

Wind: Winds mainly from the south were light to moderate (mean speeds of 7 to 10 knots) – force 3 on the Beaufort scale; winds increased moderate (10 to 13 knots0 during the forenoon – Beaufort Force 4.

Weather: Occasional rain, sometimes heavy.

Temperatures: The air temperature ranged 13 to 15 degrees Celsius.

Visibility: Generally moderate (5 to 7 km), but may have been poor (2000 to 4000 meters) occasionally in rain.

Sea States Sea heights were consistent throughout the period. Little contribution was made from local wind, but a considerable underlying swell was present. The Significant Wave Height (SWH) ranged 2.8 to 3.3 meters with an average period of 8 seconds. The maximum wave height was 4.8 meters at around midday. The direction of swell was from 250 degrees. Sea temperature was 15 degrees Celsius.
Seas overall could be described as rough.

Appendix 7.5C Met Éireann Weather Report.

MET ÉIREANN
The Irish Meteorological Service

From 12:00 hours to 18:00 hours. 12th September 2016

Wind: Light and variable mainly from the west (mean speeds of 4 to 7 knots) – Force 2 to 3 on the Beaufort scale.

Weather: Drizzle for a time up until 2:00 pm; thereafter cleared to mainly dry weather but stayed cloudy.

Temperatures: 13 to 15 degrees Celsius.

Visibility: Moderate for a time at first (6 to 9 km), but generally good (Greater than 10 km).

Sea States Seas consisted again mostly of swell. SWH was 3.0 to 3.5 meters with an average period of 8.2 seconds. Maximum wave height was 5.0 meters. Wave directions was from 260 degrees. Sea temperature was 15 degrees Celsius.
Seas overall could be described as rough.

[redacted]

[redacted]

Appendix 7.5C Met Éireann Weather Report.

MET ÉIREANN
The Irish Meteorological Service

Appended Beaufort Wind Scale.

Beaufort Scale of Wind

Force	Description	Speed* knots	Speed* km/hr	Specification -sea	Wave height** (metres)
0	Calm	<1	<1	Sea like mirror	
1	Light air	1-3	1-5	Ripples	0.1 (0.1)
2	Light breeze	4-6	6-11	Small wavelets	0.2 (0.3)
3	Gentle breeze	7-10	12-19	Large wavelets, crests begin to break	0.6 (1)
4	Moderate breeze	11-16	20-28	Small waves becoming longer, frequent white horses	1 (1.5)
5	Fresh breeze	17-21	29-38	Moderate waves, many white horses, chance of spray	2 (2.5)
6	Strong breeze	22-27	39-49	Large waves, white foam crests, probably some spray	3 (4)
7	Near gale	28-33	50-61	Sea heaps up, streaks of white foam	4 (5.5)
8	Gale	34-40	62-74	Moderately high waves of greater length	5.5 (7.5)
9	Strong gale	41-47	75-88	High waves, dense streaks of foam, spray may reduce visibility	7 (10)
10	Storm	48-55	89-102	Very high waves, long overhanging crests, visibility affected	9 (12.5)
11	Violent storm	56-63	103-117	Exceptionally high waves, long white foam patches cover sea	11.5 (16)
12	Hurricane	64+	117 & over	Air filled with foam and spray, sea completely white	14 (-)

*Speed = mean speed at a standard height of 10 metres.
**Wave height is only intended as a guide to what may be expected in the open sea.
Bracketed figures indicate the probable maximum wave height.

Appendix 7.5C Met Éireann Weather Report.

MET éireann

MET ÉIREANN
The Irish Meteorological Service

Sea States.

Wave Heights / State of Sea
The wave height is the vertical distance between the crest and the preceding or following trough. The table below gives a description of the wave system associated with a range of significant wave heights. The Significant wave height is defined as the average height of the highest one-third of the waves. (It is very close to the value of wave height given when making visual observations of wave height.)

Sea State (Descriptive)	Significant Wave height in meters
Calm	0 – 0.1
Smooth(Wavelets)	0.1 – 0.5
Slight	0.5 – 1.25
Moderate	1.25 – 2.5
Rough	2.5 – 4
Very rough	4 – 6
High	6 – 9
Very high	9 – 14
Phenomenal	Over 14

Individual waves in the wave train will have heights in excess of the significant height. The highest wave of all will have a height about twice the significant height

Visibility Descriptions of visibility mean the following:

Visibility (Descriptive)	Visibility in nautical miles (kilometres)
Good	More than 5 nm (> 9 km)
Moderate	2 – 5 nm (4 – 9 km)
Poor	0.5 – 2 nm (1 – 4 km)
Fog	Less than 0.5 nm (< 1km)

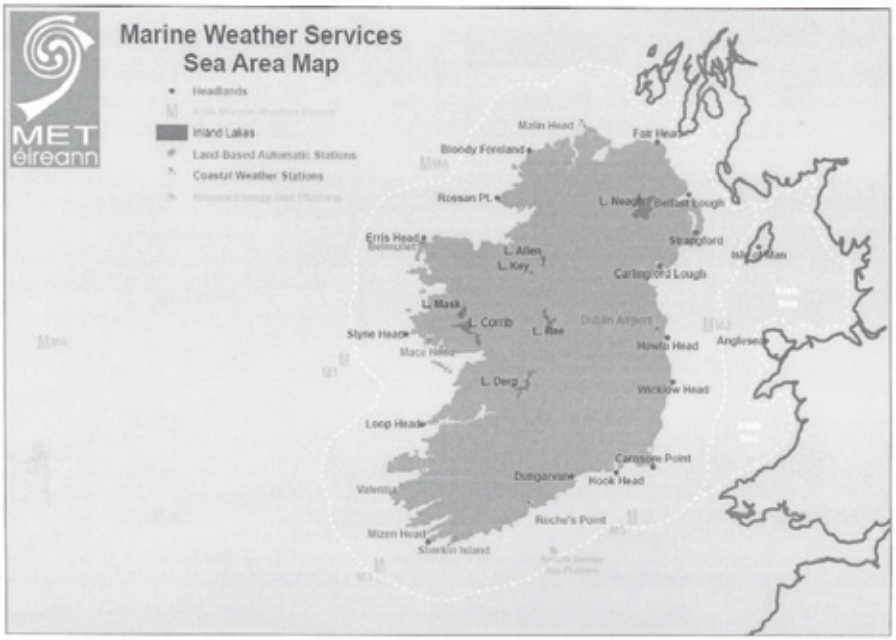
Note:

If there are no measurements or observations available for an exact location, these estimated conditions are based on all available meteorological measurements and observations which have been correlated on the routine charts prepared by Met Éireann.

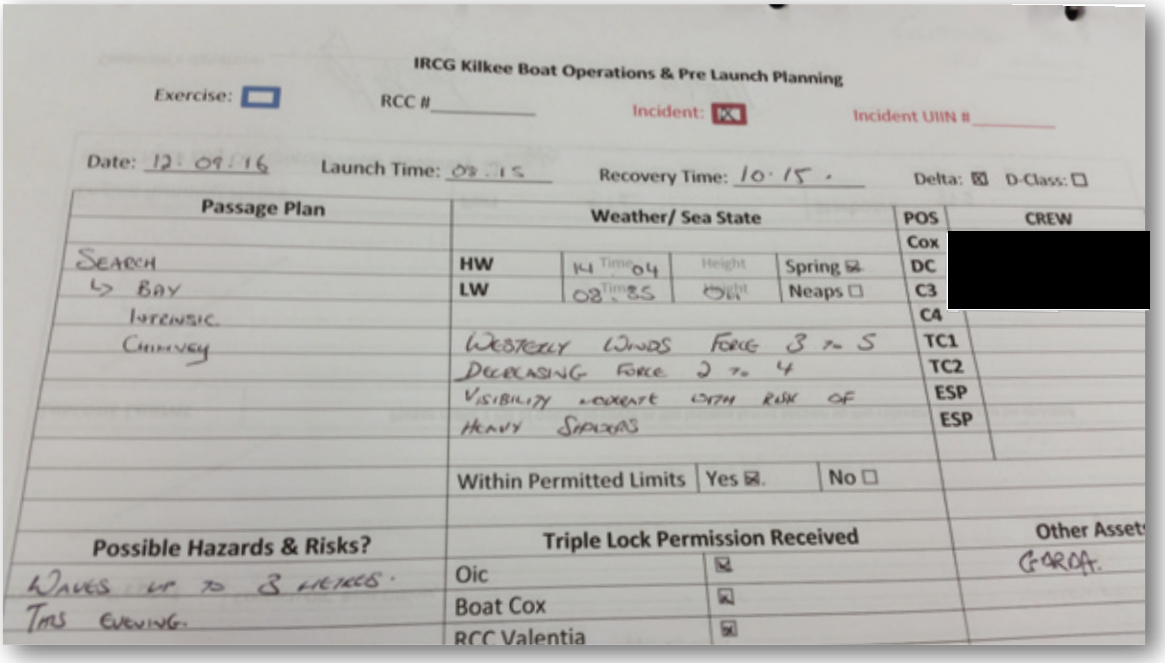
Appendix 7.5C Met Éireann Weather Report.

MET ÉIREANN
The Irish Meteorological Service

Sea Area Map



Appendix 7.6 Pre-Launch Planning document for 1st launch on 12th September 2018.



IRCG Kilkee Boat Operations & Pre Launch Planning

Exercise: ☐ RCC #_____ Incident: ☒ Incident UIIN #_____

Date: 12:09:16 Launch Time: 03:15 Recovery Time: 10:15 Delta: ☒ D-Class: ☐

Passage Plan	Weather/ Sea State				POS	CREW
					Cox	[redacted]
SEARCH	HW	14 Time 04	Height	Spring ☒	DC	
↳ BAY	LW	08:35 Time	Height	Neaps ☐	C3	
INTENSIC					C4	
CHIMNEY	WESTERLY WINDS FORCE 3 TO 5				TC1	
	DECREASING FORCE 2 TO 4				TC2	
	VISIBILITY MODERATE WITH RISK OF				ESP	
	HEAVY SHOWERS				ESP	
	Within Permitted Limits	Yes ☒	No ☐			

Possible Hazards & Risks?	Triple Lock Permission Received		Other Assets
WAVES UP TO 3 METRES.	Oic	☒	GARDA.
THIS EVENING.	Boat Cox	☒	
	RCC Valentia	☒	

Appendix 7.7 Triple Lock System

(1) 4.7 CGB Operational Co-ordination

(1) 4.7.1 CGB Launch Procedure

A triple lock pre-launch decision making process must be adhered to every time a CGB is launched, whether for response of routine operation.

This triple lock process involves the:

- Rescue Co-ordination Centre.
- OIC *(or authorised representative)*.
- Designated Boat Cox.

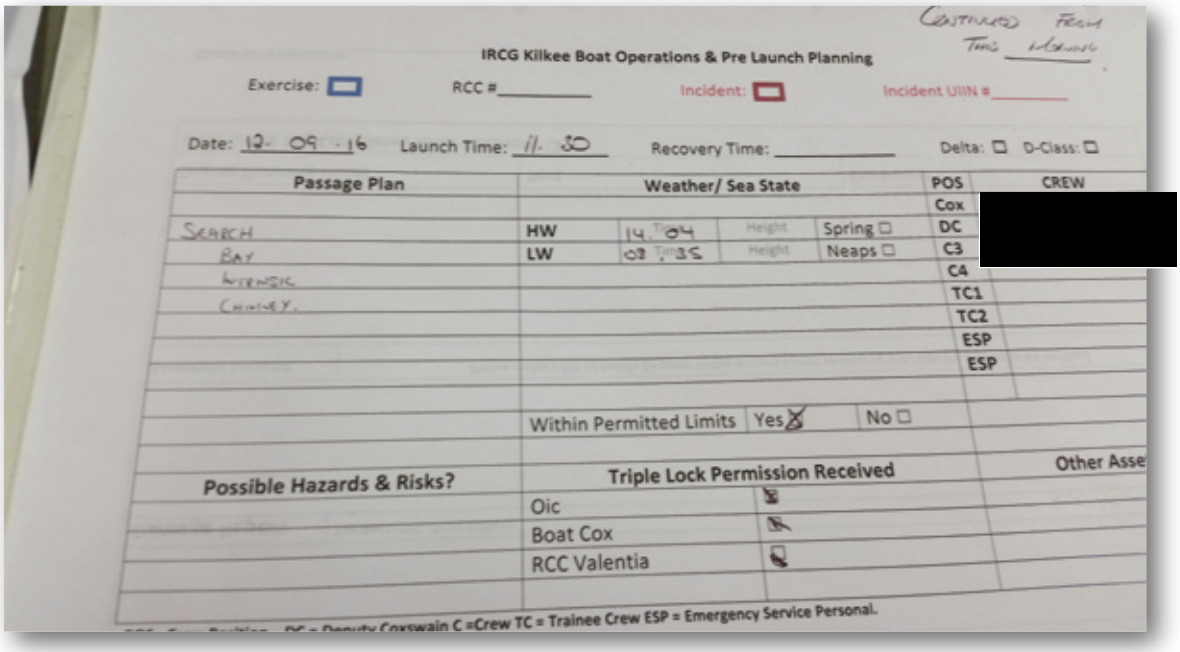
The CGB may only be launched if approval is obtained from all three parties:

Approval from

SMC + OIC + Boat Cox

= Authority to Launch

Appendix 7.8 Pre-Launch Planning Document for 2nd Launch 12th September 2016



IRCG Kilkee Boat Operations & Pre Launch Planning

Exercise: ☐ RCC #_____ Incident: ☐ Incident UIIN #_____

Date: 12. 09 .16 Launch Time: 11. 30 Recovery Time: _____ Delta: ☐ D-Class: ☐

Passage Plan	Weather/ Sea State				POS	CREW
					Cox	[redacted]
SEARCH	HW	14. Time 04	Height	Spring ☐	DC	
BAY	LW	08 Time 35	Height	Neaps ☐	C3	
INTENSIC					C4	
CHIMEY.					TC1	
					TC2	
					ESP	
					ESP	
	Within Permitted Limits	Yes ☒		No ☐		
Possible Hazards & Risks?	Triple Lock Permission Received					Other Asse
	Oic	☒				
	Boat Cox	☒				
	RCC Valentia	☒				

DC = Deputy Coxswain C =Crew TC = Trainee Crew ESP = Emergency Service Personal.

Appendix 7.9 Irish Coast Guard SAR Emergency Checklist.

For Official Irish Coast Guard Use Only

Section 4

SEARCH TERMINATION CRITERIA

Page 48

General Considerations

Safety

- Consider balance of risks and gains to SAR Resources if the decision is taken to continue the search.

Search Planning Tools

- Was SARMAP used to determine the search area and also to determine track spacing?
- what was the Coverage Factor and POD for the planned / completed searches. Could they be improved;
- for land searches, was all information provided taken into account and was the area searched to an acceptable standard.

Search Planning Tactics

- how much time has elapsed;
- what survival equipment was available;
- could they have survived the incident and is there no longer any probability that survivors might still be alive given temperature, wind and sea conditions prevailing since the incident occurred;
- what is the likely condition of potential survivors taking into account existing medical conditions or injuries - has their 'will to live' been considered;
- what does the survivability table suggest;
- what is the forecast for the next 12+ hours.

Media Interest

- is there potentially adverse media interest or any particular media interest in the incident;
- have the media / public expectations been managed;
- has the DOT press office been involved.

Team

- has the On Call Officer been involved. If not, contact prior to termination and are you both in agreement regarding termination;
- have the SAR Resources involved been consulted regarding termination;
- is there a potential need for a Critical Incident Stress Debrief for coastguard personnel;
- what are the wider ramifications of terminating the search e.g. political involvement, impact on the local community.

Next of Kin Notification

- has the NOK been given advance warning of search termination by the Incident Manager / On Call Officer.

The above Checklists serve as an aide memoire only and must be fully understood and implemented in accordance with IAMSAR Manual Vol. II Chap.8. and IRCG SOPs

Appendix 7.9 Irish Coast Guard SAR Emergency Checklist.

For Official Irish Coast Guard Use Only

Section 4

SEARCH TERMINATION CRITERIA

Page 49

Incident Checklist

- what were the facts, factors, possibilities and action plans - have these been reviewed as the incident progressed;
- were the proper assumptions made;
- have all probable locations been investigated and enquiries as to the whereabouts of the person or craft been exhausted;
- has the probability that survivors were actually in the search area been considered - has the area been exhaustively searched, or is it no longer possible to continue the search;
- how good was the search effort, were you able to debrief and discuss the quality of search with the OSC or individual search facilities. Was the search effort assessment realistic under the circumstances;
- was the search based on a visual search or has a detection aid / electronic aid search been considered / executed;
- were the appropriate assets used?

- was all information re-evaluated as it came into the operations room;
- were datum calculations reviewed;
- how accurate was the data used e.g. tidal data, weather data, initial position, drift data;
- were the search variables used appropriate. (e.g. track spacing, sweep width, navigation errors, etc);
- were the scenarios used for planning purposes realistic;
- if other agencies have been/are involved, what are their views on terminating the search.

Notes

Consultation

A SAR search should continue until the possibility of success is no longer reasonable and all hope of rescuing survivors is past. If, after consultation with those involved, it has been determined that a further search would be of no avail, the SMC must consult the On Call Officer before terminating the search.

Closing an Incident

Having taken the above into account, a brief note of significant factors that formed the decision to terminate the search should be logged.

Restarting A Terminated Search

If new information is received, reopening a terminated search should be considered. Similarly, Searches may have to be temporarily suspended for various reasons e.g. SAR resource exhaustion, adverse weather. In such circumstances, the criteria above should be taken into account.

The above Checklists serve as an aide memoire only and must be fully understood and implemented in accordance with IAMSAR Manual Vol. II Chap.8. and IRCG SOPs

Appendix 7.10 Coast Guard Marine Safety Helmet fitting and handling instructions

Equipment Job Card (PPE)

Equipment (Make):	**Marine Safety Helmet (Gecko)**	**Ref: JCE-02**
Source Document:	Gecko Fitting and Handling Instructions: *(As supplied January 2013)*	**Frequency:** Detailed within
Date Issued: *19 August 13* **: Revision No.:** *Original*		

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SHEET 1 of 3

NB. Prior to using this job card, confirm that the make, model and source dcoument described above match that of the equipment utilised at the CGU.

Equipment Overview

The following information is provided as a guide on how to gain the maximum use from this product and should be read and understood before use.

- The Gecko Marine Safety Helmet (G.M.S.H.) is designed for use within a marine environment, for operators of small craft and people requiring head protection in waterborne activities. No helmet can protect the wearer against all possible impacts.
- The GMSH is designed to absorb shock by partial destruction of the **shell and EPS liner**: This damage may not be visible. Therefore if subject to an impact, the helmet should be destroyed and replaced.
- The **strap** assembly is then secured, which is registered closed when a click is heard. Adjustment of the strap is achieved by pulling on the looped tab, and must be tensioned correctly and secured at all times during use. The loop allows adjustment with a gloved hand.
- The **clear visor** is manufactured from LEXAN® Polycarbonate which meets the highest impact requirement of BS4110 Eye Protectors for vehicle users. The clear visor provides 97% UV protection.
- The helmet is cut high at the nape of the neck to allow interaction of the lifejacket. This also allows greater freedom of head movement during use, including entering the water where swimming is a possibility.
- The **optional ear defence** system allows the wearer to re-install / remove the bungs depending on conditions, or if hearing needs defending or improving. Replacement bungs are available from the manufacturer.
- The attention of users is also drawn to the danger of modifying or removing any of the original component parts of the helmet, other than as recommended by the helmet manufacturer. Helmets should not be adapted for the purpose of fitting attachments in any

The information contained within this Job Card has been extracted from the manufacturer information supplied with each Gecko Helmet.

Appendix 7.10 Coast Guard Marine Safety Helmet fitting and handling instructions

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way not recommended by the helmet manufacturer. Do not apply paint, solvents, adhesives or self-adhesive labels, except in accordance with instructions from the manufacturer.

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Appendix 7.10 Coast Guard Marine Safety Helmet fitting and handling instructions

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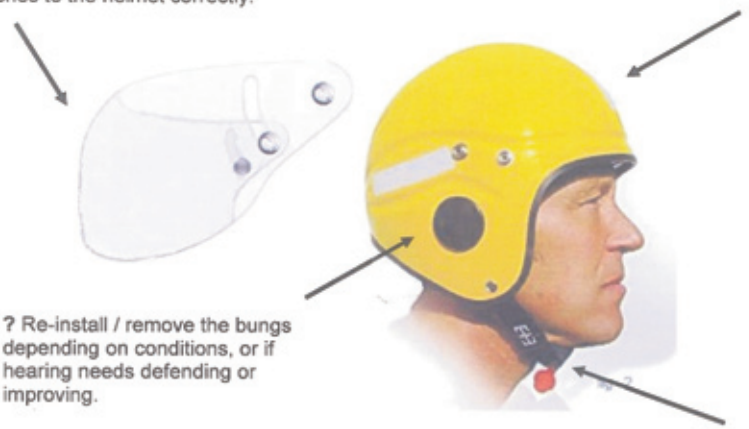
SHEET 2 of 3

Pre Use Checks

➢ Before use, please examine the helmet to confirm it is in a sound condition:

✓ Check the visor is clean / clear from scratches or defects and attaches to the helmet correctly.

✓ Ensure the shell is intact and the adjustable bladder is fully functioning.



? Re-install / remove the bungs depending on conditions, or if hearing needs defending or improving.

✓ Examine the strap anchor points along with the buckle to ensure it is in working order.

Post Use Care

➢ After each use:

✓ Wash the helmet in fresh water.

✓ Wipe the valve clean with a cleansing wipe *(available for purchase from Gecko Head Gear Ltd.)*.

✓ Allow to dry before storing in a clean and safe environment out of direct sunlight.

Maintenance and Replacement

➢ Periodically the visor needs to be removed and the mounting studs smeared with a Petroleum Jelly type product, to help prevent salt corrosion between the visor caps and the helmet studs.

➢ The Gecko helmet has a manufacturer recommended shelf life of 4 years, based on 300 working hours per year before replacement: The IRCG have increased this working life to 10 years based on 120 hours per year.

The information contained within this Job Card has been extracted from the manufacturer information supplied with each Gecko Helmet.

Appendix 7.10 Coast Guard Marine Safety Helmet fitting and handling instructions

Equipment Job Card (PPE)

Equipment (Make):	Marine Safety Helmet (Gecko)	**Ref: JCE-02**
Source Document:	Gecko Fitting and Handling Instructions: *(As supplied January 2013)*	**Frequency:** Detailed within
Date Issued: *19 August 13* : **Revision No.:** *Original*		

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- The helmet must be destroyed and replaced if subject to a impact.

The information contained within this Job Card has been extracted from the manufacturer information supplied with each Gecko Helmet.

Appendix 7.10 Coast Guard Marine Safety Helmet fitting and handling instructions

Equipment Job Card (PPE)

Equipment (Make):	Marine Safety Helmet (Gecko)	**Ref: JCE-02**
Source Document:	Gecko Fitting and Handling Instructions: *(As supplied January 2013)*	**Frequency:** Detailed within
Date Issued: *19 August 13* : **Revision No.:** *Original*		

K:\MCIB\MCIB 23 - [MCIB INVESTIGATION REPORTS]\DELTA COAST GUARD BOAT - (MCIB. 266)\Reply re MCIB letter dated January 16th 2018\Bullet point 2\Manual S1 to S4\Section 2\Job Cards Equipment\JCE 02 First Edition.doc

SHEET 3 of 3

Donning & Fitting Instructions

Important Safety Recommendations // Fitting instructions for Gecko Marine Safety Helmet

Please refer to the handling instructions prior to following these fitting guidelines and be sure you understand and follow the procedures listed on this card.

To fit the helmet//

Open valve by pulling the larger red outer ring whilst supporting clear tube and helmet in other hand (see fig 1).

Partially exhale before placing valve in mouth and remove (by sucking) the air out of the liner to the required amount.

Before removing from mouth, close valve by pushing against the red outer ring. Note: this is important to prevent automatic inflation.

As detailed in the handling instructions, place helmet on head in correct position so that the forehead section sits level just above the eyebrow line. Do not at this stage secure strap. (See fig 2).

Open valve by pulling on outer red ring while holding clear tube (see fig 1), which will allow the liner to self inflate. This is caused by atmospheric pressure being greater than the vacuum inside the liner, which equalises upon opening.

Once the pressure has equalised (within 10 seconds) check for fit by attempting to roll or remove the helmet. If the fit is secure with no movement, close the valve to prevent air escaping. The valve must be securely closed at all times other than when adjusting the fit. Secure the strap using the Fastex buckle system, which will "click" when closed. The strap has an additional looped length to facilitate adjustment.

To adjust strap remove the looped end from neoprene tube. Adjust by loosening the webbing through the buckle or take up any surplus webbing with the looped end, to create a snug fit under and in contact with the neck area under the jaw line. (See fig 2).

Tel: +44(0)1288355988 // www.geckoheadgear.com

Note: The strap must be secured and tensioned at all times. The bladder is secured into the helmet only at five points. This will allow the bladder to inflate freely to accommodate the appropriate size.

The information contained within this Job Card has been extracted from the manufacturer information supplied with each Gecko Helmet.

Appendix 7.10 Coast Guard Marine Safety Helmet fitting and handling instructions

Equipment Job Card (PPE)

Equipment (Make):	Marine Safety Helmet (Gecko)	**Ref: JCE-02**
Source Document:	Gecko Fitting and Handling Instructions: *(As supplied January 2013)*	**Frequency:** Detailed within
Date Issued: *19 August 13* : **Revision No.:** *Original*		

K:\MCIB\MCIB 23 - (MCIB INVESTIGATION REPORTS)\DELTA COAST GUARD BOAT - (MCIB. 286)\Reply re MCIB letter dated January 16th 2018\Bullet point 2\Manual S1 to S4\Section 2\Job Cards Equipment\JCE 02 First Edition.doc

Important Safety Recommendations // Fitting instructions for Gecko Marine Safety Helmet

Important !!

Once satisfied with the fit, replace looped webbing back through the neoprene tube to house and prevent slippage. This must be housed at all times other than when adjusting for fit.

If the fit after inflation is considered insufficient, additional air may be added by blowing into liner via the red valve to the required pressure.

Equally if the helmet feels too tight after inflation surplus air can be removed by partial inhalation via the red valve.

It is possible that whilst under duress or operating in warm temperatures the liner will expand, creating increased pressure from the liner fit. To alleviate this, surplus air may be removed via the red valve, remembering to close the valve securely after adjustment.

Once satisfied with the overall fit and correct tension of straps, it is recommended to perform a forward rotation test. Grasp the helmet with either hand at the nape of neck area (See fig 3). Pull the helmet in a forward motion to see if you can rotate it off your head (in to the chest (perform test slowly with care).

If after carrying out these instructions you feel the fit or size is not correct then we would recommend that you do not use the helmet for its intended purpose.

Please refer to the illustrations, which are there to guidance and contact your supplier if you have any questions or require any help in any of the literature supplied.

fig 3

GECKO HEAD GEAR

The information contained within this Job Card has been extracted from the manufacturer information supplied with each Gecko Helmet.

Appendix 7.11 Extract from Value for Money Report

Irish Coast Guard: Value for Money Review Final Report April 2012, Fisher Assoc. Ltd,

4.2.2 Risk and Safety Management

We recommend that IRCG, in conjunction with DTTAS and the AGO (Attorney General's Office), review all the recommendations in the NSAI (National Standards Authority of Ireland) report and adopt OHSAS (Occupational Health and Safety Management System 1800) as early as possible. There is a need to ensure that many of those recommendations are adopted and implemented at an early date, if only to reduce the organisation's potential exposure to inspection, investigation and/or prosecution by the Health and Safety Authority in the event of an accident or serious injury involving IRCG Volunteers. It may also be appropriate to consult with the AGO to ensure that any policies and procedures that may be adopted are in compliance with the appropriate Health and Safety legislation. This has resource implications.

We further recommend that, as a part of the restructuring of the organisation, a senior manager is appointed as Safety Systems Manager and is given the responsibility for safety oversight throughout IRCG. This should be at Assistant Principal Officer level as a minimum.

Appendix 7.12 Extract from Dingle Capsize Report

Dingle Coast Guard Boat Capsize Report – February 2015 - Conclusions

3.1 The CGB was operating in significant wave heights in excess of the IRCG's specified limits

3.2 The CGB was operating in a surf zone at the time of capsize. The CGB capsized whilst trying to out - run a breaking wave. The CGB was stern-to and ahead of the wave. The wave broached and capsized the CGB.

3.3 Surf operations are precluded by CGB policy and present dramatically increased risks to personnel and equipment.

3.4 There is no record of conditions on scene being requested by nor reported to the MRSC.

3.5 Actual weather on-scene was at variance with the principle forecast used by the MRSC (sea area forecast).

3.6 The CGU (CGB crew and shore-team) did not recognise that the CGB was operating in a surf zone.

3.7 Training and audit records confirm CGU capabilities.

3.8 The conditions on-scene i.e. swell height and surf were beyond the scope of the training and qualification of the crew.

3.9 Not all the components of the pre-launch procedures were adequately followed i.e. ascertaining environmental conditions for launch site and expected area of operation *(forecast and actual)*

3.10 MRSC primarily utilised the sea area forecast wind speed to consider operating limits.

3.11 There were significant differences between the conditions returned by forecasts available from Met Éireann and Now Casting and localised forecasts from other sources such as "*Windguru*."

3.12 CGU personnel could readily recall the wind parameters but were less conversant with the wave height parameters for CGB operations.

3.13 Communication difficulties contributed to the incident.

3.14 Two-way communications were not achieved with the CGB whilst it was on-scene.

3.15 The range of communication methods (i.e. Tetra, VHF-CH16, VHF-CH67, VHF-P4 and mobile phone induced operational complexities.

3.16 The MRSC was not equipped to record Tetra communications. The MRSC could not receive nor record P4 communications.3.17. Assets were not always aware of others' actions and intentions.

3.18 The status and position of casualties was not readily available to assets or coordinating authority.

3.19 Ineffective utilisation of risk evaluation / management processes during the operation contributed to the incident. Decision makers across assets did not work together to adequately evaluate, reduce and manage risk.

3.20 Operational issues onboard the CGB contributed to the incident i.e engine performance concerns and communication difficulties.

3.21 Neither helicopter nor CGB AIS were transmitting at any stage of the operation.

3.22 One dry suit had a visible boot damage and should not have been worn.

3.23 Three personnel were unable to operate the inflation mechanism of their PFD.

3.24 The GPS continued to function post capsize but track data was not recorded.

3.25 The CGB, equipment and machinery sustained minimal damaged as a result of this incident.

3.26 The IRCG has been systematically implementing a Boat Operations Safety Management System since August 2013.

3.27 Adequate support to CGB Volunteers is not attainable with the current levels of VS&T staffing.

3.28 The management and administrative responsibilities placed upon the local volunteer Officer in Charge are considered excessive.

Appendix 7.12 Extract from Dingle Capsize Report

Dingle Coast Guard Boat Capsize Report – February 2015 - Recommendations

5.1 IRCG to review / develop policies and procedures to govern response to person incidents in surf conditions.

5.2 IRCG to review communications policies and practices involving RCCs, CGB, CGUs, shore teams, helicopters, VHF, P4 channel, Tetra, phone etc.

5.3 IRCG to review the adequacy of the levels of fulltime staff support available to CGUs.

5.4 IRCG to review resourcing capabilities in relation to the need to action health and safety related equipment matters.

5.5 IRCG to review overall levels of staffing with particular regard to safety oversight of boat operations with due consideration to this report and other reviews such as the VFM report (Fishers 2012).

5.6 IRCG to review and affirm CGU pre-launch procedures.

5.7 IRCG to reaffirm to personnel the need to conduct pre-launch checks of PPE e.g. “buddy checks”.

5.8 IRCG to affirm CGU and MRSC understanding and duties associated with the triple lock pre-launch process.

5.9 IRCG to ensure adequate processes are in place to ensure the accurate and timely reporting of on- scene conditions.

5.10 IRCG to review CGB radio microphones to reduce the likelihood of “water on the mic”.

5.11 IRCG to review MRSCs oversight of AIS tracking of SAR assets.

5.12 IRCG to ensure all relevant parties understand the requirement to enforce and adhere to current IRCG surf policies.

5.13 IRCG to ensure that RCC staff have access to and are familiar with all unit specific CGB operating parameters.

5.14 IRCG to continue to the structured implementation of the Boat Operations Manual.

5.15 IRCG to review processes for familiarising RCC staff with relevant BOM content.

5.16 IRCG to ensure CG personnel understand operational constraints and limitations applicable to equipment and personnel capabilities.

5.17 IRCG to review processes for identification of local weather conditions with particular consideration to ground swell as an independent factor to wind conditions.

5.18 IRCG to review BOM procedural stipulations which restrict IRCG personnel entering the water during training exercises unless the CGB is secured alongside.

5.19 IRCG to consider setting the default position on AIS systems as fitted to CGB to transmit.

5.20 IRCG to compile post-incident procedures, including the requirement to protect GPS data

NATURAL JUSTICE - CORRESPONDENCE

Before publishing this Report, under Natural Justice and in accordance with Section 36 of the Merchant Shipping (Investigation of Marine Casualties) Act, 2000, a copy of the draft of this report was sent to persons considered by the Marine Casualty Investigation Board (MCIB) to be adversely affected by the publishing of the report or sections of, if that person be deceased, then such person as appeared to the Board best to represent that person's interest.

Responses received by the MCIB under Natural Justice are printed in Part II of this report.

Leeson Lane, Dublin 2.
Telephone: 01-678 3485/86.
email: info@mcib.ie
www.mcib.ie

MCIB
Marine Casualty Investigation Board
Bord Imscrúdú Taismí Muirí

REPORT INTO THE FATAL INCIDENT INVOLVING THE KILKEE IRISH COAST GUARD RIGID INFLATABLE BOAT AT KILKEE, CO CLARE 12th SEPTEMBER 2016

PART II

Responses received under Natural Justice

REPORT NO. MCIB/266
(No.7 OF 2018)

The Marine Casualty Investigation Board (MCIB) examines and investigates all types of marine casualties to, or on board, Irish registered vessels worldwide and other vessels in Irish territorial waters and inland waterways.

The MCIB objective in investigating a marine casualty is to determine its circumstances and its causes with a view to making recommendations for the avoidance of similar marine casualties in the future, thereby improving the safety of life at sea.

The MCIB is a non-prosecutorial body. We do not enforce laws or carry out prosecutions. It is not the purpose of an investigation carried out by the MCIB to apportion blame or fault.

The legislative framework for the operation of the MCIB, the reporting and investigating of marine casualties and the powers of MCIB investigators is set out in The Merchant Shipping (Investigation of Marine Casualties) Act, 2000.

In carrying out its functions the MCIB complies with the provisions of the International Maritime Organisation's Casualty Investigation Code and EU Directive 2009/18/EC governing the investigation of accidents in the maritime transport sector.

Leeson Lane, Dublin 2.
Telephone: 01-678 3485/86.
email: info@mcib.ie
www.mcib.ie

REPORT INTO THE FATAL INCIDENT INVOLVING THE KILKEE IRISH COAST GUARD RIGID INFLATABLE BOAT AT KILKEE, CO CLARE 12th SEPTEMBER 2016

PART II

Responses received under Natural Justice

The Marine Casualty Investigation Board was established on the 25th March, 2003 under the Merchant Shipping (Investigation of Marine Casualties) Act, 2000.

REPORT NO. MCIB/266
(No.7 OF 2018)

NATURAL JUSTICE - CORRESPONDENCE RECEIVED

Section 36 of the Merchant Shipping (Investigation of Marine Casualties) Act, 2000 requires that:

"36 (1) Before publishing a report, the Board shall send a draft of the report or sections of the draft report to any person who, in its opinion, is likely to be adversely affected by the publishing of the report or sections or, if that person be deceased, then such person as appears to the Board best to represent that person's interest.

(2) A person to whom the Board sends a draft in accordance with subsection (1) may, within a period of 28 days commencing on the date on which the draft is sent to the person, or such further period not exceeding 28 days, as the Board in its absolute discretion thinks fit, submit to the Board in writing his or her observations on the draft.

(3) A person to whom a draft has been sent in accordance with subsection (1) may apply to the Board for an extension, in accordance with subsection (2), of the period in which to submit his or her observations on the draft.

(4) Observations submitted to the Board in accordance with subsection (2) shall be included in an appendix to the published report, unless the person submitting the observations requests in writing that the observations be not published.

(5) Where observations are submitted to the Board in accordance with subsection (2), the Board may, at its discretion -

(a) alter the draft before publication or decide not to do so, or

(b) include in the published report such comments on the observations as it thinks fit."

The Board reviews and considers all observations received whether published or not published in the final report. When the Board considers an observation requires amendments to the report that is stated beside the relevant observation. When the Board is satisfied that the report has adequately addressed the issue in the observation, then the observation is 'Noted' without comment or amendment. The Board may make further amendments or observations in light of the responses from the Natural Justice process.

'Noted' does not mean that the Board either agrees or disagrees with the observation.

Report MCIB/266 (Part 2) published by The Marine Casualty Investigation Board. Printed 27th November 2018.

8. NATURAL JUSTICE - CORRESPONDENCE RECEIVED

Note: The names and contact details of the individual respondents have been obscured for privacy reasons.

Where reference to a Section, Paragraph or Appendix of a report is made in the MCIB response this refers to the final, as published report, in Part 1 of the published report.

Correspondence 8.1 Correspondence from DOiC (1) and MCIB response.

[redacted]

[redacted]
Chairman
Marine Casualty Investigation Board,
Leeson Lane,
Dublin 2.

Marine Casualty Investigation Board
08 JUN 2018
Bord Imscrúdú Tasimí Muirí

Your Ref: MCIB/12/266

RE: Draft Report of Investigation of fatal accident involving the capsizing of the Delta Coast Guard Rib Kilkee Co Clare
12th September 2016.

Dear Sir,

I confirm that I act fo[redacted]n relation to this matter. You very kindly furnished us with a copy of the draft report.

My client has considered same very carefully and is most disappointed with the content.

I will prepare a more detailed report for you but in the meantime, I wish to set out a list of the primary concerns and inaccuracies which my client considers to be contained in the draft report. I am doing so merely from the point of view of getting something off to you as timely as possible in order to prevent the draft report being finalised and also to point out to you that there is a further a far more detailed submission following from this correspondence.

I will deal with the matters as they arise in the report. Unfortunately, the pages are not numbered and I can only deal with them as they arise in paragraph form.

Paragraph 11 1
There is was no boat crew launched or used on the 9th of September.

Paragraph 212
I confirm that this RIB was used in night time operations and was not limited to twenty-seven knots. In the communication paragraph please note that there was no TETRA on the boat. It was a hand-held TETRA only. This was held by the OIC[redacted]

With regards to the MMSI number please note that this has been requested by the members of the unit.

[redacted]

MCIB RESPONSE:
The MCIB notes this and refers to paragraph 3.8.

MCIB RESPONSE:
This paragraph refers to the manufacturers limitations as set out in Appendix 7.2

MCIB RESPONSE:
The MCIB notes this.

Correspondence 8.1 Correspondence from DOiC (1) and MCIB response.

Paragraph 221
It is important to note that the search plan did not include the search of the small cove north east of Foohagh Point where this accident occurred. This is a surf zone and therefore it was not sought to search within this area.

My client is unaware as to where the lat/long positioning of the capsized RIB came from. Please clarify.

MCIB RESPONSE: The MCIB notes this.

Paragraph 231
Please note that the vessel was broken up by the surf over a period of twenty-four hours and not in the course of the accident.

MCIB RESPONSE: The MCIB notes this.

Paragraph 241
I most draw your attention to this matter, you have indicated that the private RIB was requested by a member of Gardai to assist. This is not the case. My client, [redacted] equested the Garda at the scene to secure the private RIB in order that they could assist. My client was on that RIB. It is also important to state that the launch of the D Class craft was at a later stage. The D-Class was unable to be utilised initially as the OIC departed the scene with another member despite being asked to assist to attempt a rescue operation given the grave and imminent threat to life.

MCIB RESPONSE: This is explained in the report, paragraphs, 2.4.1, 3.11.12 and 4.12.

Paragraph 262
This forecast is factually incorrect.

MCIB RESPONSE: This is taken from records provided to the investigation.

Paragraph 246 and 266
Please clarify that the waves of three meters which you referred to were believed to be not forecasted until that evening.

MCIB RESPONSE: This is taken from the planning documents at appendices 7.6 and 7.8 .

Paragraph 32
Please note that there was not a cliff rescue unit in place only a search unit.

MCIB RESPONSE: The MCIB notes this.

Paragraph 311
My client merely comments as follows;

a. The OIC did not report for duty as per a text he sent.
b. The conditions on the scene were not the same as per the weather report and consideration should be given to localised weather and sheltered areas.

MCIB RESPONSE: Conditions and considerations are set out in paragraphs 2.5, 2.6, 3.11, 4.3 and 4.8.

Paragraph 311.1
Please note that it is agreed that the boat was not permitted to operate in surf and that the boat did enter a defined surf zone. This was never requested or part of the search plan.

MCIB RESPONSE: The MCIB refers to paragraph 3.11.6.

Paragraph 311.2
My client takes issue with the fact that you have alleged that there was less formality, discussion and risk assessment in relation to the second launch. In fact, my client would point out that a number of risk assessments were carried out prior to the second launch which inevitable led to the survival of one crew member.

MCIB RESPONSE: The MCIB refers to documentary evidence provided during the course of this investigation at appendices 7.6 and 7.8.

Paragraph 311.3
Please note that Search Termination Criteria was never brought to the attention of the DOiC nor were they ever trained in relation to same.

MCIB RESPONSE: The MCIB notes this.

Correspondence 8.1 Correspondence from DOiC (1) and MCIB response.

Paragraph 316
I believe it should be clarified that the body of the missing person found on the 24th of September 2016 was at a different location and not in the same cove as the incident.

MCIB RESPONSE: he MCIB notes this and the report has been amended see paragraph 3.17.

Paragraph 4 3
Please note that the launch log states a possible three-meter swell that evening. You are misleading in the report when you refer to the meter swell as being current. Also the Met Eireann small craft warning was specifically for the east coast not the west coast. Also, please clarify as to how the triple lock system was not properly adhered to.

MCIB RESPONSE: The Weather reports provided during the course of the investigation are from Met Éireann.

Paragraph 4 8
Again, the weather conditions are disputed.

MCIB RESPONSE: The MCIB refers to paragraphs 3.11 and 4.3.

Paragraph 4 9
Again, this is a surf area and the RIB had not being brought in to that area to conduct any search over the pervious days.

MCIB RESPONSE: The MCIB notes this.

Paragraph 4 21
The findings of this report were never brought to the attention of the unit in Kilkee.

MCIB RESPONSE: The MCIB notes this.

Paragraph 4 24 and 4 25
The instructions given by the OIC warned members not inflate the bladder.

MCIB RESPONSE: As stated, please refer to Manufacturer's instructions which were available on the Extranet and are in appendix 7.10.

Paragraph 4 30
This is agreed with but it should be stressed that the Coast Guard were requested to intervene six months previously in order to carry out a full review of the Kilkee Station.

Paragraph 5 8
This is agreed but my client wishes to stress that the matter had been raised with management.

MCIB RESPONSE: The MCIB notes this.

Paragraph 5 16
Please note that many members of this unit were locked out of the Coast Guards systems and this information was not available to them for some time. Management were made aware of this issue.

MCIB RESPONSE: The MCIB notes this.

I confirm that I will be available to meet with anyone in relation to this matter and would welcome the opportunity to do so.

[redacted]

MCIB RESPONSE: The MCIB notes this.

Correspondence 8.2 Correspondence from DOiC (2) and MCIB response.

To Whom It May Concern,

Further to receipt of the draft report I enclose my comprehensive response to same. I am happy for all and any of these details to be published with my name attached. There are numerous inaccuracies and points in need of clarification which is disappointing given that it has taken over 18 months to get to draft stage.

My understanding of the purpose of Marine Casualty Investigations is to identify how accidents occur and what can be done to prevent further loss of life. In my opinion this draft report has failed in its briefing. The report seeks to blame the weather as the cause, going so far as including a weather report for the Eastern coast of the country in an attempt to provide evidence of unfavourable conditions. One will see from the Met Eireann report (which was what was available to responding crews on the day in question) and the data from two wave buoys north and south of Kilkee that the weather was in fact within the operational limits of the boat utilised that day. One would also have to wonder if the weather was in fact as poor as this report suggests, why at no point did anyone raise concern, why did the MRCC Valentia (those responsible for sea area forecasts) not raise concern and how did so many resources manage to respond to the accident in such timely manners. Furthermore, the operational limits of the Delta boat utilised are a force 6 and 2 metre swell (as can be seen in the extract of the IRCGs boat operations manual attached to my response), this report does not make this clear.

The IRCG boat operation manual states clearly that the Delta boat should not enter a surf zone. At no point does this report define what a surf zone actually is. In my opinion an accurate legible sea area chart should be included in this report with surf zones clearly indicated. This would clarify whether or not the boat did in fact enter a surf zone and whether or not this was actually the cause of the accident. In addition, the report does not detail whether or not IRCG crews were adequately trained in identifying surf zones.

MCIB RESPONSE: The MCIB report, using "Coast Guard Boat Operational Capabilities and Limits" documents only refers to the term surf. The term surf zone is not a relevant factor in the operational criteria.

In relation to the death of the casualty, the report states that all three crew lost their helmets, furthermore, it suggests that the casualty suffered a head injury which contributed to her death. At no point does the report suggest why all three crew lost their helmets or suggest whether or not these helmets should remain in use. It is worth noting that I myself stated to the MCBI that I was instructed on numerous occasions not to inflate the bladder of the helmet.

MCIB RESPONSE: Please refer to 4.10 of the report.

Additionally, the MCBI were informed that the suit of another crew member involved that day had to be repaired prior to the launch. This crew members neck seal had been replaced on station in Kilkee by the OiC but unfortunately was incorrectly fitted. It is reasonable to suggest that had this not been noted, this crew member neck seal would have failed when she entered the water, causing her suit to fill with water. The report at no point looks at this issue which is surprising given that there is massive potential for this to occur again, possibly resulting in further injury or death. It would also be useful if the MCBI had investigated whether or not the life jacket would hold a person up in the water if a suit was to fill with water. It is also worth noting that this defect was noted by the diligence and attention to detail by the launching crew, the same launching crew which this report suggests did not conduct a pre-launch assessment.

MCIB RESPONSE: Please refer to 3.16 of the report.

In relation to the life jackets, the report states that none of the 3 crew inflated them, instead they relied upon the inherent buoyancy in the jacket. The report fails to address why the life jackets were not inflated and whether or not this contributed to the death of the casualty. It is also worth noting that these life jackets were supplied to stations as part of a nationwide re issue. I informed the MCBI that at the time of these being issued, I was informed that one of the best features of these jackets was that they would keep a casualty face out of the water thus reducing the risk of drowning. From witnessing the accident that day, it is evident that the lifejacket did not keep the casualty face out. The report does not suggest whether these jackets are fit for purpose or not.

MCIB RESPONSE: Please refer to 4.11 and 4.27 of the report.

In relation to the format of this report, I have read numerous other reports published by MCIB which include details of the post incident response in some even include an appendix of the response time line eg. MCIB/252 and MCIB report /268 (Appendix 7). This contains information about the asset, it's time of arrival on scene and steps taken in responding to the incident. This appears to be omitted in the draft report and I would question why is this the case given the comment in relation to launching the D-Class and the high probability of their being 2 fatalities had I not commandeered the private rib at the slip, launched and rescued the second helm from the sea. Surely an accurate time line of arriving SAR assets would demonstrate the necessity of a prompt response from any available asset in the immediate area and I feel that it is unjust of the MICB not to include this in the final

MCIB RESPONSE: This appears to be at variance with your comments at 2.4.1 regarding the Gardaí at Kilkee being asked to assist.

Correspondence 8.2 Correspondence from DOiC (2) and MCIB response.

report. Also in relation to the launch of the D-class, the experienced coxn of this boat has not been formally interview by the MCBI or given the opportunity to comment on this draft report.

Finally, I wish to have it noted that I only found out that I was required to meet with the MCBI(and other investigating parties) via a third party. A meeting was arranged in the Kilkee Station however many people involved on the day of the incident were not requested by the IRCG to attend. Additionally, the IRCG failed to inform me of a second subsequent meeting with the MCBI which took place some time after the incident. The report also fails to mention that IRCG management were made aware 6 months prior to the accident of issues within the unit that could compromise the units ability to respond to tasking's effectively and safely.

In conclusion I feel that this draft report does not meet the requirements of the MCBI'S briefing, that is to identify the cause of the accident and make recommendations to prevent future deaths. There are a number of critical inaccuracies (as seen in my response) which need to be addressed prior to issuing the full report.

Kind Regards,

[redacted]

Correspondence 8.2 Correspondence from DOiC (2) and MCIB response.

1 SUMMARY

1.1 On the 9th September 2016, the Irish Coast Guard Station (CGU) at Kilkee was tasked by Maritime Rescue Sub-Centre (MRSC) Valentia to provide search and rescue volunteers for a missing person at the cliffs to the southwest of the town close to Foohagh Point. The Irish Coast Guard Station provided both cliff top search teams and boat crew on 9th, 10th, 11th and 12th September.

Clarify; Location close to Knockroe Point not Foohagh (Appendix 1)

Clarify; No boat crew used on the 9th

On the morning of the 12th September the volunteers, from Kilkee and Doolin Coast Guard Units (CGUs), assembled at the Coast Guard Station and resumed operations, including a launch of the Delta Rigid Inflatable Boat (hereinafter referred to as the Delta RIB).

1.2 At approximately 13.11hrs on the second tasking on the 12th September and whilst searching a cove to the east of Foohagh Point, the Delta RIB capsized. The three crewmembers were thrown into the water. A search and rescue operation (SAR) commenced. One of the crewmembers was picked up by a privately owned RIB, a second crewmember was rescued by the SAR Rescue helicopter R117. The third crewmember, the Casualty, who was a volunteer from the Doolin CGU, was recovered by a SAR Rescue helicopter R115.

Note: For the purposes of this Report all times are Local time.

MCIB RESPONSE: Location has been charted in accordance with witness statements. The incident occured within visual range of on lookers. See Appendix 7. 4 of the report.

MCIB RESPONSE: Please refer to 3.8 of the report.

Correspondence 8.2 Correspondence from DOiC (2) and MCIB response.

2 FACTUAL INFORMATION

2.1 Vessel Characteristics

2.1.1 The Irish Coast Guard boat at Kilkee was a Rigid Inflatable Boat (RIB) of glassfibre reinforced plastic (GRP) material with Hypalon inflatable tubes manufactured by Delta Power Group of the United Kingdom. The Delta RIB was powered by twin Yamaha outboard engines rated at 115 HP each. The Delta RIB was fitted out to Irish Coast Guard specifications. It was delivered in January 2003 with a central control console, seating in two rows of two, with a stowage locker at the rear of the vessel (see Appendix 7.1 Vessel specification on delivery in 2003). During its service with the Irish Coast Guard the seats were converted to air suspension type, with additional fold down seats which could be used as required, and the stowage locker was moved forward in front of the centre console. Two towing poles were installed, one in the stern and one in the bow floor area. The Delta RIB had three stainless steel petrol tanks located under the decking. The electrical systems were 12 volt DC with batteries charged by the engines. An "A" frame was fitted over the aft end to carry antennae, safety equipment and a manually operated self-righting bag.

2.1.2 Principal Particulars

Name	Unnamed	
Flag:	Irish	
Port of Registry:	Unregistered	
Year and place of build:	2003, United Kingdom.	
Type:	Delta Class 7.9X Range Patrol/Rescue Craft, Rigid Inflatable boat.	
Builder:	Delta Power Group, United Kingdom.	
Hull Identification Number:	GB-DPS18530A303	
Construction:	GRP hull with Hypalon tubing.	
Length Overall:	7.9 metre (m).	
Beam:	2.5 m.	
Engines:	Two Yamaha Outboard rated at 115 HP each.	
Fuel:	Petrol.	
Electrical:	12 volt DC, via battery bank.	
Stated Area of operations:	Up to six nautical miles offshore.	
Capacity:	Minimum Operational:	three persons.
	Optimum operational:	four persons.
	Casualty Capacity:	four persons.
Weather Restrictions:	Daylight and unrestricted visibility only.	
	Clarify Delta RIB has been used on night operations and participation in night time operations is mandatory for Advanced Powerboat Training.	

MCIB RESPONSE: Please see Appendix 7.2 of the report "Coast Guard Boat Operational Capabilities and Limits"

Correspondence 8.2 Correspondence from DOiC (2) and MCIB response.

	Wind up to and including 27 Knots
Area of Operations:	Significant wave height limitation 2 m. Not permitted to operate in surf (see Appendix 7.2 Coast Guard Boat Operational Capabilities and Limits).
Navigation Aids:	Two Garmin chart plotters, linked to GPS satellite navigation units, with chart plotters using British Admiralty based charts and fitted with radar capability. Navigation lighting in accordance with the Collision Regulations.
Communication:	Two DSC type fixed VHF radio transceivers fitted to the vessel. Each crewmember on board had a hand held VHF transceiver. Most communications were on Channels 16 and 67, which could be recorded. There was private Channel P4, which was not recorded. Some communications could also be carried on the TETRA (Terrestrial Trunked Radio) system, again un-recorded. **Clarify; No TETRA on Delta RIB, Unit TETRA held by OiC**
Safety Equipment:	Each crewmember was equipped with: Helly Hansen inner body suit, Helly Hansen drysuit, Gecko marine safety helmet, Mullion Rescue 400 Seaforce Vest, comprising a 275N single chamber inflatable lifejacket zipped onto an inherent (nominal 50 N) buoyancy foam equipment vest, personal locator beacon (PLB), knife, kill cord, lanyard, handheld flare and a safety line.
Ownership:	Irish Coast Guard, transferred from Dingle CGU to Kilkee in 2013 on formation of the Kilkee CGU.
Licencing:	Vessel un-licenced.
MMSI Number:	None assigned.

MCIB RESPONSE:
Noted.

Correspondence 8.2 Correspondence from DOiC (2) and MCIB response.

An EA-16 D-Class lifeboat (hereinafter referred to as the D-Class), based at Kilkee CGU, was also used in the later part of the Delta RIB crew rescue on the 12th of September. The D-class is an inshore lifeboat (ILB), 4.95 m in length and powered by a 40HP Mariner Outboard motor. These fast, light inflatable boats are suited to shallow water and confined locations close to cliffs, among rocks, or even in caves. The operation limits of this craft are mandated for wind up to and including Force 5 and significant wave height of 1.5 m (see Appendix 7.3 Coast Guard Boat Operational Capabilities and Limits).

2.2 Voyage Particulars

2.2.1 On the 12th September 2016, at approximately 10.30 hrs, the Delta RIB departed from Kilkee Harbour, Co. Clare There were three crewmembers on board, two from the Kilkee CGU and one from the Doolin CGU. This tasking was the continuation of a search operation for a person reported missing on 9 September which was being conducted in conjunction with a Coast Guard cliff top search team (hereinafter referred to as Team Sierra). The Delta RIB proceeded towards Intrinsic Bay and then north of George's Head to Chimney Bay. To complete its search the Delta RIB entered a small cove north-east of Foohagh Point, close to Bishop's Island

Clarify the location the Delta RIB entered and capsized is a significant distance from Bishops Island (Appendix 1) Also clarify, this was not in an attempt to complete a search plan as entering this zone was not planned.

It had been unable to do so earlier due to tidal conditions. It had indicated to the CGU at Kilkee that it was ready to return to base. As the RIB was travelling slowly approximately 20 m from the shoreline and preparing to leave the area the crewmembers became aware of a large breaking wave, directly on their starboard side.

Clarify if a large breaking wave is a feature of a surf zone.

The CGU crew had no time to take any avoiding action. The Delta RIB was struck by this breaking wave and capsized immediately. All three crewmembers were thrown overboard. One crewmember, using a handheld VHF Transceiver, made a "MAYDAY" call on Channel 16, which was received by the Kilkee CGU base who relayed the distress message to MRSC Valentia.

In the SITREP(Situation Report) issued at 13.14 hrs on the l2th September 2016 the reported position of the capsize was 52° 40.76'N 009°39.56'W. At 16.42 hrs the position was amended to 52° 40.94' N 009° 39.62' W. The actual position of the capsize was identified as 52°40.53' N 009°41.28'W by visual observations of an eye witness and charting of the position, (see Appendix 7.4 Chart of area).

Clarify; these locations on an accurate legible map. Clarify how these GPS coordinates were obtained.

MCIB RESPONSE: Please refer to 3.11.6 and Appendix 7.4 of the report.

MCIB RESPONSE: The MCIB report, using "Coast Guard Boat Operational Capabilities and Limits" documents only refers to the term surf. The term surf zone is not a relevant factor in the operational criteria.

MCIB RESPONSE: Please refer to paragraph 2.2.1.

Correspondence 8.2 Correspondence from DOiC (2) and MCIB response.

2.3 Type of casualty

2.3.1 This was a very serious marine casualty. When the Delta RIB capsized all three Coast Guard volunteer crewmembers were thrown into the water. One crewmember was rescued by a privately owned RIB.

Clarify; this experienced owner deemed conditions suitable to take part in the original search of the missing person.

MCIB RESPONSE: Noted.

The CGU search and rescue helicopters R115 and R117 rescued the other two crew members, one of whom subsequently died. The vessel was broken up by the surf at the base of the cliff.

Clarify; The vessel broke up over the course of 24 hours.

MCIB RESPONSE: Noted.

2.4 Shore Response

2.4.1 The shore response was immediate. The Kilkee CGU alerted MRSC Valentia of the situation. The Shannon based SAR helicopter R115 was tasked immediately upon its crew becoming aware of what was happening. A Civil Defence team had just arrived with a drone to assist and was operational within ten minutes. The local fire service was also tasked to assist. The RNLI All Weather Boat was tasked from Kilmore on the Aran Islands, and Kilrush RNLI was put on standby (later tasked).

Clarify; Doolin Delta was also tasked.

Clarify; Conditions & weather were deemed suitable for Kilrush RNLI to navigate around Loop Head.

Clarify; Conditions & weather were deemed suitable for Doolin CG to navigate around Hags Head.

Clarify; A local fishing boat also responded, again, they had no concerns re the conditions or weather.

Clarify; a jet ski rescue team was also tasked by the OiC with swimmers utilised.

MCIB RESPONSE: Noted.

A member of the Gardai at Kilkee requested the owner of a private RIB to assist with the rescue operation.

Clarify; This Garda was requested to do so via the DOiC as no other response was available with the threat to life imminent.

MCIB RESPONSE: Refer to comment above regarding D-Class.

The private RIB proceeded to the scene with an IRCG Deputy Officer in Charge (DOiC) and three civilian crewmembers on board. All three had good local knowledge of the area. The Kilkee CGU, D Class craft was also launched to assist.

2.4.2 All three crewmembers of the Delta RIB were recovered from the water and all units stood down at approximately 17.25 hrs. The boat was broken up by the surf against the cliff face and was recovered on 14th September 2016.

Correspondence 8.2 Correspondence from DOiC (2) and MCIB response.

2.5 Tidal Conditions

2.5.1 The tidal predictions for the 12th September used by Kilkee CGU showed the predicted tides. Kilkee CGU used Admiralty Easy Tide (a web based tidal predication service by UK Admiralty) expressed as local time, as the source:

Low Water 08.35 hrs High Water 14.04 hrs

2.52 The tidal heights indicate that the tides were close to neap conditions, a tide that occurs when the difference between high and low tide is least.

2.6 Weather conditions

2.6.1 The Met Eireann sea area forecast issued at 06.00 hrs on the 12th September predicted the following conditions for the area. Westerly winds of Force 3 to 5 decreasing Force 2 to 4 in the afternoon. A small craft warning was also in place.

2.6.2 A forecast relied on by the CGU, issued by Windguru (a web based weather forecasting service) indicated the following sea conditions for the area:

07.00 hrs - sea 2.4 m 10.00 hrs - sea 2.4 m 13.00 hrs - sea 2.4 m.

Clarify; To state that the forecast relied upon was Windguru is opinionated. Please provide evidence to support this or omit opinion.

MCIB RESPONSE: The report has been amended.

2.6.3 The Met Eireann Weather Report for 06.00 hrs to 12.00 hrs states wind Force 3 on Beaufort scale increasing to Beaufort Force 4. Significant wave height ranged from 2.8 to 3.3 m, period 8 second, swell direction 250 degrees.

2.6.4 The Met Eireann Weather Report for 12.00 hrs to 18.00 hrs states wind Force 2-3 Beaufort. Sea state, significant *wave* height 3.0 to 3.5 m, period 8.2 seconds. Seas overall described as rough (see Appendix 7.5 Met Eireann Weather Report).

Clarify; The detail of weather evident in the MCBIs Appendix 7.5 was not available to the responding crews at the time of the accident or indeed any time prior. Please see attached appendix 3 which is a copy of the weather available to the crews on the day of September 12th.

MCIB RESPONSE: Appendices 7.5 a and b were available to Kilkee Coast Guard. Both forecasts indicated a wave height in excess of 2m throughout the day.

2.6.6 The IRCG Kilkee Boat Operations and Pre Launch Planning document for the 12th September at 08.15 hrs, completed for the first launch, indicated that waves of up to 3 m were expected (see Appendix 7.6 Pre Launch Planning Document for first launch).

Clarify; that the waves of up to 3 metres documented as expected that evening not at the time of launch.

MCIB RESPONSE: 3 metre waves: Please refer to 3.11 and Appendix 7.6 of the report.

Correspondence 8.2 Correspondence from DOiC (2) and MCIB response.

3 NARRATIVE

3.1 The Irish Coast Guard

The Irish Coast Guard (IRCG) is a Division of the Department of Transport, Tourism and Sport. It operates as a marine emergency service and provides a nationwide maritime emergency organisation as well as a variety of services to shipping and other government agencies. The IRCG has responsibility for Ireland's national system of marine communications, and emergency management in Ireland's Exclusive Economic Zone (EEZ) and certain inland waterways. It's responsible for the response to, and coordination of, maritime accidents which require Search & Rescue and also for Counter Pollution & Ship Casualty operations. It also has responsibility for vessel traffic monitoring.
The IRCG has three primary functions:

- Pollution prevention, casualty intervention and response
- Search and Rescue,
- Volunteer Services & Training.

3.1.1 The current structure of the Irish Coast Guard Service was set up in 2000. The Irish Coast Guard operates within the parameters set out by the International Maritime Organisation, specifically the guidelines set down in the International Aeronautical and Maritime Search and Rescue {IAMSAR) manual volumes I, II & II. A new issue of Volume Ill was published in July 2016. The IRCG Voluntary Services & Training Coast Guard Code states the IRCG core activities are:

- To provide a national marine search and rescue response service.
- To provide a coastal and, where appropriate, cliff search and rescue service;
- To provide a post-emergency body search and recovery service and relative liaison;
- To develop and co-ordinate an effective regime in relation to marine pollution;
- To provide a response to marine casualty incidents and to monitor/intervene in marine salvage operations;
- To provide a safety awareness and public information service in relation to the discharge of the functions set out above;
- To provide a maritime safety communications service.
- To provide a maritime assistance service and single point of contact to shipping, fishing, commercial and leisure traffic.

3.1.2 The Director of IRCG is supported functionally by an Assistant Director, IRCG Managers, Operations and Training Officers and Coast Unit Sector Managers (CUSM). The IRCG coordinates Search and Rescue (SAR) through its Maritime Rescue Coordination Centre (MRCC) in Dublin and Maritime Rescue sub-centres (MRSC) at Malin Head, Co. Donegal and Valentia Island, Co. Kerry. Each MRCC or MRSC is responsible for SAR operations and the day to day running of its allocated division.

Correspondence 8.2 Correspondence from DOiC (2) and MCIB response.

3.1.3 The CUSM based in Castlebar was responsible for an area which includes Kilkee and Doolin GCUs. When a Coastal Unit or station is tasked during an incident, the adjacent stations are deemed to be flank stations. For Kilkee Coast Guard Station, the flanked stations are Ballybunion and Doolin. A tasked station would request assistance from the MRCC who would then direct a flanking station to assist the tasked station during an incident.

Coast Guard Units are organised in the following way:

Officer in Charge (OiC)	Selected by HQ.
Deputy Officer in Charge (DOiC):	Selected by HQ.
Team Leader:	Selected by OiC.
Administration Officer:	Selected by OiC.
Training Officer:	Selected by OiC.
Education Officer:	Selected by OiC.
Equipment Officer:	Selected by OiC.

3.2 Kilkee Coast Guard Station

Kilkee CGU is one of the Coastal Units operated by the Irish Coast Guard. The unit was formed in 2013 by combining the existing CGU cliff rescue unit and the previous locally operated marine rescue service which had operated for approximately 30 years.

Clarify; the existing CGU was a search team only, not a cliff team.

MCIB RESPONSE: Noted.

Many of the original volunteers from this local Marine Rescue unit were retained as volunteers by the Irish Coast Guard.

Clarify; Few, not many of the original volunteers from the marine rescue unit were retained by the IRCG.

MCIB RESPONSE: Noted.

Kilkee CGU Operational Readiness Audit, carried out on 29th February 2016 certified the unit as "fully operational". Both the Delta RIB and D Class vessel were inspected as part of an audit carried out on 3rd November 2015. This audit stated that the Delta RIB was "in excellent overall condition; some minor historic damage noted on Port side midships in way of the hull chine and adjacent hulls action. Bilges clean and dry. Hull and fixtures and fitting at a high standard of cleanliness. Standing rigging in good order. Overall the vessel in excellent condition and well maintained".

3.3 The Role of the OiC and DOiC

The OiC and the DOiC have a central role in the operation of the volunteer Coast Guard operations and are selected by IRCG HQ. On a day to day basis they are responsible for maintenance equipment, training of volunteers, keeping records and team building of the unit. When there is an incident they are required to make decisions on the effective deployment of resources and planning the search operation. The OiC is party to the "Triple Lock System" of making the decision to launch the Coast

Correspondence 8.2 Correspondence from DOiC (2) and MCIB response.

Guard Boat (CGB). OiCs are usually drawn from current unit members. Members are advised of an available post and the applicants are selected after interviews. On appointment there is informal training on IRCG administration procedures.

The Irish Coast Guard Boat Operations Manual states that:

"The OiC, in consultation with the designated Boat Cox, is responsible for considering the capabilities of the CGB in relation to operating conditions and probable tasks to be encountered prior to designation.

The OiC, in consultation with the designated Boat Cox, is responsible for considering the capabilities of the crew prior to designating roles of operation."

On the evening of 9th September 2016, the Voluntary Services and Training (VS&T) Manager from headquarters travelled to Kilkee and announced at a meeting with volunteers at the Kilkee Coast Guard Station that the OiC was being replaced. The DOiC was to be appointed interim OiC until a permanent replacement was appointed. The impending changes were deferred to give Headquarters time to advise MRSC Valentia (Coast Guard Radio Station for the area) of the personnel changes. The appointment of the DOiC as interim OiC was scheduled to happen on the 12th September 2016. For the avoidance of doubt, in the remainder of this document and during the period covered by this report the OiC and the DOiC were the incumbent post holders.

3.4 The Role of the Coxswain

The coxswain (Boat Cox) is the person who commands the Coast Guard Boat (CGB) and is helmsman of the boat. The boat cox is party to the "Triple Lock System" which decides to launch the CGB. The Boat Cox makes the operational decisions when the boat is on the water. In addition to the basic requirements to navigate and handle the boat, the Boat Cox also needs intimate local knowledge of the coastline around which the boat operates. The basic knowledge in boat handling and navigation is covered by the training provided by the IRCG. The local knowledge of the coastline is usually covered by the fact that the boat cox is involved with local fishing or water sport activities.

Clarify; the boat coxn came from the original Land based CGU.

This type of information is imparted by discussion between the boat cox and crew. It is part of local CGU training, where dangerous areas of coastline are identified and navigational strategies developed to use when navigating them.

Clarify; Evidence was provided to the investigator that communication regarding safety concerns was poor within the Kilkee CGU.

The Irish Coast Guard Boat Operations Manual states that:

"The designated Boat Cox, in consultation with the CGB crew, is responsible for considering capabilities of the crew prior to allocating tasks during an operation."

The Boat Cox of the Delta RIB at the time of the incident was qualified in accordance with the requirements of IRCG.

MCIB RESPONSE: Noted.

MCIB RESPONSE: Noted.

Correspondence 8.2 Correspondence from DOiC (2) and MCIB response.

3.5 Triple Lock System

The Irish Coast Guard Boat Operations Manual describes the pre-launch procedure which must take place before every launch. Part of this procedure is the "triple lock system" described in the manual as:

> "A triple lock pre-launch decision making process must be adhered to every time a CGB is launched, whether for a response or routine operation.
> This triple lock process involves the:
> - Rescue Co-ordination Centre.
> - OiC (or authorised representative).
> - Designated Boat Cox.
>
> The CGB may only be launched if approval is obtained from all three parties."
> (see Appendix 7.7 Triple Lock System).

3.6 Training.

Boat crewmembers were given training under the National Powerboat Scheme to the level of Advanced Powerboat Certificate. In 2013, the Irish Coast Guard commenced further training in SAR for boat coxswains. All boat crewmembers involved with the incident had completed their training to SAR 2 level.

Clarify; SAR level two was not completed. Advanced SAR was.

In addition, all crewmembers are required to attend unit training sessions on a regular basis.

Clarify; Evidence was provided to the investigator indicating that many crew members were excluded from training. Clarify also how many training sessions crews are required to attend.

MCIB RESPONSE: The report has been amended to reflect the records.

3.6.1 The Coast Guard provides a Personal Survival Training and RIB capsize course. This is a bespoke course for the IRCG using the equipment provided by IRCG. The trainees use IRCG Personal Floatation Devices (PFD}, drysuits and helmets during the course. The three crewmembers in the Delta RIB at the time of the incident had all attended this course.

Clarify; Not all the crew had partaken in the course with the new version PPE they were wearing.

MCIB RESPONSE: Refer to 4.28 of the report.

3.7 Radios

The Delta RIB had two VHF radios fitted to the centre console. One was set to Channel 16 and the other to Channel 67. Evidence from crewmembers states that there had been difficulties with the on board radio which had been preset to Channel 16. Because of this, one crewmember had her personal hand held radio locked to Channel 16.

Clarify; The DOiC ensured that this crew member (operating in the position of deputy coxn responsible for communications) had a radio at close reach as they had highlighted this problem previously. This act indicates that thought was given to the pre-launch.

MCIB RESPONSE: Noted.

Correspondence 8.2 Correspondence from DOiC (2) and MCIB response.

Due to the localised transmitting capabilities of these hand held radios, only Kilkee Coast Guard station could converse with them on this frequency. Subsequent information was relayed by telephone from Kilkee to Valentia.

Incident Chronology

3.8 9th September 2016

At approximately 23.00 hrs on Friday 9th September 2016, the Kilkee unit was paged requesting assistance in the search for a missing person in the Kilkee area. Kilkee CGU and Coast Guard Helicopter R115 were tasked. The parameters of the search area were the bay north of George's Head to Foohagh Point. The DOiC was in command. Only a land search on the cliff top took place that evening. Search operations were stood down for the night at 02.00 hrs.

3.9 10th September 2016

On Saturday 10th September 2016 the CGU operation resumed at approximately 06.30 hrs with a cliff top search. This involved three teams from Kilkee CGU with the DOiC in command. Following sightings of objects in the water offshore, the operation was re-assessed at the CGU base. The Delta RIB crew was gathered and the boat was launched at 09.30 hrs. Kilkee CGU was assisted by R115, Doolin CGU and the Civil Defence drone in the morning. The Delta RIB was retrieved and re- launched a second time later on 10th September 2016. The OiC arrived at the station at approximately 12.00 hrs and was briefed on the ongoing situation. **Clarify; The OiC was then in command.**

MCIB RESPONSE: Noted.

3.10 11th September 2016

The CGU operation during Sunday the 11th comprised a further cliff top search and the launch of the Delta RIB on two occasions. Neither the OiC nor the DOiC were in attendance for the first boat launch and the most senior member in the station was in command of the CGU for the period. The OiC was in attendance at the station prior to the second launch. The search focused on the area between Chimney Bay, north of Gregory's Head, and south of Bishop's Island, which is to the south of Kilkee. On the 11th September 2016, at approximately 17.57 hrs, personnel were paged and told by the OiC to assemble at the Station for 06.45 hrs on 12th September 2016.
Clarify; personnel were text not paged. See Appendix 4

MCIB RESPONSE: Noted and the report has been amended.

3.11 12th September 2016

On Monday the 12th September both land and boat crews gathered to commence searches. The DOiC was in command.
Clarify; The DOiC was in command as the OiC did not show up, contrary to the text sent by them.
The day's plans were discussed between the station and MRSC Valentia. MRSC Valentia was requested to ask for assistance from the Doolin Station, due to a shortage of available suitably qualified boat crew.
Clarify; The days plans were also discussed between the acting DOiC (later the box coxn at time of accident) and the OiC via phone.
Clarify; The shortage of suitably qualified crew was due to a number of recent resignations, an issue which CG management were aware of.

MCIB RESPONSE: Noted.

Correspondence 8.2 Correspondence from DOiC (2) and MCIB response.

For the first launch of the Delta RIB, the "Triple Lock System" was completed using the IRCG Boat Operations & Pre Launch Planning Form (See Appendix 7.8 Pre Launch Planning document). The planning focused on the prevailing weather forecasts. The pre-planning document, which includes a heading "Possible hazards and risks?" stated a possible risk of 3m wave heights.

Clarify; The risk of 3m wave heights was for that evening, not at time of launch. Clarify also who's responsibility it is to complete the pre-launch planning form. Clarify also any comment provided by MRSC Valentia regarding sea and weather conditions given that one of their primary roles is to provide sea area forecasts and another primary role is to authorize the launch of the delta as part of the triple lock system.

MCIB RESPONSE: Please refer to 3.11 and Appendix 7.6 of the report and your comment at 2.6.6.

There were no visual observations of sea conditions South of Kilkee in the proposed search area.

Clarify; The investigator was informed that a visual was conducted on that morning by another boat coxn and DOiC.

MCIB RESPONSE: Please refer to 3.5 and Appendix 7.6 of the report. No visual observation was recorded on the pre-launch planning documents.

The Met Eireann forecast had a small craft warning for 06.00 hrs but there is no record of this warning being considered.

Clarify; the definition of a small craft warning. Clarify that the met Eireann weather report as seen in appendix 3 was held on station, visible to all members and clearly states there is a small craft warning in operation. Clarify from this weather report as to what region of the country this small craft warning is applicable to. Clarify also the number of previous times the Kilkee Coast Guard Delta was launched when met Eireann stated there was a small craft warning in place. Clarify also is any comment was provided by MRSC Valentia given that one of their primary roles is to provide sea area forecasts and another primary role is to authorise the launch of the Delta as part of the triple lock system.

MCIB RESPONSE: Please refer to 2.6, 3.11, 4.3, 4.8 and Appendix 7.5 of the report. The Met Éireann forecast is read in conjunction with Met Éireann sea area forecast terminology (see Appendix 7.5A).

Met Eireann: Westerly 3 to 5, decreasing in afternoon to 2 to 4
Wind Guru:

Time	07:00	10:00	13:00
Av wind speed Kts	11	9	8
Gusts kts	16	13	9
wave height m	2.6m	2.4m	2.4m

3.11.1 The operational limits for the Delta RIB are set out in the Irish Coast Guard Boat Operations manual. In brief this states that the limits were daylight and unrestricted visibility only, wind up to and including Force 6 /27 kts and significant wave height of 2 m. Maximum distance from coastline 6 nautical miles. This boat was not permitted to operate in surf.

Clarify; definition of a significant wave height and definition of a surf zone.

MCIB RESPONSE: See 2.6.4 of the report, this is also contained at section 3.6.4 of the CGB Operational Capabilities and limits manual. See also 3.11, 4.3, 4.8 and appendices 7.5, 7.6 and 7.8.

Clarify; if that the weather on the day was not a combined Force 6 and significant wav height of 2metres. As you have stated above the both operations manual states that this is a combined limitation of Force 6/27knots and a wave height of 2metres (Appendix 2).

MCIB RESPONSE: The manual does not state combined environmental conditions. See Appendix 7.2 of the report.

3.11.2 The second launch at approximately 10.30 hrs, with a crew of three, the Boat Cox, a second Cox and one crewmember (the Casualty), appears to have been authorised with less formality,

Correspondence 8.2 Correspondence from DOiC (2) and MCIB response.

discussion and risk assessment.

Clarify; The statement 'appears to have been authorized with less formality' is opinionated. Please provide evidence that this was the case or omit opinion. Evidence has been supplied to the investigator indicating that great care and diligence was taken prior to this launce which inevitably ensured the survival of one crew member.

The IRCG Boat Operations & Pre Launch Planning Form for the previous launch appears to have been used again with the notation "continued from this morning" in the top right hand corner. This implies that consensus had been reached that the first launch had not encountered any problems and that wind and sea conditions were the same.

Clarify; the sea conditions had not remained the same, they had in fact improved. There was also a discussion with the outgoing boat coxn from the first launch re the sea conditions.

MCIB RESPONSE: Please refer to 4.3 and Appendix 7.8 of the report and note "continued from this morning" on the pre-launch document.

3.11.3 It could not be determined whether any consideration was given to terminate the search operation at any point over the weekend. Irish Coast Guard SAR Emergency Checklist contains search termination criteria for the guidance of operational crews (see Appendix 7.9 Search Termination Criteria).

Clarify; the document seen in appendix 7.9 was not available on station and evidence given to the investigator details that many members were isolated from accessing information databases.

MCIB RESPONSE: Noted

3.11.4 Prior to launching one crewmember had her personal handheld VHF secured to the upper part of her PFD, locked to Channel 16, close to her ear to provide the second VHF cover. This was the crewmember who issued the "MAYDAY" call on Channel 16 following the capsize of the Delta RIB.

Clarify; This VHF was secured to this crew member due to the diligence of the DOiC and other launch crew member (whom has provided a statement but was not given the opportunity to comment on this report).
Clarify also that this crew members neck seal was also incorrectly fitted and again due to the diligence of the DOiC and other launch crew member this was rectified prior to her going to sea. This serves to prove to the contrary of the boards opinion in section 3.11.2 that the second launch "appears to have been authorised with less formality, discussion and risk assessment".

MCIB RESPONSE: Noted and please refer to Appendix 7.8 of the report.

Correspondence 8.2 Correspondence from DOiC (2) and MCIB response.

3.11.5 The transcript of radio traffic shows radio communication problems between MRSC, Valentia and the Delta RIB. At times it was necessary for the Kilkee Base to relay communications between the Coastal Radio Station and the Delta RIB. This was due to line of sight and distance issues for VHF radio communications.

3.11.6 The last radio communications between Team Sierra, the clifftop CGU team, and the Delta RIB was at 11.56 hrs. At 12.20 hrs the Delta RIB reported to Kilkee Station that it was just south of Bishop's Island. At 12.37 hrs it reported it was heading back to Chimney Bay, north of St. George's Head. At 13.06 hrs the CGB reported "we are just off the back of the Pollack Holes. We will just do one search around underneath the shelter and we will head in". At 13.11hrs a "MAYDAY" call was picked up by the Kilkee Base. The call was made by one of the crew using her hand-held radio on Channel 16. This call was not picked up by MRSC, Valentia. A member of the public phoned the Kilkee Station and reported an incident involving the Delta RIB. Kilkee station contacted MRSC Valentia on Channel 67 and by telephone to let them know what had happened and asked them to task the SAR helicopter. At the time both the OiC and DOiC were at the station.

3.11.7 The Delta RIB appears to have been capsized by a large wave striking it beam on to starboard. The three crewmembers were thrown clear of the vessel and all three crewmembers lost their helmets during the incident. The crew were unable to conduct the Coast Guard post RIB capsize instructions due to the severity of the incident and the conditions. A wave righted the vessel shortly after the capsizing. The RIB's manual self-- righting system was not activated and subsequent inspection found the gas cylinder intact and fully charged.

3.11.8 The second Cox managed to swim offshore. The Boat Cox was swept inshore, into a small recess in the cliff and clung to rocks until rescued by Coast Guard rescue helicopter R115. The third crewmember was washed inshore under the cliff with the RIB. Civil Defence drone video footage, which commenced at 13.24 hrs, shows the third crewmember holding on to the port bow section but she was repeatedly washed off by the waves. After approximately three minutes the Casualty lost her grip and was next sighted lying face down in the water and drifting freely with the seas.

3.11.9 From later inspection of the drone footage none of the PFDs had been operated to inflate the airbladders. This was later confirmed by inspection of the PFDs. None of the Personal Locator Beacons (PLB's) had been activated. No hand flares were set off.

Correspondence 8.2 Correspondence from DOiC (2) and MCIB response.

3.11.10 At the cliff top, several teams from different emergency services had assembled. These included Gardai, Civil Defence and the Fire Service. There were also onlookers on the cliff top who were not members of the emergency services.

3.11.11 The outgoing OiC arrived at the station sometime between 12.30 hrs and 12.50 hrs on the 12th September 2016. There is conflicting evidence as to whether he was briefed on the on-going search operation or had called to return equipment. In and around this time the Delta RIB reported that it was heading back to Chimney Bay and was quickly followed by the "MAYDAY" call. On becoming aware of the distress call the OiC made his way with another colleague to the cliff top to assess the situation and took charge of the incident liaising with other agencies and the Coast Guard Helicopter.

3.11.12 At this time, a privately-owned RIB was being prepared to launch with the intention of assisting in the search. The RIB owner was asked by a member of the Gardai to await the arrival of the DOiC. The DOiC boarded the RIB and departed for the scene of incident.

Clarify; please include technical specs of this vessel for comparative reasons. Also clarify if any comment was sought from the owner of this vessel and if so please clarify what was their experienced understanding of the sea conditions and weather at the time they chose to launch their vessel.

MCIB RESPONSE: Noted.

This vessel got close enough to rescue the second Cox who had been able to swim offshore. At approximately 13.44 hrs the rescued second Cox was transferred to the D- Class lifeboat which had been launched to assist. The second Cox was brought to the pier at Kilkee where an ambulance was on standby to take her to hospital.

Clarify; the casualty was not brought ashore by the Kilkee D-class, she remained on board the privately-owned rib.

MCIB RESPONSE: Noted that the "casualty" is the rescued Second Cox and the report has been amended accordingly.

3.11.13 At 14.17 hrs Coast Guard helicopter R115 winched the Casualty out of the water and landed on an adjacent cliff top where paramedics attended to her. They brought the Casualty to Limerick University Hospital where she was pronounced dead at 16.05 hrs.

3.11.14 Following the departure of Coast Guard helicopter R115, Coast Guard helicopter R117 continued with the rescue effort. The cliff top rescue teams, a mixture of personnel from the different services present, abseiled down the cliff face and managed to get a line to the Boat Cox. They were able to reassure the Boat Cox and brief him on the situation. The Boat Cox was recovered by helicopter R117 at 17.25 hrs and brought to hospital.

Clarify; please clarify if weather conditions were as the board depict them to be, whether it was deemed suitable for numerous people to abseil down a cliff edge in a surf zone.
Clarify; a jet ski rescue unit were also tasked to the scene by the OiC and attempted to swim to the boat coxn. Please also clarify if any comment was sought from this team and if so clarify whom deemed it suitable to utilise swimmers.

MCIB RESPONSE: Noted.

Correspondence 8.2 Correspondence from DOiC (2) and MCIB response.

Post Incident Chronology

3.11.15 The post mortem report of 13th September 2016 on the deceased Crewmember indicated the cause of death as drowning. A skull injury was also identified which might have been a contributory factor but on its own this injury would not have been fatal. The autopsy report conclusions are provisional at the time of publication of this report. It is the role of the Coroner's Office to determine the cause of death.

3.12 The Gardai collected equipment from the Coast Guard Station and placed it in plastic bags, with seals attached.

Clarify; a number of people witnessed equipment involved in the accident being packaged in black bags and removed from the station by a coast guard vehicle.

These were handed over to the MCIB on the 14th September 2016. The equipment and all other contents of the bags were examined on the 3rd October 2016. · On completion of the examination, the equipment was returned to the IRCG at their depot in Ballycoolin on 13th October 2017. At that time two lifejackets, identified as being worn by crew on the day of the incident were inflated. Both operated and fully inflated.

MCIB RESPONSE: Noted.

3.13 Each waistcoat had a red flashing light unit, activated by immersion in water, a GMS Accusat PLB; whistle on lanyard, a kill cord, a penknife, a handheld signal flare, a safety line with stainless steel snap-on clamps and a handheld ICOM VHF transceiver. Of the equipment retained by the Gardaí and returned to the MCIB, there was only one handheld VHF, which was thought to be the unit used to issue the "MAYDAY" call. PLB's 3, 4,5 and 8 were missing. Lifejacket 8 was missing.

3.14 The safety helmets were examined. At the scene of the incident, on the 14th September when the vessel remnants were recovered, it was noted that one helmet had been crushed. All other helmets examined were intact, but on two the inner air bladder was missing.

3.15 The Casualty's drysuit was cut away by the Paramedics attending to her immediately after the incident. The remains of this suit were later inspected by the MCIB. It was so damaged that no conclusive determination could be made concerning its condition prior to the incident.

3.16 After the incident the search operation was taken over by the Civil Defence. The body of the missing person was found on the 24th September 2016 in the same cove as the incident.

Clarify; the body was not recovered in the same cove as the incident

MCIB RESPONSE: Note and the report has been amended.

Correspondence 8.2 Correspondence from DOiC (2) and MCIB response.

4. ANALYSIS

Search and Rescue and Recovery Operations

4.1 In Ireland the overall framework for search and rescue (SAR) is established in the Irish National Search and Rescue Framework document which was issued by the Minister for Transport in March 20101 This document addresses SAR but it does not provide adequate clarity regarding rescue and recovery operations and in particular when a search and rescue mission becomes a search and recovery operation. The framework document does not provide any guidance on any intermediate stages between rescue and recovery operations.

4.2 This incident occurred on the third day of an operation in respect of a person who had been missing since 9th September. Sightings of objects in the water had led to the launch of the CGU boats on 10th September. The likelihood of a rescue rather than a recovery from the sea was severely reduced by the 12th September. There seems to have been no clear analysis as to when the operation changed from rescue to recovery or even whether it had been changed. A recovery operation would require a commensurate analysis of the risks involved and should have resulted in a different strategy being adopted. The teams were not provided with adequate guidance on these considerations.

Clarify; what documents / forms allow the decision to change from rescue to recovery to be documented. Clarify also that the statement given by the DOiC to the investigators clearly depicts that the change to a recovery had taken place.

Clarify also that evidence was provided to the investigator that members of the team had requested training from HQ in policies, protocols and procedures.

MCIB RESPONSE: Please refer to 4.2, 5.1 to 5.4 and Appendix 7.9 of the report.

MCIB RESPONSE: Noted.

Decision to launch the Delta RIB.

4.3 The decision to launch a CGB is made by three people under the "Triple Lock System" as described in paragraph 3.5. The manner in which this is implemented is outlined in section 1, Chapter 4 of the Irish Coast Guard boat operations manual (see Appendix 7.7). The investigation found that the only factors considered prior to either launch on the 12th of September were the weather forecast, predicted sea conditions and the availability of boat crew. The launch log stated a possible 3m swell, which was outside the limit for boat operations. No visual confirmation from the cliff tops was made as to the swell and wave heights. There is no evidence that Met Eireann small craft warning was considered. These findings indicate that the "Triple Lock System" was not adequately adhered to before launching the Delta RIB on the 12th September.

Clarify; Please provide evidence that "no visual confirmation from the cliff tops was made" given that there were cliff top search teams deployed. Please again clarify that the 3m swell was for that evening not at the time of launch. Please also review appendix 5. This is an abstract form the IRCG boat operations manual which states that;

"situations may arise where the local environmental conditions differ from the forecasted weather e.g. in a sheltered Bay the sea state may be calm despite a forecasted gale".

MCIB RESPONSE: Please refer to 2.6, 3.5, 3.11, 4.3, 4.4, 4.8, 5.6, 5.7, 5.14 and Appendices 7.5, 7.6 and 7.8.

Correspondence 8.2 Correspondence from DOiC (2) and MCIB response.

4.4 Factors which appear not to have been considered included:

- The necessity for launching a CGB.
- The effectiveness of the Delta RIB on a lee shore in breaking swells.

  Clarify; If breaking swells indicate that a surf zone?
  Then clarify that the Delta RIB should not be operating in a surf zone.
- The operational status of the vessel and functioning of all equipment.
- A co-ordinated plan of searching.
- The operational limits of the craft.
- The risk of personal injury to the crew of the Delta RIB given the operational conditions.
- The availability of a drone as an appropriate search tool.

  Clarify; the Kilkee or Doolin units of the coastguard did not own or operate drones. Also, please provide evidence or research to support the statement that drones are appropriate for this type of search.
- The risk of personal injury to the crew of the Delta RIB given the likelihood of recovery rather than rescue if the missing person had been in the sea since 9th September.

MCIB RESPONSE: Please refer to Appendix 7.2 "The Boat Cox is not permitted to operate the CGB in surf.

MCIB RESPONSE: Please refer to 2.4.1 and 3.9.

4.5 The IRCG does not distinguish between "search and rescue" and "search and recovery" operations and does not have a priority rating on CGB callouts. The Search Termination Criteria Document states: "A SAR search should continue until the possibility of success is no longer reasonable and all hope of rescuing survivors is past. If after consultation with those involved, it has been determined that a further search would be of no avail, the SMC (search mission co-ordinator} must consult the On Call Officer before terminating the search."

Clarify; it is irrelevant whether a rescue or recovery operation was in operation. Risks should not be taken in any case

MCIB RESPONSE: Please see 4.2 and 5.1 to 5.4 of the report.

The capsize incident on the 12th of September

4.6 The incident occurred in a small cove at the base of a cliff to the north and east of Foohagh Point. The area is covered by the chartlet as shown in Appendix 7.4. Local knowledge is that the seabed in the area rises in sharp cliff faces rather than a gradual shelving of the seabed. This can cause a sudden uprising in certain sea conditions and large swells can appear as if from nowhere.

4.7 The cliffs at Foohagh Point are approximately 49 m in height above sea level. The cove where the incident occurred shelves very steeply from 29 m to 11.6 m and then dries. There are numerous rocky shoals in the area, some of which dry. The innermost part of the cove is located at 52° 40.37'N 009° 41.16'W.

4.8 Over the period of the original operation on the 12th September, the weather conditions were not

Correspondence 8.2 Correspondence from DOiC (2) and MCIB response.

favourable with high swells and strong winds forecast. This does not appear to have been adequately considered during the launch planning. The predicted wave heights, as per the Met Eireann weather forecasts at 06.00hrs of 2.8 to 3 m swells exceeded the operational limit for the RIB which was 2 m. There was also a "Small Craft Warning" in operation on the day which appears to have been ignored.

Clarify; Please see the met Eireann weather report available to the responding crew on the day in question. Please note that the winds for the west coast were reducing to force 2 to 4. Please also note that the small craft warning is not specifically for the west coast or the Kilkee area. Also, the statement above "appears to have been ignored" is opinionated, please provide evidence that it was in fact relevant to the area of operation and then that it was ignored. Otherwise please omit opinion.

§ **Please also see appendix 6, data from the commissioner of Irish Lights wave buoys in Ballybunion (south of Kilkee) and Finnish (north of Kilkee). Both these wave buoys recorded average waves heights of less than 2 metres around the time of the accident. Please also clarify why this data was not included by the board.**
Please also clarify why a weather report for the East of the country was included in the report (appendix 7.5)

4.9 The Boat Cox lived locally and had undertaken all of the relevant training for boat coxswain. The cove was not searched earlier in the day because there was insufficient water due to the state of the tide.

Clarify; the area had not been searched previously by other coxns as it was deemed unsafe. Please review MRSC Valentia VHF radio transcripts for 2 days previous where evidence should be heard of the boat refusing to enter that area having been requested to do so by the OiC.

The track taken by the RIB when traversing the cove resulted in it being placed beam on to the direction of the swell at slow speed. The Delta RIB was brought close inshore into the breaking waves where it capsized.

4.10 The three crewmembers lost their helmets during the capsize. The investigation was unable to establish definitively how the helmets were lost. The security of the helmet in use depends entirely on it being properly fitted/inflated and secured according to the suppliers instructions.

Clarify; State please that statements were given by crew members indicating that helmets were not worn as per the manufacturer's instructions.

The post-mortem on the Casualty identified a trauma to the side of the head in a position which should have been protected by the helmet.

4.11 The PFD would only support an unconscious person in a face up position when it was fully inflated. The PFDs inflation mechanism was manual to prevent inadvertent automatic activation. During the incident, none of the three casualties inflated their PFDs. During post incident examinations two of the three PDFs were activated so difficulties in activating the PFDs during the incident may have arisen from difficulty in finding the activation toggle, or a decision by the wearer not to inflate their device.

MCIB RESPONSE: Please refer to 2.1.2, 2.6, 3.5, 3.11, 4.4, 4.8, 5.6, 5.7, 5.14 and Appendices 7.5, 7.6 and 7.8.

MCIB RESPONSE: There is no record of anything other than the Met Éireann forecast and Windfinder being used on the day. The weather report is for the entire country.

MCIB RESPONSE: Please refer to 3.11.6 and Appendix 7.2 and 7.8.

MCIB RESPONSE: Noted

Correspondence 8.2 Correspondence from DOiC (2) and MCIB response.

4.12 In this incident the crew members were thrown well clear of the boat during the capsize and were some distance apart. They found themselves in heavy seas which righted the boat again.

Clarify; the boat entered a surf zone with breaking swells.

The Boat Cox was washed inshore and clung to the rocks until winched off by helicopter. The second Cox swam offshore and was rescued by boat. She had ingested water and required medical attention once brought ashore. The Casualty was washed inshore with the boat on to a rock ledge that was awash under the cliffs. She clung to the grab line on the port bow of the boat, but was repeatedly washed off and went under water. After three minutes she was washed off and did not swim back to the boat. The video footage showed her face down with her PFD un-inflated. The Casualty expended energy holding on to the boat, would have ingested water and probably received the impact to the head during one of the periods when she was submerged. Following the "MAYDAY" message the D Class Coast Guard Boat was launched from Kilkee. There is no record of any pre-launch risk assessment of the D Class launch. This boat was launched in similar sea and wind conditions as the Delta RIB. These conditions were outside the operational capabilities and limits of both of these craft.

Clarify; it is opinionated to suggest that a pre-launch risk assessment was not conducted simply because it was not written on paper. In this instance there was an imminent threat to three lives. A dynamic risk assessment was completed by the responding crew and in their experienced opinion the risk of losing three lives out weighed the risk of attempting a rescue. The boat was utilised and remained in the water for some time with no complications arising. Furthermore, this boat was coxnd by the same person whom had taken part in an on the water search earlier that morning and was more than familiar with conditions.

MCIB RESPONSE: Please refer to 3.11.7.

MCIB RESPONSE: Please refer to Appendix 7.7, requirement to carry out triple lock.

MCIB RESPONSE: Please refer to 3.5 and Appendix 7.7 of the report.

Operational Issues

4.13 The IRCG manages approximately 900 volunteers which requires dedicated resources and systems. While not within the scope of this report, which is focused on the capsize incident on the 12th September 2016, it is reasonable to conclude that the capacity of the Coast Guard to manage such a large number of volunteers places a strain on its ability to manage the day to day operations of the coastal units.

4.14 Prior to the incident, the Irish Coast Guard had been subject of two recent separate reports:

- Value for Money Report published in 2012. This report made recommendations with respect to human resources and training of personnel (see Appendix 7.10 Extract from Value for Money Report).
- Report issued by Maritime SAR Limited following an incident where the Dingle CGU RIB capsized in August 2014. This report made 20 recommendations (see Appendix 7.11for detail).

Correspondence 8.2 Correspondence from DOiC (2) and MCIB response.

4.15 The investigation in 2014 did not find any formal recognition of the skills required for OiCs and DOiCs or specific training program for these key personnel. The report into the 2014 Dingle incident identified the high workload and responsibility of the OiC as factors in the incident.

4.16 This current investigation found 'that there were management issues in the Kilkee CGU. A number of coxswains with local knowledge had left the unit. There was no local area Coast Unit Sector Managers (CUSM) for a period and the situation had escalated to the point that IRCG headquarters had intervened as detailed below.

Clarify; there was in fact a CUSM appointed for some time (approx. 1 year) prior to the incident.

MCIB RESPONSE:
Noted.

4.17 During the course of this investigation the following facts were established:

- Headquarter managers became aware of management issues at the station and held a meeting with the volunteers in July 2016.

- A further meeting was held at the station only hours before the first call out on 9th September 2016. It was announced that the OiC was to step aside and undertake another position with the IRCG. The proposed handover was deferred until 12th September 2016 to allow for notification of the personnel changes to MRSC Valentia and other relevant parties.

4.18 It is normal practice for a Coast Guard Unit to call for assistance from flanking stations, through MRCC, when additional volunteers are required. Doolin responded to this request on the 12h September, which was a Monday, a normal working day. The deceased crewmember was from Doolin and had brought her drysuit and helmet with her. She was supplied with a PFD from the Kilkee station.

Safety Management and Volunteers

4.19 The IRCG consists of full time staff with headquarters in Dublin and with further staff based in the radio centres in Valentia and Malinhead. However, in circumstances such as those described in this report the IRCG is dependent on the role of volunteers who are based in the 55 coast guard stations around the coast. This structure of full time staff managing volunteers leads to complexity in the overall system.

4.20 The relevant legislation in relation to safety, health and welfare at work in Ireland is the Safety, Health and Welfare at Work Act 2005. The Health and Safety Authority is carrying out its own investigation into the incident.

Correspondence 8.2 Correspondence from DOiC (2) and MCIB response.

4.21 An effective Safety Management System has at its core a feedback mechanism which reviews operations and analyses them. It uses accident reports and other non-compliances to review procedures and to constantly seek improvement. The IRCG have experienced incidents previously and most notably a Delta RIB capsized in Dingle on the 25th of August 2014. The IRCG carried out an internal accident investigation report, the recommendations of which are annexed to this report. This incident in 2014 has many attributes similar to the present case and a Safety Management System should ensure that the recommendations would be reviewed and implemented. It is apparent that not all of the recommendations were implemented. The IRCG needs to implement an effective and functioning Safety Management System.

Clarify; the findings of this report were not made known to the Kilkee Crew.

MCIB RESPONSE: Noted.

4.22 The International Standards Organisation, ISO, in March 2108 adopted the International Standard ISO 45001:2018 Occupational health and safety management systems. The main elements of this standard are as follows:

- Integration with other management systems
- Provide an integrated approach to organizational management
- Ensure the organisation establishes clear policies which are compatible with the overall strategic objectives and direction of the organisation
- Promote continual improvement across the organisation
- Enable the organisation to address and manage risk in the workplace
- Context of the organisation
- Understanding the needs and expectations of the worker and other interested parties
- Leadership, culture and commitment
- Polices linked to overall strategic objectives and direction of the organisation
- Participation and consultation
- Risk and opportunities
- Performance evaluation
- Evaluation of compliance
- Management review

Correspondence 8.2 Correspondence from DOiC (2) and MCIB response.

Equipment and Training

4.23 The volunteers were supplied with a safety helmet, a drysuit, an inflatable PFD which had pockets for a handheld VHF radio, a flare, a Personal Locator Beacon (PLB), a knife and a safety lifeline.

4.24 In 2013, new helmets and drysuits were provided to both Doolin and 'Kilkee CGUs. There was no evidence of formal instruction or training in the use of this equipment. Full instructions for use and care of this equipment was available to IRCG staff and volunteers on an internal Extranet.

Clarify; evidence was provided indicating that management were aware that a number of Kilkee CGU members did not have access to online databases due to being blocked by the OiC.

MCIB RESPONSE: Noted.

4.25 Each safety helmet had an inner air bladder which is designed to be inflated to ensure a proper fit on the wearer's head. The helmet manufacturer's instructions confirm that inflation of the bladder is essential to a proper fit of the helmet and that the strap assembly must be properly secured and adjusted (see Appendix 7.12 Coast Guard fitting and handling instructions). All three crewmembers lost their helmets when they were thrown from the Delta RIB. Two of the helmets recovered after the incident did not have the inner air bladder. The Casualty suffered a head injury during the incident which may have contributed to her inability to return the vessel after being washed away.

4.26 The Marine Safety Helmet documentation states that it complies with Publicly Available Specification PAS 028:2002 for marine safety helmets. This specification specifies the requirements for marine safety helmets for use by occupants of small, fast craft. Also included in this specification are mandatory requirements that are specific to the marine environment for the helmet to be positively buoyant.

Clarify; what evidence the investigator has found to suggest why the helmets came off the all three casualty's heads. This was a critical factor given that the casualty whom died suffered a head injury and these helmets remain in use by the IRCG. and the root cause of this needs to be identified.

Please also clarify whether the investigator was informed by a number of crew that instruction had been given not to orally inflate the bladder but to allow it to reach ambient pressure.

MCIB RESPONSE: Please refer to 3.12, 4.10, 4.25 and Appendix 7.10 of the report.

4.26 The inflatable PFDs that were supplied to the IRCG were Mullion "Rescue 400 Seaforce Vest"

Correspondence 8.2 Correspondence from DOiC (2) and MCIB response.

model. These comprised a waistcoat type jacket with two types of buoyancy. Non-inflated, the jacket provided 50 Newtons of buoyancy. The standards to which the lifejackets conformed were EN ISO 12402-S(non-inflated) and EN ISO 12402-6 (inflated) as a Special Purpose PFD. None of the crewmembers inflated their lifejackets for maximum buoyancy after they were thrown in the water. A fully inflated lifejacket can reduce swimming and manoeuvrability and may have been a factor in a wearer's decisions not to inflate.

Correspondence 8.2 Correspondence from DOiC (2) and MCIB response.

4.27 All IRCG boat crew must attend the bespoke personal survival skills and capsize course. Although all the crew had attended this course, only one of the surviving crewmembers had done so recently using the current PPE and survival equipment. At present IRCG crews are required to attend this course only once. As this is specialised training and hard to replicate during routine training on the bases there is a case to be made for frequent refreshers, particularly when new equipment is introduced.

Boats Used

4.28 The IRCG Delta RIB was being used to carry three volunteers in what was initially a search and rescue operation. At no stage on the 12th of September was the nature of the mission clearly defined. The carriage of personnel on boats is regulated in Ireland by means of the Merchant Shipping Acts. The status of the people being carried depends on the nature of the mission. It can be considered that during a SAR operation that all efforts must be made to save life commensurate with the safety of the rescue boat crew. However, the IRCG boats are not vessels of opportunity as they are dispersed throughout the coast in a planned manner to be readily available for such uses.

Clarify; given the lack of other nearby rescue vessels this boat can be deemed a vessel of opportunity.

Therefore, they should be safe and comply with all applicable statutory requirements. These boats should hold passenger boat licences or load line exemption certificates. In this case, as they were being used for search operations, it is considered that the vessels should have held passenger boat licences.

MCIB RESPONSE:
Noted

4.29 It was noted in this investigation that the fixed VHF radio installation on the Delta RIB was not operational. The volunteers were aware of this and carried a handheld VHF on Channel 16. However, all vessels fitted with a VHF radio installation must hold a ship's radio station licence and the operators must hold the appropriate operators certificate. Additionally, the IRCG Delta RIB should have held a passenger boat licence and this requires that the radio installation is correctly installed, fitted and operational.

New Technologies

4.30 The decision to launch the Delta RIB and to deploy cliff teams was based on traditional ways of carrying out search and rescue missions and recovery operations. Using boats and teams places volunteers in hazardous situations and requires extensive risk management and safety procedures.

Correspondence 8.2 Correspondence from DOiC (2) and MCIB response.

A fundamental tenet 'of safety management systems is to seek to avoid taking a risk if possible.

Clarify; IRCG management were asked to intervene 6 months previously for this very reason.

New technologies such as drones may provide alternative means of searching, particularly in recovery operations where they could be an effective way to reduce risks to volunteers and other emergency services. In this incident, the missing person had been reported missing from the cliffs on 9th September and the likelihood of a rescue from the sea, rather than a recovery situation, was very limited.

MCIB RESPONSE:
Noted.

Correspondence 8.2 Correspondence from DOiC (2) and MCIB response.

5. CONCLUSIONS

Search and Rescue and Recovery Operation

5.1 The Irish National Search and Rescue Framework does not provide adequate clarity in relation to search and recovery operations as to when a search and rescue operation becomes a search and recovery operation or at any of the intermediate stages.

5.2 The criteria for determining the response to recovery operations as opposed to search and rescue and the appropriate responses were not clearly defined. This is especially in incidents where search and recovery operations take place close to cliffs and in surf conditions.

Clarify; The Delta RIB is not permitted to operate in surf zones.

MCIB RESPONSE: Please refer to 3.11.1, 4.3, 5.2 and Appendix 7.2 of the report.

5.3 The need to deploy, and the activities to be carried out by, the cliff search teams and boats in search and recovery operations was not adequately considered.

5.4 The use of new technologies or alternative means of carrying out search and recovery operations was not adequately considered.

Clarify; new technologies were not utilised, operated by or available to the CGU at the time.

MCIB RESPONSE: Please refer to 2.4.1, 3.9, 3.11.8, 3.11.9, 4.4 and 4.31 of the report.

5.5 The criteria for oversight of Kilkee station to ensure that it met pre-determined operational readiness were not established. There was no evidence of any effective management system in place with associated oversight to ensure that it met these criteria before the operation was tasked.

Clarify; Evidence was provided to the investigator indicating that this issue was raised approx. 6 months previously with the IRCG management.

MCIB RESPONSE: Noted.

5.6 The "Triple Lock System" to decide on launching a boat was not adequately set out. Neither the roles and responsibilities, nor the acceptance criteria for launching before each launch were adequately documented.

Clarify; Evidence was provided to the investigator indicating that this issue was raised approx. 6 months previously with the IRCG management

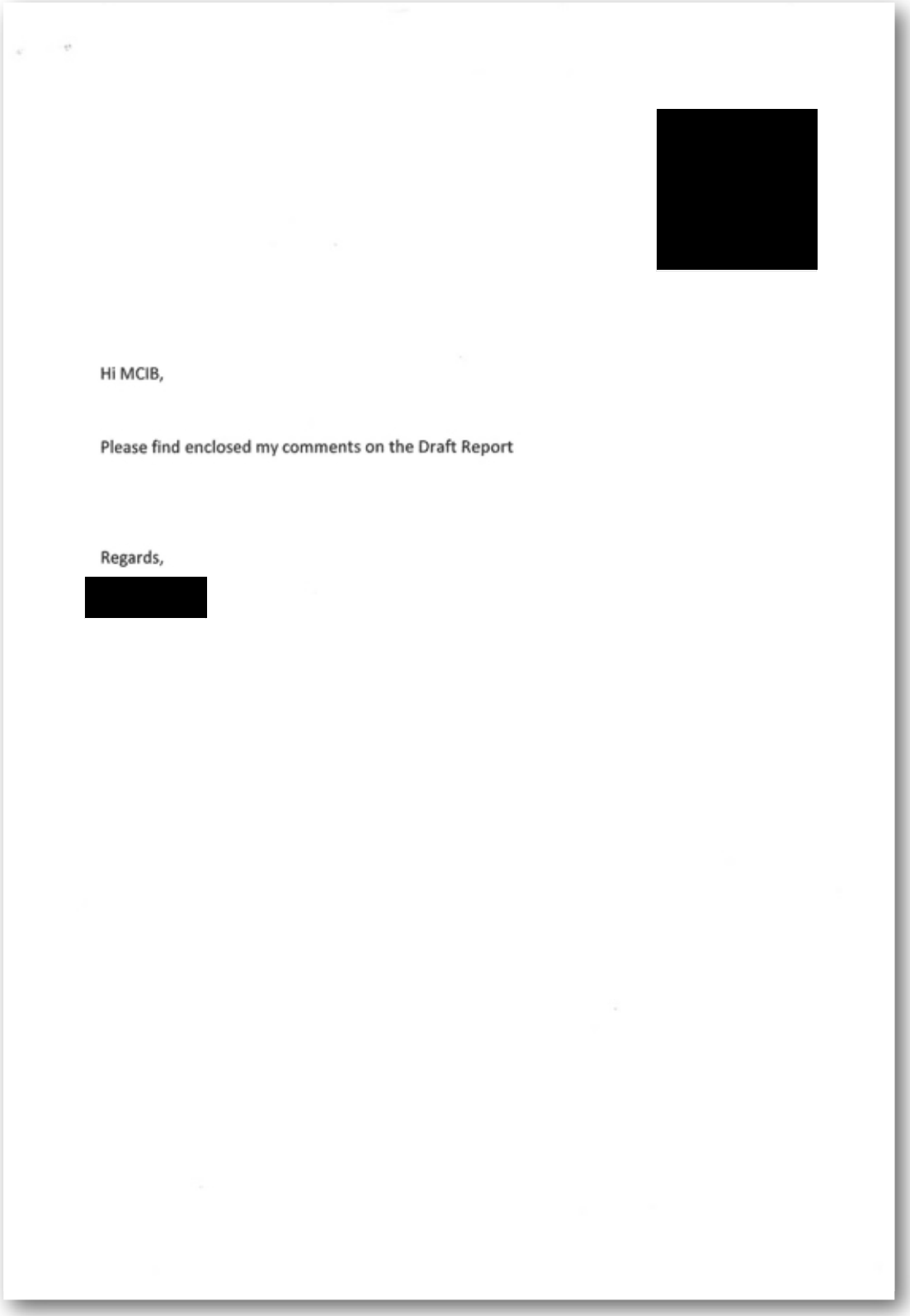
MCIB RESPONSE: Noted.

5.7 The Delta RIB was used outside of the IRCG's own defined operational limits.

Clarify; please review the boards understanding of the on-scene weather. Please include that on scene weather can and did differ from forecast and also clarify that given the boat was in a breaking swell, was it operating in a surf zone.

MCIB RESPONSE: Please refer to 2.1.2, 2.6, 3.5, 3.11, 4.3, 4.4, 4.8, 5.6, 5.7, 5.14 and Appendices 7.5, 7.6 and 7.8.

Correspondence 8.3 Correspondence from Boat Cox and MCIB response.



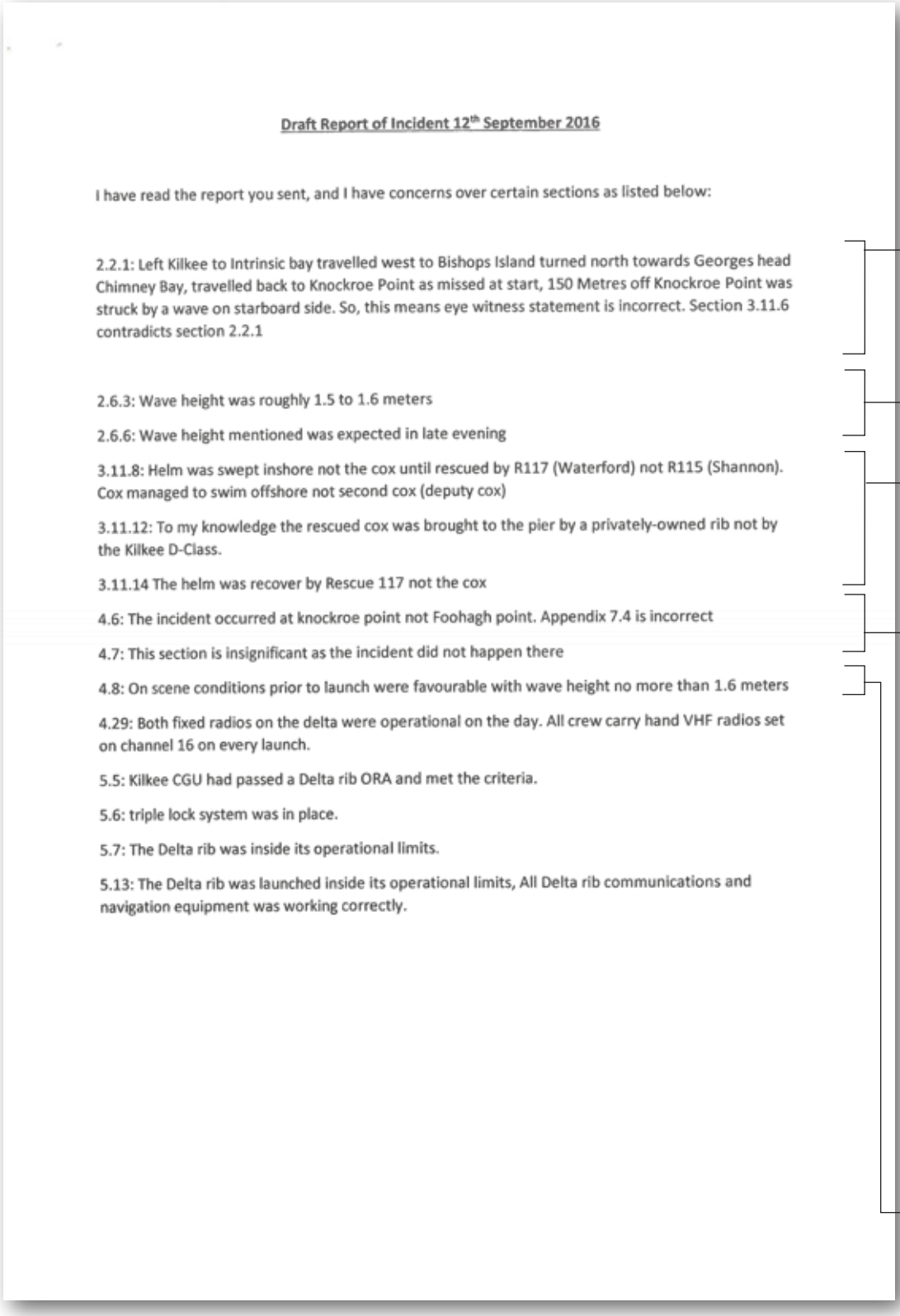
Hi MCIB,

Please find enclosed my comments on the Draft Report

Regards,

[redacted]

Correspondence 8.3 Correspondence from Boat Cox and MCIB response.



Draft Report of Incident 12th September 2016

I have read the report you sent, and I have concerns over certain sections as listed below:

2.2.1: Left Kilkee to Intrinsic bay travelled west to Bishops Island turned north towards Georges head Chimney Bay, travelled back to Knockroe Point as missed at start, 150 Metres off Knockroe Point was struck by a wave on starboard side. So, this means eye witness statement is incorrect. Section 3.11.6 contradicts section 2.2.1

2.6.3: Wave height was roughly 1.5 to 1.6 meters

2.6.6: Wave height mentioned was expected in late evening

3.11.8: Helm was swept inshore not the cox until rescued by R117 (Waterford) not R115 (Shannon). Cox managed to swim offshore not second cox (deputy cox)

3.11.12: To my knowledge the rescued cox was brought to the pier by a privately-owned rib not by the Kilkee D-Class.

3.11.14 The helm was recover by Rescue 117 not the cox

4.6: The incident occurred at knockroe point not Foohagh point. Appendix 7.4 is incorrect

4.7: This section is insignificant as the incident did not happen there

4.8: On scene conditions prior to launch were favourable with wave height no more than 1.6 meters

4.29: Both fixed radios on the delta were operational on the day. All crew carry hand VHF radios set on channel 16 on every launch.

5.5: Kilkee CGU had passed a Delta rib ORA and met the criteria.

5.6: triple lock system was in place.

5.7: The Delta rib was inside its operational limits.

5.13: The Delta rib was launched inside its operational limits, All Delta rib communications and navigation equipment was working correctly.

MCIB RESPONSE: Location has been charted in accordance with witness statements. The incident occurred within visual range of onlookers. Please refer to Appendix 7.4 of the report.

MCIB RESPONSE: Please refer to 2.6, 3.11, 4.3 and 4.8 of the report.

MCIB RESPONSE: The report reflects the crew positions as per the pre-launch documents, the responsibilities of the cox in paragraph 3.4 and witness evidence. Please refer to 3.11.12, 3.11.13 and 3.11.14 of the report.

MCIB RESPONSE: Location has been charted in accordance with witness statements. The incident occurred within visual range of onlookers. See Appendix 7.4 of the report.

MCIB RESPONSE: Please refer to 2.1.2, 2.6, 3.5, 3.11, 3.11.1, 3.11.2, 4.3, 4.4, 4.8, 5.6, 5.7, 5.14 and Appendices 7.6 and 7.8 of the report.

Correspondence 8.3 Correspondence from Boat Cox and MCIB response.

Draft Report of Incident 12th September 2016

I have read the report you sent, and I have concerns over certain sections as listed below:

2.2.1: Left Kilkee to Intrinsic bay travelled west to Bishops Island turned north towards Georges head Chimney Bay, travelled back to Knockroe Point as missed at start, 150 Metres off Knockroe Point was struck by a wave on starboard side. So, this means eye witness statement is incorrect. Section 3.11.6 contradicts section 2.2.1

2.6.3: Wave height was roughly 1.5 to 1.6 meters

2.6.6: Wave height mentioned was expected in late evening

3.11.8: Helm was swept inshore not the cox until rescued by R117 (Waterford) not R115 (Shannon). Cox managed to swim offshore not second cox (deputy cox)

3.11.12: To my knowledge the rescued cox was brought to the pier by a privately-owned rib not by the Kilkee D-Class.

3.11.14 The helm was recover by Rescue 117 not the cox

4.6: The incident occurred at knockroe point not Foohagh point. Appendix 7.4 is incorrect

4.7: This section is insignificant as the incident did not happen there

4.8: On scene conditions prior to launch were favourable with wave height no more than 1.6 meters

4.29: Both fixed radios on the delta were operational on the day. All crew carry hand VHF radios set on channel 16 on every launch.

5.5: Kilkee CGU had passed a Delta rib ORA and met the criteria.

5.6: triple lock system was in place.

5.7: The Delta rib was inside its operational limits.

5.13: The Delta rib was launched inside its operational limits, All Delta rib communications and navigation equipment was working correctly.

MCIB RESPONSE: Evidence provided to the investigation is as stated at 3.13, 3.7 and 3.11.4.

MCIB RESPONSE: Noted and please refer to 3.2 of the report.

MCIB RESPONSE: Please refer to 2.1.2, 3.5, 3.11.1, 3.11.2, 4.3, 4.4, 5.6, 5.7, 5.14, Appendices 7.6 and 7.8 of the report.

MCIB RESPONSE: Please refer to 3.11, 3.11.1, 3.11.2, 4.3 and Appendix 7.2 of the report.

MCIB RESPONSE: Evidence provided to the investigation is as stated at 2.1.2, 3.7 and 3.11.4 of the report.

Correspondence 8.4 Correspondence from 2nd Cox and MCIB response.

5th July 2018.

[redacted]

Marine Casualty Investigation Board,
Leeson Lane,
Dublin 2.

Your Ref: MCIB/12/266

RE: Draft Report of Investigation of fatal accident involving the capsizing of the Delta Coast Guard Rib Kilkee Co Clare
12th September 2016.

Dear Sir,

From the outset I confirm that these comments are meant to clarify the position in relation to a incorrect statements in the draft report and also to hopefully be of assistance when the full report is being prepared.

1.1 Please note that in this paragraph it could be believed that the boat was launched on the 9th, 10th 11th and 12th of September. There was no boat launch on the 9th of September.

2.2.1 This relates to the location of the incident. I believe that the correct location of the incident is as I have described in the copy map which I am returning to you. This is the map which you have used at appendix 7.4. I also believe that the coordinates to be incorrect. Can clarification be given as to where these coordinates were obtained from ?

2.4.1 It was the lifeboat station at Kilronan on the Aran Islands not Kilmore that was contacted.

3.2 Kilkee Coast Guard Unit was not a cliff rescue team but a search rescue team.

3.10 Please note that it is not Gregory's Head but George's Head.

3.11.2 This is disputed. In any event the weather was more settled for the second launch than it was for the first launch and the weather appeared to be improving. To clarify prior to the launch the cox briefed the crew, with DOIC present area of operation was discussed, previous search was discussed as to where items were found conditions at sea. All were asked if happy to go to sea at this time and all were happy to do so. When the boat launched contact was made with Valentia and crew information was given, area to be searched and at no stage we were asked by Valentia for on scene weather which had improved from that morning.

MCIB RESPONSE: Noted.

MCIB RESPONSE: Location has been charted in accordance with witness statements. The incident occurred within visual range of onlookers. See Appendix 7.4 of the report.

MCIB RESPONSE: The MCIB notes this and has amended the report.

MCIB RESPONSE: Noted.

MCIB RESPONSE: The MCIB notes this and has amended the report.

MCIB RESPONSE: Please refer to 2.1.2, 2.6, 3.5, 3.11, 3.11.1, 3.11.2, 4.3, 4.4, 4.8, 5.6, 5.7, 5.14 and Appendices 7.6 and 7.8 of the report.

Correspondence 8.4 Correspondence from 2nd Cox and MCIB response.

3.11.7 It is very important to note that [redacted] did not lose her helmet when the boat was capsized. She lost her helmet later in the incident when she was in the surf.

MCIB RESPONSE: Noted.

3.11.8 [redacted] takes personal exception to this paragraph. She did not swim off shore. Following the boat being capsized she was the first person washed into the cave that the boat eventually finished up. She was washed down the cliff face in a northerly direction by the action of the wave breaking. She observed the boat cox now on a ledge in the cave. The boat was also in the cave and there was a crew member faced down in the surf. She held at the base of the cliff for some time until she observed a RIB off shore and with a break in the waves she managed to get away from the cliff face where this RIB picked her up from the water.

MCIB RESPONSE: All facts relevant to the incident have been contained within the paragraph.

3.16 This is factually incorrect. The casualty was recovered north of the bay that the incident had occurred in.

MCIB RESPONSE: The MCIB notes this and has amended the report.

4.3 It is important to note that the three-meter swell did not relate to this search and rescue. It is misleading and factually incorrect to state that it did. It is also possible that the incorrect conclusions have been drawn from this omission. By reading the met reports it is clear that the small craft warning was for the east coast.

4.4 There are certain occasions when a sea CGB can be launched. One of these is for the recovery of a casualty if located by R115, a drone or a shore team. It would also be launched where there was personal danger to a member of the public or to a member of the crew which would give rise to immediate action.

MCIB RESPONSE: Please refer to 2.1.2, 2.6, 3.5, 3.11, 3.11.1, 3.11.2, 4.3, 4.4, 4.8, 5.6, 5.7, 5.14 and Appendices 7.6 and 7.8 of the report.

4.7 Again I believe that the incorrect coordinates have been furnished here. Please clarify where these were obtained from.

4.8 At the risk of repeating myself I confirm that the swell and the small craft warning were for the east coast and later in the evening.

4.9 This is a very important matter. The cove where the accident occurred had been searched that morning by the pervious search team.

MCIB RESPONSE: The MCIB notes this and has amended the report.

4.10 Again the position with regards to the helmet is incorrect. In relation to this particular issue it should be noted that the none of the team were ever provided with proper instruction in relation to the wearing and the operation maintenance of the helmet.

5.7 Again the met reports are relevant. It should be noted that seat three was out of order. It had been out of order for a period of time prior to the accident and was roped off with blue rope. It is not mentioned anywhere in the report. Yet it could have been a major factor in the incident as this would have been the normal location of the crewmember when only three crew were on board.

MCIB RESPONSE: Please refer to 4.2 and Appendix 7.7 of this report stating "A triple lock pre-launch decision making process must be adhered to every time a CGB is launched."

Correspondence 8.4 Correspondence from 2nd Cox and MCIB response.

3.11.7 It is very important to note that [redacted] did not lose her helmet when the boat was capsized. She lost her helmet later in the incident when she was in the surf.

3.11.8 [redacted] takes personal exception to this paragraph. She did not swim off shore. Following the boat being capsized she was the first person washed into the cave that the boat eventually finished up. She was washed down the cliff face in a northerly direction by the action of the wave breaking. She observed the boat cox now on a ledge in the cave. The boat was also in the cave and there was a crew member faced down in the surf. She held at the base of the cliff for some time until she observed a RIB off shore and with a break in the waves she managed to get away from the cliff face where this RIB picked her up from the water.

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4.4 There are certain occasions when a sea CGB can be launched. One of these is for the recovery of a casualty if located by R115, a drone or a shore team. It would also be launched where there was personal danger to a member of the public or to a member of the crew which would give rise to immediate action.

4.7 Again I believe that the incorrect coordinates have been furnished here. Please clarify where these were obtained from.

4.8 At the risk of repeating myself I confirm that the swell and the small craft warning were for the east coast and later in the evening.

4.9 This is a very important matter. The cove where the accident occurred had been searched that morning by the pervious search team.

4.10 Again the position with regards to the helmet is incorrect. In relation to this particular issue it should be noted that the none of the team were ever provided with proper instruction in relation to the wearing and the operation maintenance of the helmet.

5.7 Again the met reports are relevant. It should be noted that seat three was out of order. It had been out of order for a period of time prior to the accident and was roped off with blue rope. It is not mentioned anywhere in the report. Yet it could have been a major factor in the incident as this would have been the normal location of the crewmember when only three crew were on board.

MCIB RESPONSE: Location has been charted in accordance with witness statements. The incident occurred within visual range of onlookers. See Appendix 7.4 of the report.

MCIB RESPONSE: Please refer to 3.11 and 7.6 of the report.

The MCIB notes this and has amended the report.

MCIB RESPONSE: Facts in the report are per combined witness statements and we refer to section 2.2, 3.11 and appendix 7.4 and 7.8.

MCIB RESPONSE: Please refer to 3.6.1, 4.10, 4.25 and Appendix 7.10 of the report.

MCIB RESPONSE: The MCB re-iterates its conclusion at 5.7. All relevant facts to support the conclusion are contained within the report. Please refer to 2.1.2, 2.6, 3.11, 3.11.1, 4.3 and 4.8 of the report.

Correspondence 8.4 Correspondence from 2nd Cox and MCIB response.

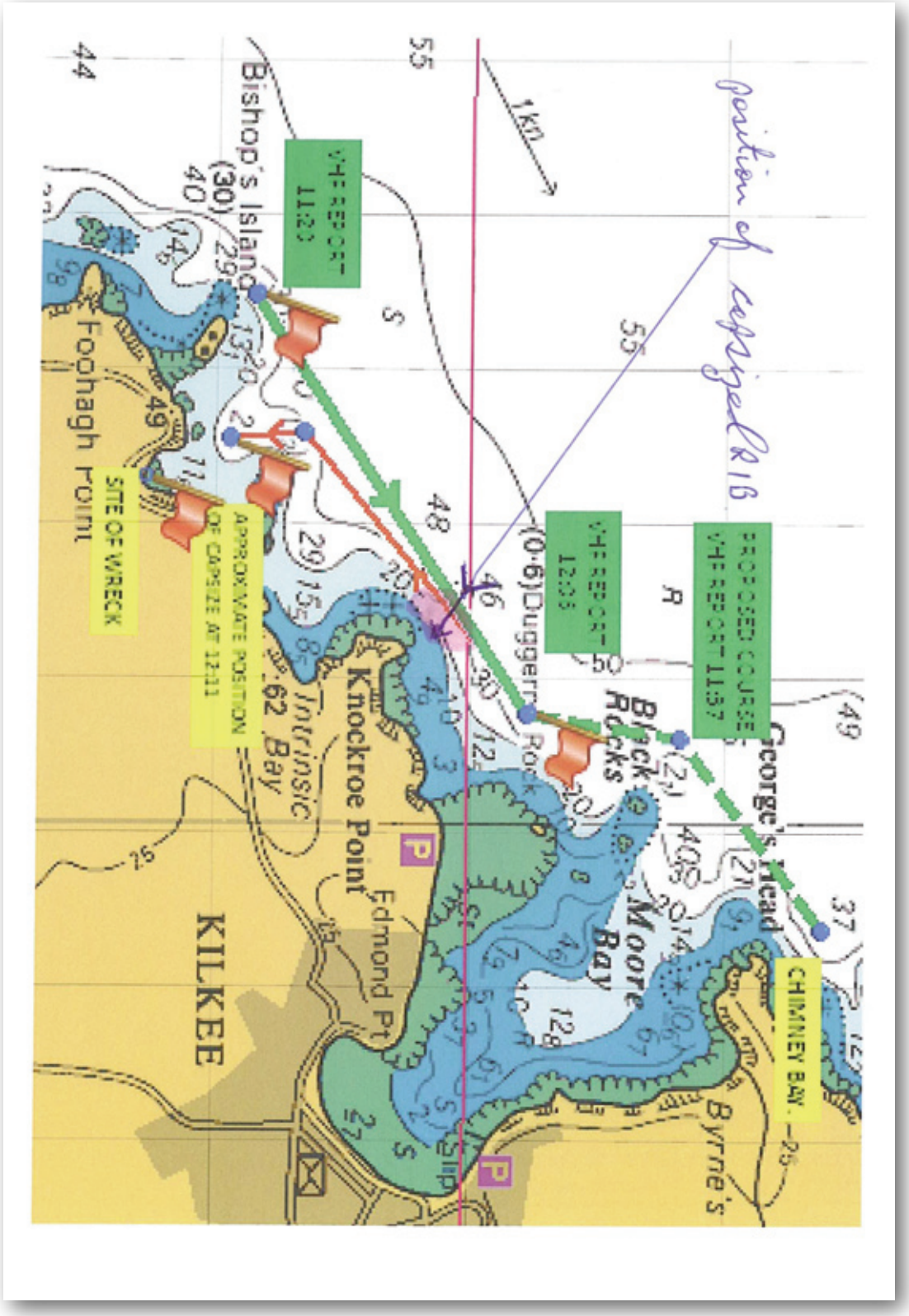
Appendix 7.4
I am returning this map to you and I have kept a copy for myself you will see that I have correctly identified where the incident occurred. As this is a very relevant issue I believe that the map should be amended and that the correct location be marked.

Yours faithfully,

[redacted]

MCIB RESPONSE: Location has been charted in accordance with witness statements. The incident occurred within visual range of onlookers. See Appendix 7.4 of the report.

Correspondence 8.4 Correspondence from 2nd Cox and MCIB response.



Correspondence 8.5 Correspondence from Next of Kin and MCIB response.

[redacted]

Marine Casualty Investigation Board,
Leeson Lane,
Dublin 2.

Our Ref	Your Ref	Date
RAC/VOC/3233	MCIB/12/266	2nd July, 2018

RE/

Draft Report of Investigation in a fatal accident
Involving the capsizing of the Delta Coast Guard RIB,
Kilkee, Co. Clare – 12th September, 2016

Our Client: [redacted]

Dear Sirs

We have been furnished by our client, [redacted] with your draft Report regarding his late wife [redacted] who died in a fatal accident on the 12th September, 2016 at Kilkee, County Clare.

Our client's comments are as follows:-

1. His understanding is the personal locater beacons were never found so he does not understand how the Report can comment as to the fact of whether these were defective or not.

2. He has said that there appears to be contradictions in the Report as to whether the boat cox was qualified or not. On the one hand it says at the start of the Report the cox was adequately qualified and at the end it says he didn't have a licence which according to our client would mean he wasn't adequately qualified on the occasion in question and should not have been in charge of the boat.

3. Our client has commented there is no reference in the Report as to the fact of the boat not having an emergency positioning radio beacon. He would have thought the Report should have mentioned this.

4. Our client is surprised there is no comment in relation to the fact of either the helmets nor the life jackets operating properly.

MCIB RESPONSE: Please refer to 3.11.9 of the report. The incident occurred within visual range of shore teams.

MCIB RESPONSE: Please refer to 3.4 and 5.10 of the report.

MCIB RESPONSE: The incident occurred within visual range of shore teams.

MCIB RESPONSE: Please refer to 3.6.1, 3.11.7, 3.11.9, 3.15, 4.10, 4.11, 4.12, 4.18 and 4.23 to 4.28 of the report.

Correspondence 8.5 Correspondence from Next of Kin and MCIB response.

The bullying and harassment that went on in Kilkee in the preceding couple of years since a new Officer in Charge took charge, in the opinion of our client, was a contributing factor in this accident. The Kilkee Unit had lost an awful lot of experience and the morale within the team was very bad. The training requirements to be a Delta Coxswain takes up to five years and our client believes the Coxswain on the day had only two years training.

There also seems to be confusion about who was in charge during and after the accident. Our client believes the Officer in Charge was giving instructions and ordering swimmers to go into the cave even though conditions were not good for swimming. Our client believes it was the Officer in Charge who gave the coordinates to Rescue 115 as to the location of the accident. The coordinates our client believes to be wrong.

Further the fact that the radios on the Delta were not working shows poor maintenance and bad management. The level of training within the team is alarming given that it is almost two years since the accident and they are still not certified for boat operations.

These are the comments that our client wishes to bring to your attention.

Yours faithfully,

[redacted]

MCIB RESPONSE: Please refer to the conclusions of the report.

Correspondence 8.6 Correspondence from IRCG and MCIB response.

An Roinn Iompair
Turasóireachta agus Spóirt
Department of Transport,
Tourism and Sport

Irish Coast Guard
GARDA CÓSTA na hÉIREANN

IRCG Directors Office,
Irish Maritime Administration
An Roinn Iompair, Turasóireachta agus Spóirt
Department of Transport, Tourism and Sport,
Leeson Lane, Dublin D02 TR60.
5th of July 2018

[redacted]
Chairperson,
Marine Casualty Investigation Board (MCIB),
Leeson Lane,
Dublin.

Re: Draft Report into the capsize of the Irish Coast Guard rigid inflatable boat off Kilkee on the 12th September 2016 (IRCG Incident File - UIIN 2012: 2016)

Dear [redacted]

Everyone in the Coast Guard is very aware that we approach the second anniversary of the loss of our colleague and friend [redacted] a loved and valued member of our volunteer services. We extend our sympathy to [redacted] husband [redacted] her children [redacted] and [redacted] her friends and relatives and all in the teams at Doolin and Kilkee Coast Guard Units. [redacted] remains always in our memory.

Thank you for the opportunity to review the draft Report; the Irish Coast Guard (IRCG) submit these observations in accordance with Section 36 (2) of the Merchant Shipping (Investigation of Marine Casualties) Act 2000. The observations are predicated on the IRCG's desire to ensure that similar casualties are avoided in the future; to learn from facts and conclusions of a final Report; and to ensure that both corrective and preventative actions are evidence-based and are in line with all legislative and regulatory requirements.

Regrettably the IRCG considers that the draft Report is flawed in its presentation of the evidence and requires a substantial re-appraisal of the analysis on which its conclusions and recommendations are based. Critically, the presentation – repeatedly - of the weather intelligence available to key decision-makers on the day is incorrect, thereby distorting the overall analysis.

Correspondence 8.6 Correspondence from IRCG and MCIB response.

On the issue of regulatory compliance, the recommendation that SAR boats should comply with passenger boat licencing requirements is at odds with the IRCG's understanding of the purpose and scope of the relevant legislation. Imposing a non-SAR specific regime in the manner suggested in the draft Report would create operational confusion and potentially undermine rather than reinforce the IRCG's boat SAR service. That said IRCG is happy with work with the safety regulator, the Marine Survey Office (MSO), and other rescue boat services to move forward in defining an appropriate compliance standard for a specialised SAR and recovery service, which would enable the service continue to operate safely and effectively.

The third issue identified is the safety management system. IRCG considers it represents a significant leap to suggest a tragic accident in one instance in one Coast Guard Unit (CGU) is representative of a whole organisation. To support such a conclusion one would expect to see very clear and concrete evidence of other examples of this in other CGU's.

All three issues are dealt with in more detail below in our observations.

Overview

Nothing, sadly, will return [redacted] to us. It is however our obligation to continue to minimise the possibility of any recurrence and to carry on learning and working to further improve IRCG's health and safety systems for both staff and volunteers. Risk is inherent in everything we do especially in the environs we are expected to operate as so often we cannot control that difficult and ever changing environment. The IRCG has been working diligently to further enhance and ensure robust practices.

We note that our volunteers have been operational since 1991 without any loss of life or life-changing harm. Our volunteers have responded to over 30,000 rescue missions and multiple times that on training exercises. This equates to over a million 'man-hours' on duty. In that we have had otherwise no loss of life or severe injuries, we believe this fact demonstrates a robust risk awareness culture and further reassures that the safety of staff and volunteers is integral to every operation undertaken by IRCG. In providing this response to the draft Report the IRCG seeks to support the investigation process in order to identify if there was a clear cause and/or any weaknesses in the existing practices and thereby further improve existing standards to maintain our otherwise excellent safety record.

The IRCG as part of its safety management process continues to develop and enhance its safety system and we will continue to do so, e.g.:

i. IRCG has employed a Health and Safety Officer (H&SO). The role of H&SO is a dedicated role to manage the oversight of a Safety Management System (SMS). Staffing in the Volunteers Division has been nearly doubled.
ii. A full-time Project Manager at assistant principal grade has been appointed to manage all Kilkee corrective actions.
iii. IRCG have employed the services of competent persons who have conducted a gap analysis/roadmap to ISO 45001: 2018.

Correspondence 8.6 Correspondence from IRCG and MCIB response.

iv. IRCG have committed to ISO 45001: 2018 which will enable IRCG to further develop a systematic and fully documented safety management system.
v. IRCG with extensive support from Maritime Services Division (MSD) will go to tender this year for a volunteer information management system called VIMS which will support the safety management system and bring together various data systems utilised by the Coast Guard Units (CGU's), IRCG and departmental management.
vi. A full review is on-going of the IRCG boat policy and boat manuals Section I – IV (2013) which includes standard operating procedures.
vii. A review of SAR and Search and Recovery Mission (SRM) has been completed and resulted in an update to our operations procedures.
viii. All IRCG Boats are now registered for ships radio licence and tracking devices are being fitted to all of the IRCG Fleet.
ix. IRCG has commenced in field testing with Remotely Piloted Aircraft Systems (RPAS) for both rescue and recovery and also Beyond Line Of Sight (BLOS) usage.
x. IRCG has introduced scenario boat based training.
xi. IRCG has reinforced prelaunch procedures in exercises and training with emphasis on triple lock control.

Section 25(1) of the Merchant Shipping (Investigation of Marine Casualties) Act 2000 provides that "the purpose of an investigation under this Part is to **establish the cause or causes** of a marine casualty with a view to making recommendations for the avoidance of similar marine casualties" (emphasis added). Section 35(2) provides that, "having regard to section 25, if the investigator succeeds in establishing the cause or causes, or probable cause or causes, of the marine casualty, the report **shall indicate it** or them" (emphasis added). The IRCG considers that the draft Report presented has established no cause(s); however it does raise conclusions the majority of which are not supported by factually accurate or robust supporting evidence. Therefore, in the present draft there are no new opportunities provided for the IRCG to action either corrective or preventative changes which points to the need for a thorough re-appraisal of the draft Report.

In an effort to provide useful feedback the IRCG have reflected on the draft Report and wish to raise the following observations:
1. Report presentation and factual accuracy;
2. Observations on the boat's activity relevant to the draft Reports conclusions;
3. Safety management system within the IRCG; and
4. Other points to note.

1. Report presentation and factual accuracy

a. Confusing or misleading presentation of evidence
It is concerning that evidence is presented in a fashion which is at best confusing to the reader, at worst misleading:
i. The narrative on the sea conditions and swell height is presented as live forecasts but are Met Éireann calculated hindcasts which were not available to anyone on the day (term used in the draft is 'Met Éireann Report' at Sect 2.63 and 2.64). The hindcasts

Correspondence 8.6 Correspondence from IRCG and MCIB response.

were created 8 days after the accident. The real Met Éireann forecast on the day can be found on the sixth page of Appendix 7.5 and, at force 3 - 5 and no significant swell, the forecast was within the weather limits for the rigid inflatable boat (RIB). Coastal Report at 0500 in Valentia confirm a wind of South –Southwest 13 knots, gust 33 knots. So much of the subsequent negative analysis concerning the IRCGs decision-making and risk assessment hinges on the use of hindcasts not available on the day, that it leads the reader an unsupported conclusion i.e. that the weather was outside of the boat's limitation.

ii. Experienced sea conditions afloat on the day do not appear to have been used to fact test Met Éireanns hindcasts or confirm its forecast. Experienced eye-witness evidence is not published in the draft Report. IRCG understands eye-witness evidence indicates that the seas encountered during both patrols were within the boat's operational limits as anticipated in Met Éireanns forecast. If the Investigator has contradictory evidence it should be stated in the Report.

iii. Hindcasts and Forecasts have been placed in the same Section 7.5 when they are separate products. The hindcasts are placed in Section 7.5 on the 1st and 2nd page and only at page 6 does it show the actual forecast that was available and used by the IRCG in its decision-making on the day. Whilst it may be MCIB policy to put hindcasts and the actual forecast in the same section it clearly can be misleading when they do not agree.

iv. The 'high waves warning' observations at Sect 2.6.6, 3.11 and 4.3 create an impression that the Coxswain and the Deputy Officer in Charge (D/OiC) deliberately ignored a 3 meter waves warning. This is both factually incorrect and misleading. The team were aware of the possibility of a weather change by the inclusion of the words "*Waves of up to 3 Meters This evening*" (Section 7.6 Pre-Launch Check). IRCG considers this demonstrates a contrary assessment – i.e. that the crew did not anticipate 3 meter waves during the midday patrol, nor does the evidence presented show that it encountered one.

v. The actual Met Éireann forecast that morning states: Warning of Heavy Swell: Nil.

vi. At sect 3.7 the draft Report notes that evidence from crewmembers states that there had been difficulties with the onboard radio. IRCG believes that there is evidence available that both console radios were functional, one on Channel 16 (CH 16) and one on CH 67 as is normal. If the Investigator evidence contradicts this it should be produced in the Report.

vii. Because the console radio is then cited as non-operational at sect 4.29 one crewmember is stated as having her radio on CH 16. This firstly gives the impression that there was a ship-shore communications problem on the day which is incorrect. Secondly crewmembers radios are always locked on CH 16 when afloat by policy not because of any radio difficulty.

viii. Finally a noted *difficulty* in the analysis section which is unspecified, unreported, unsubstantiated and undocumented somehow becomes a *critical deficiency* in the conclusions at 5.13; even though the radios have no **causal** connection to the accident or response.

MCIB RESPONSE: Certain paragraphs have been amended to clarify for the reader. Please refer to 2.1.2, 2.6, 3.5, 3.11, 3.11.1, 3.11.2, 4.3, 4.4, 4.8, 5.6, 5.7, 5.14 and Appendices 7.6 and 7.8 of the report.

MCIB RESPONSE: Relevant facts are contained within the report. Please refer to 2.1.2, 3.7, 3.9, 3.10, 3.11.1, 3.11.4 and 4.30 of the report.

Correspondence 8.6 Correspondence from IRCG and MCIB response.

ix. The draft Report makes references to other incidents (plural) (Sect 4.21 and Conclusion 5.12) other than the Dingle RIB in 2014 to in part justify a finding of safety management failure. It is not clear as to what other incidents the Investigators are referring and IRCG request copies of any documentation MCIB or the Investigator(s) have with regard to these particular events in order to enable a further IRCG review. IRCG has no other boat accident or near-miss reviews ongoing at this time.

x. The description of the RIB includes that the craft was unlicensed and unregistered. These descriptions should read 'not required' based on our understanding of the regulation (see Annex 1).

xi. The draft Report does not identify any navigational deficiency with the boat although the matter is stated in the conclusions as a critical deficiency.

xii. The draft Report notes the non-activation of the lifejackets but arrives at no conclusion or recommendation. Clarity on what the witness statements indicated would assist.

xiii. The draft Report indicated that the linings were missing from the recovered helmets but gives no indication as to why. It may lead a reader to conclude that the linings were not in the helmets at the start which would be a very serious finding. Clarity on what the witness statements indicated would assist.

xiv. The draft Report states that the sea search was taken over by the Civil Defence. The IRCG MRSC Valentia continued to coordinate the search and used Kilkee's neighbouring CGU's. The remains of the casualty were recovered by the Doolin Coast Guard inflatable boat (not the Civil Defence as stated in the Report) after sighting by the Doolin CGU shore patrol. The impression left by the draft Report is that the IRCG abandoned its duties; which is incorrect.

b. Factual Errors

It is concerning that some of the quoted evidence is not factually based thus undermining the analysis and conclusions drawn. IRCG wishes to verify that:

i. The assertion that there is a legal requirement for a passenger boat license or a requirement for a Load Line exemption is incorrect at law. See Annex A for a detailed reasoning;

ii. A Small Craft Warning was not in place off the Clare Coast;

iii. A 3 meter wave warning was not active for the period of the patrol; and

iv. Met Éireann's actual forecast was within the craft's operational limits.

The draft Report does not identify the methodologies engaged to undertake this investigation or how it carried out its cause analysis. The IRCG is disappointed at the unsupported nature of some of the draft Reports conclusions, the absence of observable fact and of relevant supporting evidence in establishing the proximate cause(s) of the capsize and loss of life, identifying the chain of causal events leading to the event and recommending reasoned preventative and corrective actions to mitigate against a similar event occurring. Instead the draft Report focusses on the weather and the regulatory regime, with much of the evidence related to these being inaccurate, therefore adding little to our understanding of the day and IRCG's desire to prevent a reoccurrence.

MCIB RESPONSE: Pursuant to Section 23 of the Merchant Shipping (Investigation of Marine Casualties) Act, 2000 the MCIB will consider all incidents reported although they may not result in an investigation.

MCIB RESPONSE: Please refer to 2.1, 4.29, 4.30, 5.8 and 5.9 of the report.

MCIB RESPONSE: Please refer to 3.9, 3.10 and 3.11.1 which have been clarified.

MCIB RESPONSE: Please refer to 3.11.9, 4.11, 4.12 and 4.26 of the report.

MCIB RESPONSE: Please refer to 3.6.1, 4.10, 4.25 and 7.10 of the report.

MCIB RESPONSE: The report states the "search" and not the "sea search" was taken over immediately following the incident. Please see 3.17. It does not state that the civil defence recovered the body.

MCIB RESPONSE: Please see response at **a.** above.

Correspondence 8.6 Correspondence from IRCG and MCIB response.

2. Observations on the boat's activity relevant to the draft Reports conclusions

a. Was the weather and wave within boat limitations?

i. The thread of the boat operating outside its sea and wave operational limitations is dealt with throughout the draft Report and cited as the basis of the conclusion of poor decision making, poor oversight and poor safety management systems. The relevant conclusions are 5.7 *The Delta RIB was used outside of the IRCG's own defined operational limits;* and 5.13: *On the 12th of September the Coast Guard Boat (CGB) was launched in conditions which were outside of the operational limits of the vessel. Insufficient consideration was given to the necessity of a boat operation…..*

MCIB RESPONSE: Noted.

ii. The draft Report repeatedly states that a **Small Craft Warning** (Sect 2.6.1 and 4.8) was in place and that this warning was not adequately considered. This is factually incorrect. The Investigator refers to a 24-hour Met Éireann Sea Area Forecast issued at 0600 hrs on Monday 12th of September, reproduced in the draft Report at Appendix 7.5 p7, which gives a small craft warning for Irish coasts from Malin Head (Donegal) to Howth Head to Roche's Point (Cork Harbour) i.e. the East Coast and South Coast east of Cork harbour as opposed to the South West or West coast where the actual event occurred. If a small craft warning for the Clare coast had been in place our Marine Rescue Sub-Centre Valentia (MRSCV) would have rebroadcast on multiple channels on receipt of the warning and at 0033 hrs, 0633 hrs, 1233 hrs and 1833 hrs Universal Time Coordinate (UTC) after announcement on CH16. There was no such warning in place up to or at the time of the event for the Clare coast.

iii. The IRCG wish to clarify that our primary sea area forecast is sourced from Met Éireann, as the National Competent Authority. It is the weather source which the SAR Mission Coordinator (SMC) must use. Any other weather sources available such as Windguru mentioned at 2.6.2 are not official and may act as advisory for a more cautious approach to proceeding to sea should their prediction be higher than the Met Éireann prediction. The Boat Operations Manual (BOM G-01 4.0) requires the Coxswain and Officer in Charge (OiC) to maintain a list of available forecasts but in doing so must be able to determine the actual conditions present.

iv. IRCG re-broadcasts Met Éireann coastal weather forecast to all seafarers throughout each day according to pre-set schedules - (on VHF): 0103 hrs, 0403 hrs, 0703 hrs, 1003 hrs, 1303 hrs, 1603 hrs, 1903 hrs and 2203 hrs local time after announcement on CH16. It is the Met Éireann forecast that the SMC in the Rescue Coordination Centre (RCC) is required to use to make decisions and any other weather data (unless auto-ingested by specific software models such as SARMap, Nowcasting, etc) is considered as complementary information. The Forecast at 0600 on the day, leading up to the event was within the boat's operational limits. It gives a wind for the correct sea area of Roche's Point to Slyne Head of West force 3 – 5 decreasing force 2 – 4 in the afternoon i.e. up to 21 knots. The warning of heavy swell reads NIL. Both criteria are within the boat's operating limits.

MCIB RESPONSE: These matters have been clarified within the report. Please see 2.1.2, 2.6, 3.5, 3.11, 3.11.1, 3.11.2, 4.3, 4.4, 4.8, 5.6, 5.7, 5.14 and Appendices 7.6 and 7.8 of the report.

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v. Sections 2.6.3, 2.6.4, 4.8 and 7.5 also gives the impression of a Met Éireann Forecast giving a wave height beyond the boat's limits. Appendix 7.5 and references in the main body are titled "Met Éireann Weather Report". The first two pages of the appendix 7.5 are actually two Met Éireann hindcasts, its re-computations, as an estimate of weather conditions off Kilkee. As these are hindcasts they were obviously not available to any of the parties on the day of the event as volunteers prepared to depart to sea; they only had the available **forecasts** to plan with. As such these hindcasts are highly misleading in contextualising the intelligence used by the decision makers on the day.

vi. Weather on Scene (Sect 2.6.2, 2.6.3, 2.6.4 2.6.6, 3.1, 4.3, 4.8 and 7.5). The IRCG considers that the vital input to decision-making is the actual weather experienced on scene and this is key to determining the appropriateness for launch on the day. The report has highlighted estimates of wave heights computed after the events and makes no reference to evidence of the actual experienced conditions on scene during that morning. This is of significant importance and IRCG would support inclusion of all such evidence available to the investigation, even if contradictory to the draft analysis. Eye witness evidence of the open water waves by experienced crews from the day is available to the Investigators. RPAS - often called drones - and RNLI Videos of the open water area away from the confused seas at the cliff, seen by the IRCG, show relatively benign conditions in the general area and within the boat's operational limits. Evidence from the morning boat patrol also appears to indicate a tolerable sea which was continuing to abate. IRCG considers that the first hand reports of those who were on the water and video evidence available are the most relevant fact-based evidence in assessing the Coxswain's decision to put to sea. The relatively benign conditions appear to be re-enforced by Sect 3.11.2 in that the first launch is noted as not encountering difficulties.

vii. In summary, the IRCG considers that the critical evidence used in the draft Report to support the conclusion that the boat was operating outside of its weather limits is in fact incorrect and that contrary "on-scene" evidence is available which has not been used. As such, MCIB is encouraged to reconsider this key assertion on which much of the balance of the report turns. **No** small craft warning was in place for County Clare waters or adjacent coastline, the Met Éireann wind predictions were within limits, **no** high swell warning, **no** 3 meter wave warning was in operation, available video and eye witness evidence show **no** heavy seas outside of the surf area at the cliff and the mornings patrol noted **no** difficulty.

b. Was there sufficient reason to carry out the boat patrol?

i. The relevant Conclusions in the draft Report are at 5.2: *The criteria for determining the response to recovery operations as opposed to SAR and the appropriate responses were not clearly defined....* and 5.3: *The need to deploy, and the activities to be carried out by, the cliff search teams and boats in search and recovery operations was not adequately considered.*

ii. The draft Report correctly concludes that the probability of survival of the missing male was very small. IRCG have long had procedures for SAR and SRM and the IRCG Memorandum 9 of 1990 'Duration of Search' details the conditions under which a SAR

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operation is terminated and describes a continuum of search effort from rescue to recovery. Since 1990 thousands of missions have taken place without incident and the remains of a great number of casualties, who otherwise would have remained lost, have been returned to their families for burial and closure. The search and rescue mission will normally last for 21 days with a gradual scaling down of resources managed locally, which also allows families to come to some gradual acceptance should a loved one remain unfound.

iii. The absence of maritime search by those organisations qualified and prepared to do so can lead to unqualified and unprepared families and friends taking to the seas and cliffs. In such situations the IRCG must be mindful of their safety.

iv. That said, the IRCG acknowledges the desirability of greater clarity in the criteria to be followed in determining when a rescue turns to a recovery. An adaptation of the existing standard operating procedures (SOP) has been put in place. SAR (Search & Rescue) Ops Notice 03/18 SOP (Attachment 1) requires a SMC, in consultation with senior IRCG staff, to declare a formal end to a SAR phase and the beginning, if appropriate, of a SRM requiring careful evaluation of resource requirements over time and a lower risk tolerance. The document complements and amplifies doctrine as enshrined in International Aeronautical & Maritime SAR (IAMSAR) manual and pre-existing IRCG check lists. This policy will be applied flexibly and pragmatically to ensure that search and rescue units (SRUs) are not withdrawn too rapidly. Volunteer Services & Training (VST) Safety Notice 1/18 (Attachment 2) complements the SAR Ops Notice.

v. Conclusion 5.2 adds '*This is especially in incidents where search and recovery operations take place close to cliffs and in surf conditions*'. IRCG considers this sentence should be re-considered. We believe IRCG procedures are very clear and are set out in the BOM and amplified through training, briefings and memos. No IRCG craft is permitted to knowingly enter surf, whether this is under a cliff, on shoals or off beaches.

vi. The draft Report's conclusions are that risk appetite during the SAR phase and SRM phase of the mission were the same. This appears to be predicated on the prevailing risks associated with the weather conditions. As set out in Section 2, the evidence used in terms of the prevailing weather conditions and intelligence available is incorrect. The actual situation is that the level of weather risk remained within the operational limits of the asset used.

vii. The IRCG considers the general use of boats in SRM operations remains a valid concept of operations (ConOps), supported as necessary by shore and aviation assets. The IRCG believe that the Valentia Marine Rescue Coordination Sub-Centre (MRSCV) and the Kilkee and Doolin CGU's were justified in carrying out the patrols.

c. Was the Boat fit for purpose?

i. The relevant conclusion is at 5.8: *The Delta was not licenced or certified in accordance with the statutory requirements for the activities in which it was engaged*. This conclusion appears to arise from a misinterpretation of Irish maritime law with regards to small fast rescue boats used by the IRCG. The Investigator has erroneously concluded

MCIB RESPONSE:
Noted

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that the passenger boat and load line regimes apply to IRCG and, by extension, may apply to other lifeboat and recovery craft, which the IRCG tasks.

ii. The Investigator's understanding of the application of the Merchant Shipping Acts to the IRCG boats is incorrect. IRCG considers that there is no legal requirement for it to build, register, train and operate to passenger boat regulations. The immediate implications of accepting this conclusion would be serious not only for the IRCG but potentially other organisations involved in SAR and SRM.

iii. More detailed reasoning on the application of the relevant law is set out at Annex A. In summary Section 2 of the Merchant Shipping Act 1992 defines a passenger boat as being for the carriage of passengers **for reward or on hire**. The Delta RIB does not operate either for reward or hire and accordingly the definition of "passenger boat" has no application to it.

iv. The Merchant Shipping (Load Lines) Act 1968 is a code designed for certain ships, and is a domestic incorporation of the International Convention on Load Lines 1966. The Act, however, applies only to "registered ships" registered under the Mercantile Marine Act 1955. While the 1955 Act defines a "registered ship" in very broad terms, under section 18(2)(a) of the 1955 Act, exempted from an obligation to register are ships not exceeding 15 net register tons burden. A rescue RIB is in the region of 2 - 3 tons and thus clearly exempted from any obligation to register under that legislation.

v. Accordingly a rescue RIB clearly **does not fall** within the definition of a passenger boat under the Merchant Shipping Act 1992 or the definition of a ship that requires to be registered under the Merchant Shipping (Load Lines) Act 1968 arising from an obligation to register under the Mercantile Marine Act 1955.

vi. Section 4.28 links safety and the need to be licenced as passenger boats. Even if the IRCG voluntarily accepted the recommendation, it is not clear from the draft report how the application of the requirements of the passenger boat and load line regimes would, in any way, add to the safety of the crew and the operation of their boats in the context of their primary role. In fact, in our view, these requirements would likely render boat SAR/SRM unworkable for reasons set out below.

vii. Compliance with build standard for passenger boats:

a. The IRCG's 10 most recent RIBs (2011/2012) have been built to comply with the passenger boat build standard 'P6'. This was used as the closest most appropriate 'build standard' for the RIBs in question. A subsequent application for a passenger boat operator's licence for IRCG boats was not made for operational reasons. The older RIBs have not been built to meet passenger boat standards. The changes that would be required to these older RIBs to meet the P6 build standard are unknown. In accepting this recommendation as drafted, IRCG would have to withdraw from service all non-compliant RIBs.

b. All inflatable boats in use by the IRCG (the D Class boats) would never achieve the passenger boat build standard by dint of relying on their buoyancy from inflatable structures only and having insufficient built-in buoyancy. In accepting

MCIB RESPONSE:
Please refer to 2.1, 4.29, 4.30, 5.8 and 5.9 of the report.

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this recommendation as drafted (i.e. applying to all IRCG craft) the IRCG would be required to withdraw these boats from service.

viii. Passenger boat operations:

a. Regulations require that every passenger boat, whilst holding a passenger boat licence, will not be used for any other activity or purpose, which could affect or alter the conditions upon which the licence was granted. SAR work by IRCG boats would therefore have to be provided under a craft of opportunity obligation to render SAR to vessels and persons in distress. Only when life was in peril could a crew deviate from these passenger boat regime limitations. Whether a pre-positioned, on-call and specialised SAR craft could be considered as a craft of opportunity is unlikely.

b. Compliance with passenger boat and load line regimes could severely constrain the IRCG in discharging SAR and SRM Missions which may vary in complexity and nature in the course of a single mission e.g. a requirement to tow or beach arising mid-mission. The flexibility required to effectively discharge SAR or SRM missions could never be achieved by compliance with the passenger boat operator's regime (e.g. notably the limitation on smooth and partially smooth water activity).

c. Attempting to operate a service under two completely different regimes is clearly unwise. IRCG craft would be so restricted in how, when and where it could operate that this would not only restrict the crew unreasonably but would add additional complexity, uncertainty and therefore risk into their operation.

d. IRCG would have to adjust training to comply with passenger boat operational limitations. Simulators can only achieve so much and in emergency response it is vital that you train in context, that how you train for SAR is how you stay safe when called on to rescue in difficult and uncontrollable conditions. Waiting for the actual event to happen and then practicing or training on the spot isn't in the interest of safety for our volunteers or the casualty.

ix. In summary compliance with the build and operating standards as recommended in the draft Report would render the IRCG boat SAR/SRM service unworkable. 14 CGUs would lose their D Class boats and up to 10 CGUs could lose their RIBs until new craft can be bought. Large areas of our coast and inland waters would be left without rescue boat services. The specialist work of the D Class boats, such as victim recovery from the base of the Cliffs of Moher, would cease.

x. The IRCG considers that the Investigator's legal interpretation that rescue RIBs require passenger boat certification and load line exemption is incorrect and needs to be amended, with consequent changes made throughout the draft Report. In the event that MCIB wishes to recommend the development of a rescue boat regulatory regime the IRCG is more than happy to work with the MSO and other rescue boat organisations to develop a specific rescue boat code for the build and operation of those craft in the future.

xi. The IRCG considers that the Delta RIB was fully fit for the purpose it was used for on the day. We would request that these legislative conclusions at Sect 5.8 and 5.10 and

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MCIB RESPONSE:
Noted.

MCIB RESPONSE:
Please refer to 2.1, 4.29, 4.30, 5.8 and 5.9 of the report.

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associated safety recommendation at Sect 6.2 be removed in the final report, particularly as it erroneously implies that the crew were breaking the law.

d. Was the crew fit for purpose?

i. The relevant conclusion is 5.10: *The Delta RIB Boat Cox did not hold the required statutory operator's licence. This is a mandatory statutory qualification and is separate to any training provided by the IRCG.* As the Delta RIB is not a passenger boat then the Coxswain does not require the statutory passenger boat operator's licence. The Coxswain and all onboard were fully qualified and licensed to operate the marine communications equipment.

ii. The IRCG boat crew training is very highly specialised and tailored for SAR and goes well beyond in skill sets that would normally be required by a passenger boat driver. Additional detail on IRCG boat training is at Annex C.

iii. The IRCG considers that the crew were well trained, competent and certified in all respects. While we do not believe the intention of the report is to suggest that there is a safety issue arising from this, we would request that this be removed in the final Report, to avoid any doubt in the matter.

e. Was the personal protective equipment (PPE) fit for purpose?

i. The draft Report does not identify any specific equipment fault as material to the outcome, although it makes reference to the certain equipment not deploying as intended (Sect 4.10) – the most critical being the helmets.

ii. As per the BOM, knowledge of appropriate donning and wearing of personal protective equipment (PPE) is demonstrated by the team's buddy checks which are required before each and every voyage afloat. Documentation showing the correct wear is contained in the Unit Job Cards and a poster on the wall in their changing room. All volunteer crew complete Personal Survival Training (PST) in full PPE at the National Maritime College of Ireland's (NMCI) survival pool in realistic all weather scenarios. Since 2018 PST is repeated every four years.

iii. Did the buddy checks take place? We understand that they did. Witness statements should clarify whether the checks were carried out correctly and the Report should clearly record that.

iv. It is absolutely vital to continued safe operation of the IRCG boat operations that any evidence of an equipment malfunction is identified clearly and unequivocally.

v. The IRCG would be happy to support any testing the Investigator may wish to carry out.

f. Was the communication suite fit for purpose?

i. The relevant conclusion in the draft Report is at 5.13 (and Sections 3.7, 5.3): *There were critical deficiencies with the boats communication and navigation equipment.* The RIB had two fixed marine VHF radio units in the console and one is reported as having difficulties and one as functioning normally for all channels. Radios would have been checked and

MCIB RESPONSE: Please refer to 2.1, 4.29, 4.30, 5.8 and 5.9 of the report.

MCIB RESPONSE: Please refer to 3.6, 3.6.1 and 4.23 to 4.28 of the report.

MCIB RESPONSE: Please refer to 2.1.2, 3.6.1, 3.11.9, 3.12, 4.10, 4.11, 4.12, 4.25, 4.27 and 7.10 of the report.

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recorded in the maintenance logs and we understand that eye-witness evidence indicates both radios were working properly on the day. Has the Investigator accepted one version without confirmation or do the logs and the sources show contradictory evidence? Any contradictory evidence relating to any analysis should be reproduced in the final Report.

ii. As required by IRCG SOPs all three crew members would have each worn their own personal hand-held marine radio locked off on CH16 which is the distress, safety and calling frequency i.e. there were at least 4 fully functioning marine radios onboard and a listening and *ops normal* watch maintained on the cliff, at the Base and by the RCC. An ops normal patrol is when the craft must call in its position and status every 15 minutes to the RCC.

iii. The draft Report gives the misleading impression that the difficulty with one radio was a critical failing and in some way causal to the accident or outcome. It was not. IRCG records show that the boat was in communication not only with its mobile unit (Sierra) acting as comms relay and Kilkee IRCG Base but also with the MRSCV. This is normal when operating in radio shadows and managed on scene through the BOM SOP G-03 4.6.3 - use of radio relays. When a RIB is inverted by a capsize both of these console communications units would not have been capable of transmitting a Mayday which is the reason why locked off CH. 16 hand-helds are carried by all crew. All crew were fully certified to operate their radio sets.

iv. At Sect 3.11.6 the text gives an impression that MRSCV was not in communication with the RIB and was unaware of the boats capsize until informed by Kilkee Base. Recordings show that the RIB had been in regular communication with MRSCV. MRSCV heard at 12:11 hrs. UTC (13:11 local time) the IRCG Base end of the Mayday call with the RIB and had commenced tasking Rescue 115 by the time it received the first phone call on the incident at 12:12 hrs. UTC MRSCV broadcast a Mayday Relay at 12:14 hrs. UTC. These timings confirm that communications between the casualty and MRSCV as relayed via the shore support team were efficient and no time was lost in formulating an immediate response to boat capsize.

v. At Sect 5.13 the difficulty with one fixed radio is described as a critical deficiency when the whole link of multiple radio listeners points toward a learnt safety culture and the matter does not relate to the cause or consequence of the accident.

vi. Conclusion 5.9 states *The Delta RIB did not hold the required ships radio station licence.* While all our radio equipment is installed to the international standards, in 2016 only the new RIBs had MMSIs. In essence because all SAR craft remain under active coordination by the Rescue Coordination Centre at all times on 15 minute Ops normal checks, unlike private or commercial craft, the matter didn't receive priority (the MMSI being akin to a mobile phone number).

vii. Although the absence of an MMSI has no relevance to the cause and consequence of the incident, all remaining IRCG craft have now been registered for a ships radio licence (which includes the issuing of an MMSI). No changes have been required to our crafts in acquiring MMSI's as it is an administrative process. The IRCG is also in a process of

MCIB RESPONSE: Please refer to 2.1.2, 3.7, 3.11, 3.11.5, 3.11.6, 4.30 of the report.

MCIB RESPONSE: Noted.

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fitting automatic identification systems (tracking system) to all our smaller inflatable D Class boats.

viii. Section 5.13 also asserts that there were critical deficiencies with the navigation equipment. Clarification is requested as the point is not referenced elsewhere in the draft Report. The IRCG would wish to ensure that where there are identified deficiencies they can immediately be reviewed to ensure that they are immediately addressed.

MCIB RESPONSE: See response above

g. Were the IRCG's local safety systems appropriate and followed on the day?

i. There are a number of conclusions relevant. *5.5 The criteria for oversight of Kilkee station to ensure that it met its pre-defined operational readiness were not established. There is no evidence of any effective safety management system in place with associated oversight to ensure that it met these criteria before the operation was tasked. 5.6 The triple lock system to decide on launching a boat was not adequately set out. Neither the roles and responsibilities, nor the acceptance criteria for launching before each launch were adequately documented. 5.11 The capsize of the Kilkee Delta RIB occurred within a wider context of safety management in the Coast Guard as a whole. While this investigation report focuses on the specifics of the Kilkee Delta RIB Casualty it is necessary to consider some of the wider context within which it occurred. It is clear from the analysis that there are a number of specific issues which contributed to the Delta RIB capsize. Each of these issues requires to be addressed as well as addressing the overall wider systemic issues.*

MCIB RESPONSE: Noted.

ii. IRCG do not believe that the draft Report has in fact set out the 'number of specific issues which contributed to the Delta RIB capsize' given the lack of supporting evidence or causal/contributory connection within the draft Report to substantiate them.

MCIB RESPONSE: Please see weather and triple lock procedural responses above.

iii. Kilkee CGU, as is the case for all IRCG units, had passed a detailed annual boat Operational Readiness Audit (ORA), as well as a combined search and station ORA and so was 'in date'. The boat ORA test verifies the Unit's compliance with the IRCG BOM which includes detailed procedures covering every aspect of rescue boat operations. The criteria are measured to ensure that each CGU meets such pre-determined operational readiness criteria. A detailed explanation of how operational readiness of Kilkee was maintained and boat management details is at Annex B to demonstrate evidence of an effective boat management system.

MCIB RESPONSE: Noted.

iv. There is an SOP in place on the triple lock and check cards are an *aide memoire* available at each IRCG CGU. The day's plans were discussed that morning with the SMC in MRSCV. Active risk assessment is inherent to each and every launch if not always recorded in real time. The second launch was based on a risk assessment using the first form and signed off as such. The absence of a detailed record for the second launch does not mean an informed active assessment did not happen. In fact the draft Report suggests that it was completed, if not as thoroughly as the mornings patrol, with no changes arising in the interim.

MCIB RESPONSE: Please refer to triple lock response above.

v. Triple lock refresher training is delivered during SMC Courses held at the NMCI. SAR OPS notice reinforces the principles enshrined in the IRCG BOM which was published in

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August 2013. Subsequent to the accident IRCG Watch Officers and Volunteers understanding of the Triple Lock has been re-enforced by the issue of SAR Ops Notice 03/18 and VST Safety Notice 1/18.

vi. The IRCG has been developing and improving its safety management system to enable it to fully discharge the duty of care which it owes to the volunteers. The IRCG has extensive duties as set out in the Volunteer Coast Guard Unit – Health and Safety Handbook (Issued October 2014) (i.e. general duties, information, instruction, training and supervision, protective and preventative measures, hazard identification and risk assessment, safety statement, safety representative, etc). Details of the IRCG's volunteer safety management are at Annex D to demonstrate the overall volunteer safety system. IRCG recognises that the systems can and will improve and are committed to doing so particularly in the areas of documentation and metrics tracking.

vii. The IRCG considers that the Report has not presented evidence that Kilkee CGU's local safety management failed on the day or that the decisions made locally point to any systemic failures across the national volunteer service.

MCIB RESPONSE:
Noted.

h. Was the capsize event inside or out of the surf zone?

i. The existence of surf close to the cliffs does not in itself mean that the average open water swell heights are greater than normal operational parameters. So a craft could be perfectly safe in the deep low swell of the open water but would be in immediate danger of capsize if caught in the high breaking and confused waves of the surf zone.

ii. The IRCG considers that the Kilkee CGU boat was seaworthy, the weather was within limits, the crew were skilled and competent and the mission within their abilities. The craft on routine 'ops normal' patrol when it suddenly encountered an unexpected beam-on wave so turbulent that no action of the crew could counter its capsizing effect.

iii. Whether the wave was an isolated unpredictable extreme wave (sometimes called rogue) close outside the surf line that capsized the craft and pushed it into the surf area or the craft accidentally entered the surf area is not clear from the draft Report.

MCIB RESPONSE:
The MCIB report, using "Coast Guard Boat Operational Capabilities and Limits" documents only refers to the term surf. The term surf zone is not a relevant factor in the operational criteria. Please refer to 2.1.2, 3.5, 3.11.1, 3.11.2, 4.3, 4.4, 5.6, 5.7, 5.14, Appendices 7.6 and 7.8 of the report.

3. Safety Management System within the IRCG

a. At 5.12 the draft Report states: *The IRCG does not have an effective Safety Management System as demonstrated by recent incidents and the resulting recommendations which remain outstanding.* In arriving at this conclusion the draft Report suggests that the decision making was poor, oversight was poor, the craft was not licenced, the crew were unqualified, Dingle lessons have gone unresolved and ISO SMS accreditation was not pursued. We believe the first four assertions have been addressed. This section addresses the last two elements of that analysis.

b. Much of the criticism levelled at the IRCG in relation to safety management within the organisation relies on evidence suggesting that the IRCG did not adhere to its own guidance

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and procedures in this case and principally but not exclusively that the boat was launched outside operational parameters. As the facts to support this are incorrect, the justification for the wider assertion is not robust and should be reviewed. We are also concerned that the report further suggests that these alleged deficiencies are representative of a more systemic deficiency across the organisation. The report draws this conclusion without producing any first hand evidence of similar deficiencies elsewhere, other than citing two secondary sources – the relevance of which we address later in this Section.

c. We acknowledge that there is always room for improvement in terms of safety management systems within any organisation. The IRCG is no exception here. However it represents a significant leap to suggest a tragic accident in one instance in one CGU is representative of a whole organisation. To support such a conclusion one would expect to see very clear and concrete evidence of other examples of this in other CGU's.

d. In the context of Annex D Overview of IRCG Volunteer safety system development, the IRCG sets out the documentation implemented which defines the elements of a safety management system that are in place, while recognises more needs to be done.

e. One previous incident involving a Delta RIB in 2014 is identified in the draft Report sets out all the findings and recommendations without any reference to the follow-up taken on foot of the Dingle Report. Details of activities related to the Dingle capsize are at Annex E which represent a significant level of close out. The draft refers to other incidents and these are unspecified.

f. The draft Report reproduces a paragraph extracted out of context from a Value for Money (VFM) Report undertaken on behalf of the Department in 2012. The VFM Report was not an investigation into an incident. The objective of the Report was to recommend efficiencies across the maritime sector within the Department. The Report itself was one input into a wider discussion and follow up Action Plan agreed by the Department.

g. That said IRCG has continuously moved forward on its safety systems. The IRCG has committed to achieving compliance with ISO 45001:2018, has engaged the services of a competent person to carry out a gap analysis against ISO 45001:2018 and further develop a route map with milestones to achieve the ISO standard. A national risk assessment programme at all our CGU's is ongoing by the services of competent persons.

h. The IRCG has now employed a full time H&SO who is a dedicated resource for managing the oversight of a safety management system ISO 45001:2018. IRCG has doubled the number of its local managers for the volunteer service to six with an additional headquarters component.

i. As mentioned already IRCG volunteers have undertaken over a million 'man-hours' on duty. In that we have had otherwise no loss of life or severe injuries, we believe these facts demonstrates a robust risk awareness culture and further reassures that the safety of staff and volunteers is integral to every operation undertaken by IRCG. The IRCG accepts that it needs to improve but without clear evidence of "systemic" failures across the IRCG in relation

MCIB RESPONSE:
The MCIB notes the NJ observations received from all parties, all steps taken by the IRCG since the incident and re-iterates its conclusions as set out in the report.

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to safety and risk assessment, the conclusions drawn in this regard at 5.11 - 5.16 are unsubstantiated and should be revised.

4. Other points to note

a. The IRCG would not recommend that Irish National SAR Framework (Conclusion 5.1) a national strategic framework document should include operational procedures and parameters which can change quickly and be organisation specific. Such matters are more likely appropriate to SOPs and liaison agreements. Any change to this 21 day search policy would require consultation, particularly with island, coastal and fishing communities. Further reasoning is attached at Annex F.

b. Conclusion 5.4 - use of new technologies: The IRCG is continually engaged with new technologies to improve search techniques and is currently undertaking an internal RPAS (UAV's/drones) project with eight units for use in land, river and near shore searches. One objective is to trial RPAS use off our RIBs at sea increasing the crew's height of eye by virtual means whilst remaining in line of sight. This line of sight regulatory requirement highly limits their maritime use from land and you will still need a boat in the water. IRCG is also participating in another project led by National University of Ireland Maynooth looking at beyond line of sight (BLOS) RPAS in the maritime domain that may also consider augmented and virtual reality concepts. However RPAS use in the maritime domain is in its infancy and most SAR professionals consider that it will not be a position to replace maritime SRU's in the near term limited principally by flight safety considerations, BLOS limitations and because they cannot recover casualties without boat or helicopter support. RPAS remains for the time being complementary to SRM activity.

Other Observations on Sect 2 and 3 of the draft Report:

i. 2.1.2 Communication. TETRA is not used by IRCG boats. It is used by IRCG helicopters for communication with the National Ambulance Service and by CGUs in the preparation of helicopter landing sites. In this incident some conversation was undertaken on TETRA between the helicopter and MRSCV due to communications saturation on CH 16 and 67. CH 16 and CH 67 are public listening channels and so Units may briefly use CH P4, a private channel, for sensitive communications such as if possible remains are sighted.
ii. 2.4.1 The RNLI AWB was tasked from Kilronan not Kilmore.
iii. Missing paragraph numbers at 2.6.5. Para 4.26 repeated twice. 4.22 - 2108 should read 2018.
iv. 3.2 The Kilkee Unit was not a Cliff Unit when merged but was a search unit.
v. 3.4 The report states that the Coxswain is both the person who commands the boat and is also the helmsman. In fact it is common that the helmsman on an IRCG craft is not the Coxswain and this is becoming a more standard practice. Later on in the section the author notes that local knowledge is gained from non-IRCG leisure activity when in reality local knowledge can also be gained by local IRCG experience, mentoring and training.
vi. 3.11.8 The boat Coxswain was not rescued by R115 but by R117.

MCIB RESPONSE: Noted.

MCIB RESPONSE: Noted.

MCIB RESPONSE: The MCIB notes this and has amended the report.

MCIB RESPONSE: The MCIB notes this and has amended the report.

MCIB RESPONSE: Noted.

MCIB RESPONSE: Noted.

MCIB RESPONSE: 3.11.13 and 3.11.14 correctly set out the process.

Correspondence 8.6 Correspondence from IRCG and MCIB response.

5. Summary

The IRCG appreciates the opportunity to respond to the draft Report and continues daily to endeavour to ensure the health and safety of both staff and volunteers. In the absence of all of the facts and evidence being taken into account and the many inaccuracies noted within the draft Report it must be questioned as to whether the conclusions raised are adequately supported and all sources of evidence verified.

IRCG management and staff respect and appreciate the many selfless hours provided by over 900 volunteers 24/7/365 around our coasts and inland waters. We work to save those in difficulty on our seas and waters and to recover the remains of those we cannot save; by default conditions will more likely be unsavoury and so we are often at the behest of nature. Therefore IRCG staff and volunteers remain ever alert and aware of the risks inherent with working in or close to open waters.

We are anxious to ascertain the facts on the causation of death of our respected colleague to ensure we can address and remedy any still existing defects or weaknesses within our policies, procedures and operational practices. Regrettably as prepared this draft Report does not support such an appraisal. IRCG believes that MCIB might consider a thorough re-appraisal of the draft Report. If, following any such re-appraisal, MCIB re-issued a revised draft, we would be happy to comment on such an amended draft in due course.

MCIB RESPONSE:
Noted.

Yours sincerely,

[redacted]

Annexes:

A. Relevant legislative provisions
B. Operational Readiness Assessment Criteria
C. Training Standards
D. Overview of IRCG Volunteer safety management system development
E. Dingle close outs
F. National SAR Framework
G. Abbreviations

Attachments:

1. SAR Ops Notice 03/18
2. VST Safety Notice 1/18

Correspondence 8.6 Correspondence from IRCG and MCIB response.

Annex A: Relevant legislative provisions

1. Merchant Shipping Act 1992 (Passenger boat reference)

Section 14(1) of the Merchant Shipping Act 1992 (as amended) provides that a vessel "shall not be used as a passenger boat unless a licence is in force in relation to it".

Section 2 of the Act defines a "passenger boat" as meaning (emphasis added):

> "(a) a vessel carrying not more than 12 passengers **for reward** or having on board for the purposes of carriage for reward not more than 12 passengers, **or**
>
> (b) a vessel that is carrying not more than 12 passengers, or has on board for the purposes of carriage not more than 12 passengers, and is **on hire** pursuant to a contract or other arrangement under which a crew or part of a crew is provided for the vessel by its owner,
>
> and includes a vessel carrying not **more than 12 persons** to or from their place of work, or having on board not more than 12 persons for the purposes of such carriage, and owned by or on hire to their employer and a vessel registered outside the State and carrying not more than 12 passengers between places in the State, or having on board not more than 12 passengers for the purposes of such carriage, but does not include such a vessel carrying passengers to or from the State or having on board passengers for the purposes of such carriage, or a vessel in respect of which a certificate is in force."

The Delta RIB is not operated for reward or hire, thus neither paragraphs (a) or (b) are applicable and **the definition of "passenger boat" does not apply**.

2. Merchant Shipping (Registration of Ships) Act 2014 (not in force)

The Merchant Shipping (Registration of Ships) Act 2014 has **not yet been brought into force**. The 2014 Act contains a very wide definition of "ship". Although not yet in force and not relevant to the current report, its provisions are set out here for completeness.

Section 9(1) of the 2014 Act provides that the Minister "shall establish and maintain a register of Irish ships to be known as the Irish Register of Ships". Section 11 creates an obligation for ships to register on this Register. Section 11(9) of the 2014 Act provides for an exception to this, **allowing the Minister to exempt certain ships from the requirement to be registered**: "The Minister may prescribe certain ships or types of ships to be exempt from the requirement under subsection (1) to be registered on the Register". Additionally, section 11(10) provides for an exemption such that it does not apply:-

> "... in circumstances where ships are commandeered and used for periods of time of short duration, not exceeding one month, by a member of the Defence Forces, the Revenue Commissioners, the Irish Coast Guard or the Garda Síochána for law enforcement or emergency response purposes."

Correspondence 8.6 Correspondence from IRCG and MCIB response.

3. Merchant Shipping (Load Lines) Act 1968 (Load lines reference)

The Merchant Shipping (Load Lines) Act 1968 is a code designed for certain ships, and is a domestic incorporation of the International Convention on Load Lines 1966. That Convention deals only with international voyages, though the domestic regime introduced may be wider in application. The reference to a load-line is to a "registered ship" under the 1968 Act. That Act regulates compliance with load lines rules by registered ships.

Section 3 sets out load line rules which make provision for matters such as "the surveying and periodical inspection of registered ships; determining freeboards to be assigned; deck to be taken to be the freeboard deck of the ship and "determining the positions in which each side of the ship is to be marked with lines of a description prescribed by the rules, indicating the various maximum depths to which the ship may be loaded in circumstances prescribed by the rules…".

A ship subject to the 1968 Act cannot "proceed or attempt to proceed to sea" unless it has been surveyed, marked with a deck-line/ load-line and the other requirements in section 3 which as will be observed are entirely inconsistent with the operations expected of the IRCG.

For the 1968 Act to apply, a ship must be a "registered ship". The definition of ship in the 1968 Act is broad. However, sections 4, 5, 6 and 7 refer to: "a ship to which this Act applies, being a registered ship." In Section 1 a "registered ship" is defined as meaning a ship registered under the Mercantile Marine Act, 1955.

Turning to the Mercantile Marine Act 1955, this Act defines a "ship" in very broad terms: "ship" includes every description of vessel used in navigation not propelled by oars." (It should be noted that the 1955 Act will be repealed when the 2014 Act comes into force, insofar as both Acts have a broad definition of ship.)

Section 18(2) (a) of the 1955 Act exempts certain ships from the obligation to register, including those (emphasis added):

> "**not exceeding fifteen net register tons burden** employed solely in navigation on the rivers, canals, lakes or coasts of Ireland and the Isle of Man".

This restriction is entirely at one with the 1968 Act insofar as the 1968 Act refers to "proceed to sea" and seems generally intended (as with the 1966 Convention) to cover international voyages.

The Delta RIB is thus exempted from any obligation to register as a "registered ship", even were the Section 3 requirements to be deemed applicable. Although ships exempted under section18(2) can be voluntarily registered, in the absence of actual registration, the Delta RIB is not a registered ship within the meaning of the Mercantile Marine Act, 1955, and **consequently the Merchant Shipping (Load Lines) Act 1968 does not apply**.

Correspondence 8.6 Correspondence from IRCG and MCIB response.

Annex B: Operational readiness assessment criteria

Kilkee ICGU, as is the case for all IRCG units, is subject to an annual boat ORA annually, as well as a combined search and station ORA. The criteria are measured to ensure that the Unit meets pre-determined operational readiness typically include the following:

- Inspection of all boat helmets;
- Inspection of all operational lifejackets – to include inflation device, knife, flare, straps, buckles and next service date;
- Inspection of all training (red) lifejackets;
- Inspection of all dry-suits;
- Testing of all Personal Locator Beacons;
- Inspection of the boat;
- Inspection of the trailer;
- Inspection of the engine(s);
- Inspection of the boat logbooks to clarify the following:
  - Health declaration;
  - Manual handling training;
  - First aid training;
  - Personal Survival Training at the NMCI;
  - Capsize training;
  - VHF licence;
  - Crew qualifications and boat hours logged;
  - Trainee Coxswain qualifications;
  - Coxswain qualifications and hours logged;
  - Logged hours (prior 12 months);
  - Afloat exercises (prior 12 months);
  - Action plans (if required)
- Boat exercises afloat – typically a sample from sector search / expanding search / personal techniques e.g. anchoring, man overboard etc.
- Review of aspects of the BOM, Risk, pre-launch, launch and recovery, communications, command and control etc.
- All Personal Floatation Device's (PFD) are barcoded and a service record is retained for each PFD.

Boat Management

There are many aspects to boat management within a CGU which provide examples of an effective management system. In particular:

- The ORA regime informs IRCG management regarding the status of a IRCG boat unit;
- There is an management structure within IRCG Headquarters which provides both direction and oversight of all IRCG boat units;
- All IRCG boat units are subject to yearly planned maintenance of their boat(s) and engine(s) with a competent contractor;
- All IRCG boat units are subject to yearly planned maintenance of their trailers, power-washers, salvage pumps, generators and fuel bowsers by a competent contractor;

Correspondence 8.6 Correspondence from IRCG and MCIB response.

- An comprehensive BOM was introduced in 2013 which assisted in implementing an effective oversight regime;
- All IRCG boat units are supplied with fit-for-purpose dry-suits;
- All IRCG boat units are supplied with fit-for-purpose lifejackets which are subject to yearly servicing;
- A contractor provides training to the ISA standard with additional bespoke training provided in SAR;
- All IRCG units are support by a professional critical incident stress de-briefing (CISD) resource which includes a bespoke 24/7 365 confidential telephone line support service.
- The BOM provides for a change management system and a group is finalising five year review of the publication;
- Additional support is provided to the boat units from Maritime Services Division, namely recruitment administration, HR, payments, buildings, Low Value Purchase Cards, etc.;
- Logistical support is provided by VS&T in terms of boat movements, etc.; and
- Engineering and Stores support is provided from our main stores in Dublin.

Correspondence 8.6 Correspondence from IRCG and MCIB response.

Annex C: Training Standards (Sect 4.24):

The Annual role retention criteria for all IRCG Boat Crew as per IRCG BOM Sec (1) 2.11.1 requires;

i. ALL IRCG basic boat training meets the national powerboat standards required by the Department of Transport, Tourism and Sports Marine Notice no 27 of 2005, updated March 2006 at Annex 1 Irish Sailing Associations Advanced Powerboat Certificate.
ii. All Crew must conduct 24 logged hours (1440 mins) of training and development annually which must include 8 exercises afloat.
iii. IRCG Boat Coxswain prior to appointment requires 120 hours (7200 min) of operational and training activity logged.
iv. Each boat must have two qualified Coxswain's onboard.
v. IRCG Boat Crew prior to appointment requires 40 hours (2400 min) of operational and training activity logged.
vi. Experience indicates the majority of boat crew exceed the baseline requirement of (1.0) of this part of annual basics. It is reasonable to project annual activity as somewhere between 30-40 hrs. (1800mins-2400mins) as a function of a Unit average.
vii. Any Unit member aboard a CG Boat must be in date for PST training.

Correspondence 8.6 Correspondence from IRCG and MCIB response.

Annex D: Overview of IRCG Volunteer safety system development

At the request of the IRCG the National Standards Authority of Ireland carried out a bench marking exercise in 2010. This Annex sets out progress to date:

i. 2010 NSAI reports recommended adoption of OHSAS 18001 as the safety management standard. IRCG sought suitable resourcing.
ii. A risk management and risk assessment manual was issued to all IRCG units to standardise the IRCG risk management process.
iii. The organisational structure proposed by the NSAI report was adopted.
iv. Internal auditor training provided for key personnel in 2010
v. An safety action plan was developed in 2012
vi. Operational readiness audits (ORA) of IRCG volunteer units formalised in 2012
vii. An OH&S Coordinator was appointed in 2012
viii. An implementation committee commenced in 2012 consisting of the OH&S co-ordinator, Coastal Unit Sector Managers (CUSMs) and other staff including Branch Heads.
ix. Management review – Provision of quarterly safety reports to senior management commenced 2012
x. BOM was published in August 2013, following an extended research, review and consultation process. It established a more formalised structure for management on boat operations, setting improved standards for safety, training, qualification progression, command and control, and operations. This included a three year implementation plan.
xi. The Irish Coast Guard is a division of the Department of Transport, Tourism and Sport (DTTaS) and is subject to the Departments Safety Statement. To complement the Safety Statement the IRCG developed and implemented a volunteer IRCG Unit Health and Safety Handbook in 2014 which is specific to the work activities of the IRCG.
xii. A competent third party was appointed to conduct risk assessments in 2013. There are over 60 premises under control of the IRCG and the risk assessment programme is ongoing.
xiii. Work is ongoing to upgrade document control and records within the volunteer sector by the Maritime Services Division.
xiv. Operational procedures are constantly under review. There are approximately 4 to 5 new or amended SOP's introduced per annum as a result.
xv. Safety Representatives were appointed at each of the CGUs. The Safety Representatives received appropriate training in 2012.
xvi. Safety training to full-time staff and relevant Volunteers commenced in 2012.
xvii. Short Safety awareness workshops, meetings and training sessions were provided for fulltime staff and volunteers and are ongoing.

Correspondence 8.6 Correspondence from IRCG and MCIB response.

Safety Management Documentation

SAR-OPS	Voluntary Services & Training	Pollution & Salvage	Boats
Standard Operating Procedures	Standard Operating Procedures	Standard Operating Procedures	*Section 1* – Standard Operating Procedures Launch Operating Procedure Management Posters Logbooks Job cards
Memos	Volunteer Health & Safety Manual	Port of Reference Decision Matrix	*Section 2* – Standard Operating Procedures Essential Safety Emergency Operating Procedures Laminated Procedures (for the sea)
RRC Staff Memos	Risk Management Code		
Search Mission Coordinator (SMC) Checklist	Forms		
SAR Ops Notices	Memos		
	Safety Notices		
	ORA's: All units are required to undertake a boat ORA within 15 months of its previous ORA.		

Correspondence 8.6 Correspondence from IRCG and MCIB response.

Annex E: Overview of Dingle recommendations and completion to date

Report Section (4.14, 4.21, 5.12 and 7.11)

The fundamental causes of the Dingle event were considered to be-

- a live rescue event pushing responders to haste and possibly incaution;
- the complications with regard to establishing a communications architecture in a short time in a VHF black spot with the additional complexity of integrating a non-maritime system, TETRA (used by the helis), into that architecture; and
- the need for additional local full-time management support and assurance; and
- entering a surf zone without realisation (situational awareness).

The IRCG has pushed ahead in closing out the recommendations. The interim period has seen a doubling of Coastal Unit Sector Managers, appointment of a dedicated professional Health and Safety Officer for the Volunteer sector and additional HQ support. All crews were reminded post-Dingle on the BOM prohibition of entering the surf zone and of the importance of pre-launch buddy checks. A national boat Coxswain seminar is planned for later this year which will again address the matter of surf.

Table 2 gives the current state of play of progress with implementation of recommendations which are at Table 1.

Correspondence 8.6 Correspondence from IRCG and MCIB response.

Table 1 – Dingle Recommendations

Dingle Coast Guard Boat Capsize Report

Issued: 26th February 2015

Section 5 – Recommendations

Important Note: Recommendations shall in no case create a presumption of blame or liability.

5.1 IRCG to review / develop policies and procedures to govern response to person incidents in surf conditions.

5.2 IRCG to review communications policies and practices involving RCCs, CGB, CGUs, shoreteams, helicopters, VHF, P4 channel, Tetra, phone etc.

5.3 IRCG to review the adequacy of the levels of fulltime staff support available to CGUs.

5.4 IRCG to review resourcing capabilities in relation to the need to action health and safety related equipment matters.

5.5 IRCG to review overall levels of staffing with particular regard to safety oversight of boat operations with due consideration to this report and other reviews such as the VFM report (Fishers 2012).

5.6 IRCG to review and affirm CGU pre-launch procedures.

5.7 IRCG to reaffirm to personnel the need to conduct pre-launch checks of PPE e.g. "buddy checks".

5.8 IRCG to affirm CGU and MRSC understanding and duties associated with the triple lock pre-launch process.

5.9 IRCG to ensure adequate processes are in place to ensure the accurate and timely reporting of on-scene conditions.

5.10 IRCG to review CGB radio microphones to reduce the likelihood of "water on the mic".

5.11 IRCG to review MRSCs oversight of AIS tracking of SAR assets.

5.12 IRCG to ensure all relevant parties understand the requirement to enforce and adhere to current IRCG surf policies.

5.13 IRCG to ensure that RCC staff have access to and are familiar with all unit specific CGB operating parameters.

5.14 IRCG to continue to the structured implementation of the Boat Operations Manual.

5.15 IRCG to review processes for familiarising RCC staff with relevant BOM content.

5.16 IRCG to ensure CG personnel understand operational constraints and limitations applicable to equipment and personnel capabilities.

5.17 IRCG to review processes for identification of local weather conditions with particular consideration to ground swell as an independent factor to wind conditions.

5.18 IRCG to review BOM procedural stipulations which restrict IRCG personnel entering the water during training exercises unless the CGB is secured alongside.

5.19 IRCG to consider setting the default position on AIS systems as fitted to CGB to transmit.

5.20 IRCG to compile post-incident procedures, including the requirement to protect GPS data.

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IRCG response to MCIB draft Report July 2018

Correspondence 8.6 Correspondence from IRCG and MCIB response.

Table 2: Dingle Close Outs

	Recommendations Dingle	% Complete	Completion expected
5.1	Operations in Surf BOM state No operations in Surf. Re-enforce in training and ORA's.	100%	Complete
5.2	Review of Comms. VST S.N 1/18 advises all Comms on recorded marine VHF	100%	Complete
5.3	New OTO and CUSM in VST. 1 OTO 1 CUSM Vacancy.	80%	Q4 2018
5.4	H&S officer inducted and in training.	70%	July 2018
5.5	Staffing levels - awaiting interviews and PAS process.	90.7%	Q3 2018
5.6	On Going Training* SN 1/18 and Boat ORA, PST	100%	Complete
5.7	OGT* SN 1/18 and Boat ORA, PST	100%	Complete
5.8	OGT* SN 1/18 and Boat ORA, PST & SAR OPS 3/17 SMC Course	100%	Complete
5.9	OGT* SN 1/18 and Boat ORA, PST	100%	Complete
5.10	Boat ORA, PST, IRCG Engineering advise OGT*	100%	Complete
5.11	AIS Tracking. All RIBS have AIS installed. Tender for D-Class inflatables – A or B?	50%	Q4 2018
5.12	OGT* SN 1/18 and Boat ORA, PST & SAR OPS 3/17 SMC Course	100%	Complete
5.13	OGT* CUSM SN 1/18 and Boat ORA, PST	100%	Complete
5.14	OGT* SN 1/18 and Boat ORA, PST. CUSM visits. Sector Meetings. OIC conference.	80%	H&S officer site visits Complete late Q3 2018
5.15	SAR manager implemented training & SAR OPS 3/17 SMC Course	100%	Complete
5.16	OGT* VST manager implemented training Boat ORA PST CUSM visits Sector Meetings OIC conference	100%	Complete
5.17	OGT* Area Risk Assessment. OJT, local knowledge and ORA's.	60%	H&S officer site visits ongoing
5.18	Boat Operations manual under review - entry to water complete	80%	Q4 2018
5.19	Not practicable	100%	Complete
5.20	GPS position information storing under review. Incident review format in line with ICAO/IMO standards to be initiated with appropriate training. AGS and MCA assistance sought.	30%	AIS class A or B?

Correspondence 8.6 Correspondence from IRCG and MCIB response.

Annex F: National SAR Framework Observations

The draft Report identifies the Irish National SAR Framework (4.1, 5.1 & 6.1) as potentially a significant document in respect of SRM's. A national SAR Framework, which by virtue of being both national and a framework would indicate it being a high level document, detailing the **strategic** and operational scope of maritime SAR, the organisations involved in maritime SAR, their roles and responsibilities and governance. Sitting under a national maritime SAR framework are multiple service level agreements (SLA's)/ memoranda of understanding (MoU's) between the listed organisations and organisational operational procedures.

Placing operational considerations, into a national Framework rather than a national SAR Plan (potentially covering land SAR as well) or service level agreements/memoranda of understanding, and/or individual organisations SOPs, may limit the flexibility of operational decision making of the specific expert teams and therefore should be carefully considered.

Currently in delivering on the National SAR Framework the IRCG has SLA's/MoU's/agreed SOP's with the

- RNLI,
- National Ambulance Service,
- An Garda Siochana,
- Civil Defence,
- Dublin Fire Brigade,
- Irish Lights,
- MCA (UK Coastguard),
- Defence Forces,
- HSE (Medico Cork),
- Irish Sailing Association (ISA),
- Atlantic Maritime Prefecture (French Coast Guard),
- IAA,
- Underwater Ireland and
- Ireland's community rescue boats.

See for information the Strategic Overview of SAR in the UK and NI January 2017 and the National SAR Plan of the USA which include land and aeronautical SAR as well as maritime.

Correspondence 8.6 Correspondence from IRCG and MCIB response.

Annex G: Abbreviations Used

BLOS	Beyond Line of Sight
BOM	Boat Operations Manual
CGU	Coast Guard Unit
D/OiC	Deputy Officer in Charge
DTTAS	Department of Transport, Tourism & Sport
H&SO	Health & Safety Officer
IAMSAR	International Aeronautical & Maritime SAR Manual
IMA	Irish Maritime Administration
IMSARC	Irish Marine SAR Committee
IRCG	Irish Coast Guard
MCIB	Marine Casualty Investigation Board
MMSI	Maritime Mobile Service Identity
MRSCV	Marine Rescue Sub Centre, Valentia of the IRCG
MSD	Maritime services Division of the Irish Maritime Administration
MSO	Marine Survey Office of the Irish Maritime Administration, DTTAS
NMCI	National Maritime College of Ireland
OiC	Officer in Charge
ORA	Operational readiness Assessment
PFD	Personal Flotation Device
PPE	Personal Protective Equipment
PST	Personal Survival Training
RCC	Rescue Coordination Centre of the IRCG
RIB	Rigid Inflatable Boat
RNLI	Royal National Lifeboat Institution
RPAS	Remotely Piloted Aircraft Systems
SAR	Search and Rescue
SMC	SAR Mission Coordinator
SMS	Safety Management System
SOP	Standard Operating Procedure
SRM	Search & Recovery Mission
SRU	SAR Unit
UTC	Universal Time Coordinate
VIMS	Volunteer Information Management System
VST	Voluntary Services and Training Division of the IRCG

Correspondence 8.6 Correspondence from IRCG and MCIB response.

SAR OPS Notice 3/18

SAR Ops Notice	3/18
Title	Search and Recovery Missions
Purpose	*To set out guidelines on Transition of Search Operations (SAR) to Search and Recovery Mission (SRM) and arrangements for management of SRM Ops.*

Date of Issue	07 June 2018
Version/ Change	***Original***
Date First Issued	*NA*

Reviewed by	[redacted]
Approved By	[redacted]

Related Documents	See also. 1. SAR Ops Notice – On Call Roster (currently 3/15) 2. Duties of Incident Manager
References/Notes	IAMSAR Manual Vol 2 Chap1.6.12; Chap 8. IAMSAR manual Vol 3 Chap 9.3/3 IRCG SAR Emergency Check List S4
Appendices	NIL
External	Nil

Correspondence 8.6 Correspondence from IRCG and MCIB response.

SAR OPS 3/18

Search and Recovery Missions (SRM)

1. **Introduction**. Unresolved Search and Rescue (SAR) Operations are terminated or suspended when it is determined by the SMC that there is No Longer Any Reasonable Hope of finding any remaining survivors, or when there is no longer any probability that the distressed persons have survived. Some, but not all SAR Operation transition to a Search and Recovery Mission (SRM)) phase, particularly in situations where it is determined that there is a reasonable possibility of locating a remains. SMC planning must;

    a. Clearly identify when a SAR operation is suspended,
    b. Determine whether an SRM is appropriate,
    c. Categorise operations as either SAR or SRM,
    d. Ensure that the Operation type is reflected in Planning, Resource Commitment and SITREPs.

2. **Aim**; To set out guidelines on transition of Search Operations (SAR) to Search and Recovery Mission (SRM) and arrangements for the management of SRM Ops.

General Considerations

3. Searches for missing persons can be considered under three distinct groupings
    a. Offshore.
    b. Coastal including harbours, bays and estuaries involving shoreline searches.
    c. Inland.
4. Prediction of survival time for immersion victims, as described in the IAMSAR manual Vol 2 Chapter 8 and Fig N-15 (page N-20,) is NOT an exact science. Survivor life expectancy will vary with experience, water confidence, use of Life jackets and immersion suits, type of clothing worn, survivor activity, possibility of available shelter (caves, islands, etc), initial body temperature, physical and physiological conditions, thirst, hunger, exhaustion and will to live. IAMSAR manual sets out a realistic upper limit survival time of less than 24 hours in the most optimal of conditions for people wearing normal clothing in the water at favourable temperatures.

5. SRM operations are generally more appropriate to near-coastal and inland situations where there is a realistic possibility of locating Remains. In the case of loss of life in offshore situations, unless there is evidence to the contrary, SRM operations are unlikely to be conducted once the SMC is satisfied that the designated area of interest has been thoroughly searched, all reasonable means of obtaining information about the location of casualties have been exhausted and all assumptions and calculations used in search planning have been reviewed.

Correspondence 8.6 Correspondence from IRCG and MCIB response.

6. Where there is a reasonable probability that the remains of casualties can be located IRCG policy is to support searches for a period of up to a normal maximum of 21 days, at which stage a DC/On Call, in conjunction with SAr Ops Manager, can decide to suspend or extend IRCG involvement. In some circumstances searches being conducted by non-IRCG resources may voluntarily continue when a search has been scaled back or for periods in excess of 21 days in case of which SMC shall continue to record information, plans and intentions of participating bodies.

7. The level of resources available for SRM operations is incident specific. Where a local loss occurs in Coastal or Inland waterways, local support by way of shoreline searching and boats is more likely to be available. During SRM operations local information and experience may also identify days in this period when there is an increased likelihood of locating a body.

8. **An Garda Síochána (AGS)** are the designated competent authority in all aspects of missing person searches. IRCGs role is to assist AGS with body searches and close liaison between RCC (SMC/DC) with their designated POCs must be prioritised. IRCG can also assist AGS in addressing public safety considerations, in bringing a coordination structure to a community/family response which may not have all the required understanding and skills to search safely, (particularly during costal or inland searches)[1].

9. Liaison with Next of Kin of missing persons is a sensitive and challenging role and should where possible be routed through AGS. If situations arise whereby IRCG personnel are briefing NOK it is highly desirable to be accompanied by a member of AGS. Any IRCG engagement with NOK should be recorded.

10. **Media and Public**. Where missions have transitioned from SAR to SRM any Public comment should only make reference to the 'ongoing search for missing person(s)' and avoid making any distinction between SAR and SRM.

[1] SMC retains overall responsibility for the coordination of seagoing SRUs and all declared resources for the duration of the Search

Correspondence 8.6 Correspondence from IRCG and MCIB response.

Key Tasks in Search and Recovery Operations

SMC

11. Determine in consultation with DC/On call when to suspend a SAR operation and determine whether an SRM operation should be initiated.
12. Liaise closely with coordinating AGS on all search plans, reports, plans and use and availability of other resources.
13. Establish POCs of Statutory and Voluntary search resources that have volunteered their services.
14. Clearly record following information in SITREPS
    a. Para L - *Coordinating Instruction*. Mission type – SAR or SRM. Lead Agency (e.g. SRM in support of AGS District XXX; diving ops will be conducted or coordinated by yyyy)
    b. Para M - *Future Plans*. Include intended tasks and duration for IRCG units for next 24/48 hours, plans for Helo searches, and participation by other statutory and voluntary agencies, dive plans, agreed search areas for SRUs, etc.
15. SMC should be mindful that situations can arise where Remains would be sighted in areas with restricted access. In such situations SMCs, in conjunction with DCs/On Call may need to be proactive in instructing search units to suspend recovery attempts until more favourable conditions present themselves.
16. Consider requests for Diving resources in accordance with standing arrangements.
17. Consider the use of any available complimentary search tools to traditional methods such as Remotely Piloted Aerial Vehicles (RPAS), side scan sonars, ROV's, etc.
18. SAR Ops Manager (large scale operations – multiple fatalities only)
    a. Appoint Incident Manager where appropriate.
    b. Determine media plan.
    c. Brief Director IRCG.
19. DC/On Call (if commencement is outside of working hours)
    a. Manage overall search plan, liaise with senior AGS, set out IRCG (Helo and CGU) levels of participation and consider overall duration of search.
    b. Assess requirement for Incident Manager. Alternatively once off or occasional visits to a search location by an IM or DC should be considered
    c. Determine level of helicopter use which should be kept to a level commensurate with their expected possibility of success; ideally opportunity searches should be conducted in conjunction with other operations or crew training.
    d. Establish liaison arrangements with participating statutory and voluntary agencies and bodies.
    e. Consider deploying ICV.
    f. Coordinate media arrangements and issue local updates where appropriate.
    g. Determine and make arrangements if required for sanitary facilities for searchers.

Correspondence 8.6 Correspondence from IRCG and MCIB response.

h. Determine in conjunction with VST (Manager/CUSM/local OIC) catering arrangements for CGUs where appropriate.

20. Use of CGUs
    a. CG Search units where geographically convenient should primarily be tasked to conduct LW daylight searches.
    b. In all circumstances the levels of CGU use should be pre-planned and risk assessed in accordance with prevailing demands and environmental conditions. The level of risk acceptable in SRM operations should be appropriate to the possibility of success and MetOc conditions and form the fundamental consideration of a Go/NoGo decision by the SMC.
    c. CG Boats where geographically convenient may be tasked for daylight searches – number and duration should be clearly determined by the SMC in consultation with DC/On Call.
    d. DC may use discretion to increase the level of CGU involvement in situations where there is a high level of public concern and/or where prevailing circumstances indicate a higher possibility of locating and recovering Remains.

21. Recovery of Remains
    a. Where there is high level of probability of recovering Remains from the sea a reception plan should be considered in consultation with AGS The overarching requirements are dignity and privacy. A suitable building adjacent to a landing point or arrangements for a temporary facility should be considered.
    b. When remains are located on land or on a river bank or estuary the area should be sealed off and secured and AGS informed. Remains should not be removed or interfered with without prior Garda permission.
    c. When a remains is located at sea it should be transported to the nearest suitable landing point.
    d. All parties should exercise extreme caution with regard to speculating on the identification of Remains until such time as it has been formally identified. The recovery of a body may not necessarily be that of the person that is the subject of the search.
22. *Ends*

Correspondence 8.6 Correspondence from IRCG and MCIB response.

IRISH COAST GUARD

VS&T Safety Notice 1/18

Notice Title:	**IRCG Boat operations – Points for particular attention**
Notice Number:	**01/18**
Version Number:	**Original**
Date First Issued:	**January 29th 2018**
Drafted:	[redacted]
Approved By:	[redacted]
Date Issued:	
Related documents:	**Boat Operations Manual Version: Original Date Issued: 19th August 2013**
References:	

Correspondence 8.6 Correspondence from IRCG and MCIB response.

The purpose of this safety notice is to remind Coast Guard Boat units on various matters as set out in the Boat Operations Manual (BOM) and to introduce a change in communication procedure regarding the use of channel P4 for boating activities.

1. **Safety and Risk Management (BOM Section 3, Chapter 1)**

Section 3, Chapter 1 outlines various aspects of managing safety and risk at unit level. It is imperative, as set out in the personal logbooks, that all volunteers are constantly familiar with the contents of this section. The management of safety and risk over-arches all CGB operations and is central to securing and managing the safety of all CGB Unit volunteers.

All CGB Units should conduct an in-house training session on this section (BOM Section 3, Chapter 1) of the manual at the earliest opportunity and this training should be recorded as having been completed. Going forward all CGB Units should factor in on-going refresher training on this section of the manual as routine training within their unit.

2. **Dynamic Risk Assessment**

The issue of dynamic risk assessments are set out in sections 3(1.4) (Dynamic Safety Management) and 3(1.6) (Dynamic Risk Assessment). While there are various control measures in place as part of an overall boat activity risk assessment i.e. training, procedures, boat and equipment maintenance, job cards, logbooks etc, it is important that all CGB unit members understand that the risk assessment process of any boating activity is only complete once the pre-launch specific dynamic risk assessment of that activity has been undertaken. Each pre-launch specific dynamic risk assessment covers matters such as job steps, roles, environmental conditions, hazards, PPE, triple-lock etc. Each boating activity requires an on-going identification of the hazards and assessment of the risks during its entirety.

Standard Operating Procedure (SOP) G-01 deals with pre-launch preparation. Within this procedure are three key blank forms as follows:

6.0: Planning Aid: Job Steps, Roles, Job Steps
7.0: CGB Pre-Launch Planning Form
8.0: Pre-Launch Checklist

All CGB units should print off a stock of these three forms, staple together as a set, and complete for all boating activities. These completed forms should then be retained on station as a permanent record of the completion of the pre-launch dynamic risk assessment and for the purpose of any future requirements.

Copies of these three forms are included as appendices.

Correspondence 8.6 Correspondence from IRCG and MCIB response.

3. Buddy check

All boat crew should ensure that their PPE is donned correctly and in accordance with the BOM as set out in the various equipment job cards. It is equally important that full buddy checks are completed for all crew and verified as having been completed for all crew by the Cox. This is an important control measure and is implemented to ensure that all volunteer's PPE is correctly donned prior to going on the water.

4. Surf/breaking waves

The issues of breaking waves and surf are set out in section 1(3.6.5) (The Combined Effect of Wind and Waves). A breaking wave of a height which is greater than or equal to the beam of the CGB is sufficient to capsize or invert the CGB.

Surf is generated by ground swell breaking in a shore zone or on a reef. Breaking waves which are wind derived form seas in which the wind causes crests to break. Breaking waves pose a significantly increased risk of capsize.

The Boat Cox is not permitted to operate the CGB in surf.

5. Communications

SOP G03 (Essential Safety Whilst Afloat) outlines the correct procedures for VHF radio communications. Note that if a CGB is launched on response, communications with the RCC should be initiated on channel 16. If the launch has not been initiated by the RCC, communications should be initiated on the Coast Radio Station working (public correspondence) channel.

Note that P4 (channel 94) is an internal IRCG channel used by all 44 Coast Guard units. The RCCs do not have access to P4 therefore it should not be used as a channel for communications to the RCCs. It is solely for internal unit communications.

The BOM states (G-03 4.6.2) **'CGB to CGU communications should occur on P4'.**

However with immediate effect a change to this procedure is being introduced primarily because P4 is not recorded at the RCCs. The amended wording within SOP G03 (Essential Safety Whilst Afloat) is as follows:

'Boat Units should ensure that P4 is not used for operational purposes while afloat. P4 should be used solely for launching and recovery and other non-operational situations where an internal unit VHF communication is required i.e. confidential medical or casualty information to land a T4 casualty etc. With immediate effect all VHF communications between a CGB afloat and RCCs and/or land units is to be conducted on either Channel 67 or other suitable channel as directed by the RCC'.

Correspondence 8.6 Correspondence from IRCG and MCIB response.

All CGBs must monitor channel 16 at all times during CGB operations: This can be achieved by using either the dual watch or scan functions or by use of a hand held radio. Unless otherwise directed by the RCC, SITREPs (Ops normal) must be passed from the CGB to the RCC every 15 minutes. A shoreside relay must be utilised to ensure communications between the CGB and RCC are maintained in areas of poor communication.

During all boating operations the communications plan should be agreed between the CGB and the RCC and any deviations from this should be communicated effectively between the RCC and the CGB.

6. Weather Forecast

Section 1 Chapter 3 (CGB Operational Capabilities and Limits) states that the forecasted environmental conditions are readily available from a variety of sources. The OIC must maintain a list of suitable sources. Those authorised to fulfil the roles of OIC or Boat Cox must be familiar with forecasting sources and be able to determine the actual conditions presented.

Units are required to support any localised weather forecast with reference to the Met Eireann forecast and any discrepancies should be carefully considered and discussed with the RCC as part of the triple-lock process. (1)

On-scene weather conditions, and any changes to the on-scene conditions during the boat operations, should be communicated to the RCC at the earliest opportunity (and ongoing in the event of any change in conditions). Should the weather conditions on-scene begin to approach the limits of the boat the RCC is to be informed and the boat return to base.

7. Signage

Various posters have been issued to CGB units namely:

A. Hierarchy of Safety (Priorities 1-6);
B. IRCG PPE – Buddy check;
C. Response Process – R.E.S.P.O.N.S.E;
D. Emergency Prevention & Emergency Action Planning:
- Likely occurrences,
- Preventative measures,
- Preparatory measures,
- Reactionary measures,
- Reduce and/or control risks & report incident;

E. Make a SAFE Plan:
- Stop,
- Assess requirements,
- Figure out risks and controls,
- Ensure safety.

Correspondence 8.6 Correspondence from IRCG and MCIB response.

- Execute – Prepare, Perform and Evaluate;

F. Correct wearing of PLBs on Lifejackets.

These posters should be prominently displayed in the station-house as reminders to all volunteers on key safety issues.

8. Triple Lock

Section 1 Chapter 4 of the BOM outlines the role of the triple lock process. This triple lock process involves the Rescue Co-ordination Centre, the OIC (or authorised representative) and designated Boat Cox. The Coast Guard Boat may only be launched if approval is obtained from all three parties. It is compulsory that this triple lock process is completed prior to the boat being launched. This triple lock process must ensure that explicit (and not implicit) approval is given to launch.

9. Logbooks

Following the 2017 boat ORAs it is evident that many volunteers are completing the first section of the logbook – the recording of hours and exercises afloat but are not completing the other sections. Note that all sections of the logbooks need to be kept up to date as this provides an overview of an individual's training needs on the BOM and to ensure that all aspects of the BOM are covered by all crew during the course of routine training.

10. Pre-use checks

The pre-use checks are set out in the various care and maintenance job cards. All units should ensure that all required checks are conducted before and after each boating activity.

11. Area of Operations

Section 1 Chapter 3 (CGB Operational Capabilities and Limits) sets out the operating limits by CGB specification. All CGB units should be issued with area specific operating limits outlining their area of operations.[(2)] All CGB units should train regularly within their area of operations to ensure familiarisation with any potential hazards. These specific unit operational capabilities and limits should be displayed on the station wall to ensure that all crew members are aware of their unit specific area of operations.

12. Personal Survival Techniques

Section 1, Chapter 2 (Appointment, Qualification, Training and Development) states (2.6.1) that all Trainee Crew must complete Personal Safety Training prior to being permitted afloat in a CGB. It is imperative that no volunteer is permitted afloat in a CGB without having completed the PST training in NMCI. Also note that volunteers should have received PST training with the type of boat they have on station i.e. D-

Correspondence 8.6 Correspondence from IRCG and MCIB response.

class v Rib. Units should undertake an audit of their boat crew to ensure that this is the case.

13. Equipment

All IRCG boat equipment and PPE should be inspected and maintained as per the manufacturers and service agent's instruction. Crews are reminded that cuff seals are replaceable on station however neck seals may only be replaced by the designated service agents. Any and all required maintenance to lifejackets may only be completed by the service agent.

(1) Note that Met Eireann is not specified within the BOM as the primary source for weather forecasts.
(2) Note that unit specific area of operations have been issued for all D-class boats. Specific area of operations will be issued for all Ribs in due course.

Correspondence 8.6 Correspondence from IRCG and MCIB response.

(G-01) 6.0 Planning Aid: Job Steps, Roles, Job Steps & Safety Measures

Job Steps	Role(s) in Charge *(Supported by)*	Job Tasks & Safety Measures *Supporting Information (by Section & Chapter)*	Complete
1. Designate Boat Cox	▪ OIC	➢ Designate an appointed Boat Cox (S1-C1 / S1-C2) with due regard to their capabilities & limitations	
2. Authorise Launch & Collate Response / Exercise Brief	▪ RCC watch officer ▪ OIC ▪ Boat Cox	➢ Jointly collate and evaluate response request utilising (G-01) 7.0 Pre-launch Planning Form ➢ Ascertain environmental conditions for launch site and expected area of operation *(forecast and actual)*	
3. Designate CGB Crew	▪ OIC ▪ Boat Cox	➢ Designate an appointed Deputy Boat Cox and CGB Crew (S1-C1 / S1-C2) with due regard to their capabilities & limitations ➢ Ensure the prescribed CGB Crewing requirements (S1-C3) are met	
4. Designate Towing Vehicle Driver	▪ OIC	➢ Designate an appointed Towing Vehicle Driver (S1-C1) to fulfil the duties required to safely launch and recover the CGB: Refer to SOP G-02	
5. Initial Briefing (Reaffirm as required throughout)	▪ Boat Cox	➢ Brief all those involved in the preparation operation as to their duties ➢ Confirm individuals have considered their capabilities & limitations (S1-C1 / S1-C2) and accept their designated roles	
6. Prepare to Launch	▪ Boat Cox	➢ Co-ordinate the job steps required to properly prepare the CGB, equipment and crew to launch – using the *(G01) 8.0 Pre-launch Checklist*	
7. Transit to the Launch Site	▪ Towing Vehicle Driver	➢ Authorised in accordance with *VS&T Procedure 04* to fulfil the duties required to safely operate the vehicle(s) which transit to the launch site or launch & recover the CGB	

Correspondence 8.6 Correspondence from IRCG and MCIB response.

(G-01) 7.0 CGB Pre-Launch Planning Form

➢ **Description of exercise / incident / casualty(ies) & area of operation:**

➢ **CGB operations to be conducted:**

□	Response to persons in the water	□	Medical assistance
□	Fire / explosion	□	Assistance to disable craft / towing
□	Lee shore recovery	□	Assistance to stranded / grounded craft
□	Assistance sinking craft	□	Body recovery
□	Search (as OSC)	□	Search (under supervision of OSC)
□	Support to cliff rescue team	□	Navigation
□	Emergency Procedures	□	Other _____

➢ **Probable duration of CGB operation:** _____

➢ **Additional SAR assets in attendance:**

□ SAR helicopter □ All-weather Lifeboat □ Inshore Lifeboat / CRBI

Call sign: _____ Call sign: _____ Call sign: _____

□ Other _____

➢ **Environmental conditions:**

Wind strength _____ & direction _____ **Wave** height _____ & direction_____ **Visibility**: _____

Tides **HW** time _____ & height _____ **LW** time _____ & height _____ Spring or Neap?

Approximate Tidal Rate: _____ Approximate Tidal Direction:_____

Within permitted operating parameters? Yes / No

➢ **Role Designation:**

Office in Charge: _____ Boat Cox: _____

Deputy Boat Cox: _____ Boat Crew: _____

Boat Crew: _____ Boat Crew: _____

Boat Crew: _____

➢ **Description of Hazards of note:**

Correspondence 8.6 Correspondence from IRCG and MCIB response.

(G-01) 8.0 Pre-Launch Checklist

To be completed by the designated Towing Vehicle Driver: _____

Job Step	**Confirmed By	
(G-01) 7.0 CGB Pre-Launch Planning Form complete:	OIC	Boat Cox
Triple lock launch approval obtained (OIC / Boat Cox / RCC)	OIC	
Volunteers have been designated roles and briefed on duties	Boat Cox	
All CGB equipment is onboard and secure	Boat Cox	
Fuel status checked and adequate	Boat Cox	
Engine(s) secured in transport position	Towing Vehicle Driver	
Battery charging lead disconnected *(where applicable)*	Towing Vehicle Driver	
Vessel secured to trailer	Towing Vehicle Driver	
Trailer securely hitched and safety chain applied	Towing Vehicle Driver	
All required PPE is present and correct	Boat Cox	

** "Confirmed by" the individual designated to the role(s) listed, must verify that the job step has been correctly completed.

Correspondence 8.7 Correspondence from Cox on first mission & D Class and MCIB response.

1 SUMMARY

1.1 On the 9th September 2016, the Irish Coast Guard Station (CGU) at Kilkee was tasked by Maritime Rescue Sub-Centre (MRSC) Valentia to provide search and rescue volunteers for a missing person at the cliffs to the southwest of the town close to Foohagh Point. The Irish Coast Guard Station provided both cliff top search teams and boat crew on 9th, 10th, 11th and 12th September.

Clarification; there was no boat crew used on the 9th

On the morning of the 12th September the volunteers, from Kilkee and Doolin Coast Guard Units (CGUs), assembled at the Coast Guard Station and resumed operations, including a launch of the Delta Rigid Inflatable Boat (hereinafter referred to as the Delta RIB).

MCIB RESPONSE: See para. 3.8 of report

1.2 At approximately 13.11hrs on the second tasking on the 12th September and whilst searching a cove to the east of Foohagh Point, the Delta RIB capsized. The three crewmembers were thrown into the water. A search and rescue operation (SAR) commenced. One of the crewmembers was picked up by a privately owned RIB, a second crewmember was rescued by the SAR Rescue helicopter R117. The third crewmember, the Casualty, who was a volunteer from the Doolin CGU, was recovered by a SAR Rescue helicopter R115.

Clarification; East of Knockroe Point, 1 NM East of 'Approximate position of capsize at 12:11' shown on appendix 7.4

Due to this misplacement of 'Approximate position of capsize at 12:11' all other information in relation to this position are also incorrect e.g. the 'Site of Wreck'

MCIB RESPONSE: Location has been charted in accordance with witness statements. The incident occurred within visual range of on lookers. See Appendix 7.4 of this report.

Note: For the purposes of this Report all times are Local time.

Correspondence 8.7 Correspondence from Cox on first mission & D Class and MCIB response.

2 FACTUAL INFORMATION

2.1 **Vessel Characteristics**

2.1.1 The Irish Coast Guard boat at Kilkee was a Rigid Inflatable Boat (RIB) of glassfibre reinforced plastic (GRP) material with Hypalon inflatable tubes manufactured by Delta Power Group of the United Kingdom. The Delta RIB was powered by twin Yamaha outboard engines rated at 115 HP each. The Delta RIB was fitted out to Irish Coast Guard specifications. It was delivered in January 2003 with a central control console, seating in two rows of two, with a stowage locker at the rear of the vessel (see Appendix 7.1 Vessel specification on delivery in 2003). During its service with the Irish Coast Guard the seats were converted to air suspension type, with additional fold down seats which could be used as required, and the stowage locker was moved forward in front of the centre console. Two towing poles were installed, one in the stern and one in the bow floor area. The Delta RIB had three stainless steel petrol tanks located under the decking. The electrical systems were 12 volt DC with batteries charged by the engines. An "A" frame was fitted over the aft end to carry antennae, safety equipment and a manually operated self-righting bag.

2.1.2 Principal Particulars

Name	Unnamed	
Flag:	Irish	
Port of Registry:	Unregistered	
Year and place of build:	2003, United Kingdom.	
Type:	Delta Class 7.9X Range Patrol/Rescue Craft, Rigid Inflatable boat.	
Builder:	Delta Power Group, United Kingdom.	
Hull Identification Number:	GB-DPS18530A303	
Construction:	GRP hull with Hypalon tubing.	
Length Overall:	7.9 metre (m).	
Beam:	2.5 m.	
Engines:	Two Yamaha Outboard rated at 115 HP each.	
Fuel:	Petrol.	
Electrical:	12 volt DC, via battery bank.	
Stated Area of operations:	Up to six nautical miles offshore.	
Capacity:	Minimum Operational:	three persons.
	Optimum operational:	four persons.
	Casualty Capacity:	four persons.
Weather Restrictions:	Daylight and unrestricted visibility only.	
	Wind up to and including 27 Knots	
	Clarification; I have crewed the KCG Delta RIB on night operations.	

MCIB RESPONSE: Please see Appendix 7.2 of the report 'Coast Guard Boat Operational Capabilities and Limits'.

Correspondence 8.7 Correspondence from Cox on first mission & D Class and MCIB response.

Area of Operations:	Significant wave height limitation 2 m. Not permitted to operate in surf (see Appendix 7.2 Coast Guard Boat Operational Capabilities and Limits).
Navigation Aids:	Two Garmin chart plotters, linked to GPS satellite navigation units, with chart plotters using British Admiralty based charts and fitted with radar capability. Navigation lighting in accordance with the Collision Regulations.
Communication:	Two DSC type fixed VHF radio transceivers fitted to the vessel. Each crewmember on board had a hand held VHF transceiver. Most communications were on Channels 16 and 67, which could be recorded. There was private Channel P4, which was not recorded. Some communications could also be carried on the TETRA (Terrestrial Trunked Radio) system, again un-recorded. **Clarification; No access to TETRA on RIB.**
Safety Equipment:	Each crewmember was equipped with: Helly Hansen inner body suit, Helly Hansen drysuit, Gecko marine safety helmet, Mullion Rescue 400 Seaforce Vest, comprising a 275N single chamber inflatable lifejacket zipped onto an inherent (nominal 50 N) buoyancy foam equipment vest, personal locator beacon (PLB), knife, kill cord, lanyard, handheld flare and a safety line.
Ownership:	Irish Coast Guard, transferred from Dingle CGU to Kilkee in 2013 on formation of the Kilkee CGU.
Licencing:	Vessel un-licenced.
MMSI Number:	None assigned.

MCIB RESPONSE:
Noted.

Correspondence 8.7 Correspondence from Cox on first mission & D Class and MCIB response.

An EA-16 D-Class lifeboat (hereinafter referred to as the D-Class), based at Kilkee CGU, was also used in the later part of the Delta RIB crew rescue on the 12th of September. The D-class is an inshore lifeboat (ILB), 4.95 m in length and powered by a 40HP Mariner Outboard motor. These fast, light inflatable boats are suited to shallow water and confined locations close to cliffs, among rocks, or even in caves. The operation limits of this craft are mandated for wind up to and including Force 5 and significant wave height of 1.5 m (see Appendix 7.3 Coast Guard Boat Operational Capabilities and Limits).

2.2 Voyage Particulars

2.2.1 On the 12th September 2016, at approximately 10.30 hrs, the Delta RIB departed from Kilkee Harbour, Co. Clare There were three crewmembers on board, two from the Kilkee CGU and one from the Doolin CGU. This tasking was the continuation of a search operation for a person reported missing on 9 September which was being conducted in conjunction with a Coast Guard cliff top search team (hereinafter referred to as Team Sierra). The Delta RIB proceeded towards Intrinsic Bay and then north of George's Head to Chimney Bay. To complete its search the Delta RIB entered a small cove north-east of Foohagh Point, close to Bishop's Island.

Clarification; factually incorrect, the Delta RIB entered a small cove north-east of Knockroe Point.

It had been unable to do so earlier due to tidal conditions.

Clarification; factually incorrect as the cox'n of the Delta that morning, this area was not on our search plan.

It had indicated to the CGU at Kilkee that it was ready to return to base. As the RIB was travelling slowly approximately 20 m from the shoreline and preparing to leave the area the crewmembers became aware of a large breaking wave, directly on their starboard side. The CGU crew had no time to take any avoiding action. The Delta RIB was struck by this breaking wave and capsized immediately. All three crewmembers were thrown overboard. One crewmember, using a handheld VHF Transceiver, made a "MAYDAY" call on Channel 16, which was received by the Kilkee CGU base who relayed the distress message to MRSC Valentia.

In the SITREP(Situation Report) issued at 13.14 hrs on the l2th September 2016 the reported position of the capsize was 52° 40.76'N 009°39.56'W. At 16.42 hrs the position was amended to 52° 40.94' N 009° 39.62' W. The actual position of the capsize was identified as 52°40.53' N 009°41.28'W by visual observations of an eye witness and charting of the position, (see Appendix 7.4 Chart of area).

Clarification; Appendix 7.4 is factually incorrect as stated earlier, positions incorrect.

MCIB RESPONSE: Please refer to 3.11.6 and Appendix 7.4 of the report.

MCIB RESPONSE: Please refer to 3.11.6.

MCIB RESPONSE: Please refer to para. 2.2.1.

Correspondence 8.7 Correspondence from Cox on first mission & D Class and MCIB response.

2.3 Type of casualty

2.3.1 This was a very serious marine casualty. When the Delta RIB capsized all three Coast Guard volunteer crewmembers were thrown into the water. One crewmember was rescued by a privately owned RIB. The CGU search and rescue helicopters R115 and R117 rescued the other two crew members, one of whom subsequently died. The vessel was broken up by the surf at the base of the cliff.

Clarification; this happened overnight.

MCIB RESPONSE:
Noted.

2.4 Shore Response

2.4.1 The shore response was immediate. The Kilkee CGU alerted MRSC Valentia of the situation. The Shannon based SAR helicopter R115 was tasked immediately upon its crew becoming aware of what was happening. A Civil Defence team had just arrived with a drone to assist and was operational within ten minutes. The local fire service was also tasked to assist. The RNLI All Weather Boat was tasked from Kilmore on the Aran Islands, and Kilrush RNLI was put on standby (later tasked). A member of the Gardai at Kilkee requested the owner of a private RIB to assist with the rescue operation. The private RIB proceeded to the scene with an IRCG Deputy Officer in Charge (DOiC) and three civilian crewmembers on board. All three had good local knowledge of the area. The Kilkee CGU, D Class craft was also launched to assist.

2.4.2 All three crewmembers of the Delta RIB were recovered from the water and all units stood down at approximately 17.25 hrs. The boat was broken up by the surf against the cliff face and was recovered on 14th September 2016.

Correspondence 8.7 Correspondence from Cox on first mission & D Class and MCIB response.

2.5 Tidal Conditions

2.5.1 The tidal predictions for the 12th September used by Kilkee CGU showed the predicted tides. Kilkee CGU used Admiralty Easy Tide (a web based tidal predication service by UK Admiralty) expressed as local time, as the source:

Low Water 08.35 hrs High Water 14.04 hrs

2.52 The tidal heights indicate that the tides were close to neap conditions, a tide that occurs when the difference between high and low tide is least.

2.6 Weather conditions

2.6.1 The Met Eireann sea area forecast issued at 06.00 hrs on the 12th September predicted the following conditions for the area. Westerly winds of Force 3 to 5 decreasing Force 2 to 4 in the afternoon. A small craft warning was also in place.

Clarification; The Met Eireann sea area forecast issued at 06.00 hrs on the 12th in Appendix 7.5 does not mention a small craft warning, however the 24 hour Sea Area Forecast does mention a Small Craft Warning but this is for Belfast Lough – Howth Head – Roches Point and for the Irish Sea.

MCIB RESPONSE: Report has been amended.

2.6.2 A forecast relied on by the CGU, issued by Windguru (a web based weather forecasting service) indicated the following sea conditions for the area:

07.00 hrs - sea 2.4 m 10.00 hrs - sea 2.4 m 13.00 hrs - sea 2.4 m.

Clarification; as the cox'n of the Delta that morning the KCGU use multiple sources to make decisions on whether or not to put to sea, also taken into account is local conditions visually ascertained.

MCIB RESPONSE: Noted.

2.6.3 The Met Eireann Weather Report for 06.00 hrs to 12.00 hrs states wind Force 3 on Beaufort scale increasing to Beaufort Force 4. Significant wave height ranged from 2.8 to 3.3 m, period 8 second, swell direction 250 degrees.

2.6.4 The Met Eireann Weather Report for 12.00 hrs to 18.00 hrs states wind Force 2-3 Beaufort. Sea state, significant *wave* height 3.0 to 3.5 m, period 8.2 seconds. Seas overall described as rough (see Appendix 7.5 Met Eireann Weather Report).

2.6.6 The IRCG Kilkee Boat Operations and Pre Launch Planning document for the 12th September at 08.15 hrs, completed for the first launch, indicated that waves of up to 3 m were expected (see Appendix 7.6 Pre Launch Planning Document for first launch).

Clarification; these expected waves of up to 3m were not due until late afternoon / early evening were taken into account and had no bearing on the boat launch that morning.

MCIB RESPONSE: 3 metre waves - please refer to 3.11 and Appendix 7.6 of the report.

Correspondence 8.7 Correspondence from Cox on first mission & D Class and MCIB response.

3 NARRATIVE

3.1 The Irish Coast Guard

The Irish Coast Guard (IRCG) is a Division of the Department of Transport, Tourism and Sport. It operates as a marine emergency service and provides a nationwide maritime emergency organisation as well as a variety of services to shipping and other government agencies. The IRCG has responsibility for Ireland's national system of marine communications, and emergency management in Ireland's Exclusive Economic Zone (EEZ) and certain inland waterways. It's responsible for the response to, and coordination of, maritime accidents which require Search & Rescue and also for Counter Pollution & Ship Casualty operations. It also has responsibility for vessel traffic monitoring.
The IRCG has three primary functions:

- Pollution prevention, casualty intervention and response
- Search and Rescue,
- Volunteer Services & Training.

3.1.1 The current structure of the Irish Coast Guard Service was set up in 2000. The Irish Coast Guard operates within the parameters set out by the International Maritime Organisation, specifically the guidelines set down in the International Aeronautical and Maritime Search and Rescue {IAMSAR) manual volumes I, II & II. A new issue of Volume Ill was published in July 2016. The IRCG Voluntary Services & Training Coast Guard Code states the IRCG core activities are:

- To provide a national marine search and rescue response service.
- To provide a coastal and, where appropriate, cliff search and rescue service;
- To provide a post-emergency body search and recovery service and relative liaison;
- To develop and co-ordinate an effective regime in relation to marine pollution;
- To provide a response to marine casualty incidents and to monitor/intervene in marine salvage operations;
- To provide a safety awareness and public information service in relation to the discharge of the functions set out above;
- To provide a maritime safety communications service.
- To provide a maritime assistance service and single point of contact to shipping, fishing, commercial and leisure traffic.

3.1.2 The Director of IRCG is supported functionally by an Assistant Director, IRCG Managers, Operations and Training Officers and Coast Unit Sector Managers (CUSM). The IRCG coordinates Search and Rescue (SAR) through its Maritime Rescue Coordination Centre (MRCC) in Dublin and Maritime Rescue sub-centres (MRSC) at Malin Head, Co. Donegal and Valentia Island, Co. Kerry. Each MRCC or MRSC is responsible for SAR operations and the day to day running of its allocated division.

Correspondence 8.7 Correspondence from Cox on first mission & D Class and MCIB response.

3.1.3 The CUSM based in Castlebar was responsible for an area which includes Kilkee and Doolin GCUs. When a Coastal Unit or station is tasked during an incident, the adjacent stations are deemed to be flank stations. For Kilkee Coast Guard Station, the flanked stations are Ballybunion and Doolin. A tasked station would request assistance from the MRCC who would then direct a flanking station to assist the tasked station during an incident.

Coast Guard Units are organised in the following way:

Officer in Charge (OiC)	Selected by HQ.
Deputy Officer in Charge (DOiC):	Selected by HQ.
Team Leader:	Selected by O i C.
Administration Officer:	Selected by O i C.
Training Officer:	Selected by O i C.
Education Officer:	Selected by O i C.
Equipment Officer:	Selected by O i C.

3.2 Kilkee Coast Guard Station

Kilkee CGU is one of the Coastal Units operated by the Irish Coast Guard. The unit was formed in 2013 by combining the existing CGU cliff rescue unit and the previous locally operated marine rescue service which had operated for approximately 30 years. Many of the original volunteers from this local Marine Rescue unit were retained as volunteers by the Irish Coast Guard. Kilkee CGU Operational Readiness Audit, carried out on 29th February 2016 certified the unit as "fully operational". Both the Delta RIB and D Class vessel were inspected as part of an audit carried out on 3rd November 2015. This audit stated that the Delta RIB was "in excellent overall condition; some minor historic damage noted on Port side midships in way of the hull chine and adjacent hulls action. Bilges clean and dry. Hull and fixtures and fitting at a high standard of cleanliness. Standing rigging in good order. Overall the vessel in excellent condition and well maintained".

3.3 The Role of the OiC and DOiC

The OiC and the DOiC have a central role in the operation of the volunteer Coast Guard operations and are selected by IRCG HQ. On a day to day basis they are responsible for maintenance equipment, training of volunteers, keeping records and team building of the unit. When there is an incident they are required to make decisions on the effective deployment of resources and planning the search operation. The OiC is party to the "Triple Lock System" of making the decision to launch the Coast Guard Boat (CGB). OiCs are usually drawn from current unit members. Members are advised of an available post and the applicants are selected after interviews. On appointment there is informal training on IRCG administration procedures.

Correspondence 8.7 Correspondence from Cox on first mission & D Class and MCIB response.

The Irish Coast Guard Boat Operations Manual states that:

"The OiC, in consultation with the designated Boat Cox, is responsible for considering the capabilities of the CGB in relation to operating conditions and probable tasks to be encountered prior to designation.

The OiC, in consultation with the designated Boat Cox, is responsible for considering the capabilities of the crew prior to designating roles of operation."

On the evening of 9th September 2016, the Voluntary Services and Training (VS&T) Manager from headquarters travelled to Kilkee and announced at a meeting with volunteers at the Kilkee Coast Guard Station that the OiC was being replaced. The DOiC was to be appointed interim OiC until a permanent replacement was appointed. The impending changes were deferred to give Headquarters time to advise MRSC Valentia (Coast Guard Radio Station for the area) of the personnel changes. The appointment of the DOiC as interim OiC was scheduled to happen on the 12th September 2016. For the avoidance of doubt, in the remainder of this document and during the period covered by this report the OiC and the DOiC were the incumbent post holders.

3.4 The Role of the Coxswain

The coxswain (Boat Cox) is the person who commands the Coast Guard Boat (CGB) and is helmsman of the boat. The boat cox is party to the "Triple Lock System" which decides to launch the CGB. The Boat Cox makes the operational decisions when the boat is on the water. In addition to the basic requirements to navigate and handle the boat, the Boat Cox also needs intimate local knowledge of the coastline around which the boat operates. The basic knowledge in boat handling and navigation is covered by the training provided by the IRCG. The local knowledge of the coastline is usually covered by the fact that the boat cox is involved with local fishing or water sport activities. This type of information is imparted by discussion between the boat cox and crew. It is part of local CGU training, where dangerous areas of coastline are identified and navigational strategies developed to use when navigating them.

The Irish Coast Guard Boat Operations Manual states that:

"The designated Boat Cox, in consultation with the CGB crew, is responsible for considering capabilities of the crew prior to allocating tasks during an operation."

The Boat Cox of the Delta RIB at the time of the incident was qualified in accordance with the requirements of IRCG.

Correspondence 8.7 Correspondence from Cox on first mission & D Class and MCIB response.

3.5 Triple Lock System

The Irish Coast Guard Boat Operations Manual describes the pre-launch procedure which must take place before every launch. Part of this procedure is the "triple lock system" described in the manual as:

"A triple lock pre-launch decision making process must be adhered to every time a CGB is launched, whether for a response or routine operation.

This triple lock process involves the:

- Rescue Co-ordination Centre.
- OiC (or authorised representative).
- Designated Boat Cox.

The CGB may only be launched if approval is obtained from all three parties."

(see Appendix 7.7 Triple Lock System).

3.6 Training.

Boat crewmembers were given training under the National Powerboat Scheme to the level of Advanced Powerboat Certificate. In 2013, the Irish Coast Guard commenced further training in SAR for boat coxswains. All boat crewmembers involved with the incident had completed their training to SAR 2 level. In addition, all crewmembers are required to attend unit training sessions on a regular basis.

3.6.1 The Coast Guard provides a Personal Survival Training and RIB capsize course. This is a bespoke course for the IRCG using the equipment provided by IRCG. The trainees use IRCG Personal Floatation Devices (PFD}, drysuits and helmets during the course. The three crewmembers in the Delta RIB at the time of the incident had all attended this course.

Please clarify if attending the course counts a passing the course?

MCIB RESPONSE:
Noted.

3.7 Radios

The Delta RIB had two VHF radios fitted to the centre console. One was set to Channel 16 and the other to Channel 67. Evidence from crewmembers states that there had been difficulties with the on board radio which had been preset to Channel 16. Because of this, one crewmember had her personal hand held radio locked to Channel 16.

Correspondence 8.7 Correspondence from Cox on first mission & D Class and MCIB response.

Due to the localised transmitting capabilities of these hand held radios, only Kilkee Coast Guard station could converse with them on this frequency. Subsequent information was relayed by telephone from Kilkee to Valentia.

Incident Chronology

3.8 9th September 2016

At approximately 23.00 hrs on Friday 9th September 2016, the Kilkee unit was paged requesting assistance in the search for a missing person in the Kilkee area. Kilkee CGU and Coast Guard Helicopter R115 were tasked. The parameters of the search area were the bay north of George's Head to Foohagh Point. The DOiC was in command. Only a land search on the cliff top took place that evening. Search operations were stood down for the night at 02.00 hrs.

3.9 10th September 2016

On Saturday 10th September 2016 the CGU operation resumed at approximately 06.30 hrs with a cliff top search. This involved three teams from Kilkee CGU with the DOiC in command. Following sightings of objects in the water offshore, the operation was re-assessed at the CGU base. The Delta RIB crew was gathered and the boat was launched at 09.30 hrs. Kilkee CGU was assisted by R115, Doolin CGU and the Civil Defence drone in the morning. The Delta RIB was retrieved and re- launched a second time later on 10th September 2016. The OiC arrived at the station at approximately 12.00 hrs and was briefed on the ongoing situation.

3.10 11th September 2016

The CGU operation during Sunday the 11th comprised a further cliff top search and the launch of the Delta RIB on two occasions. Neither the OiC nor the DOiC were in attendance for the first boat launch and the most senior member in the station was in command of the CGU for the period. The OiC was in attendance at the station prior to the second launch. The search focused on the area between Chimney Bay, north of Gregory's Head, and south of Bishop's Island, which is to the south of Kilkee. On the 11th September 2016, at approximately 17.57 hrs, personnel were paged and told by the OiC to assemble at the Station for 06.45 hrs on 12th September 2016.

3.11 12th September 2016

On Monday the 12th September both land and boat crews gathered to commence searches. The DOiC was in command. The day's plans were discussed between the station and MRSC Valentia. MRSC Valentia was requested to ask for assistance from the Doolin Station, due to a shortage of available suitably qualified boat crew.

Correspondence 8.7 Correspondence from Cox on first mission & D Class and MCIB response.

For the first launch of the Delta RIB, the "Triple Lock System" was completed using the IRCG Boat Operations & Pre Launch Planning Form (See Appendix 7.8 Pre Launch Planning document). The planning focused on the prevailing weather forecasts. The pre-planning document, which includes a heading "Possible hazards and risks?" stated a possible risk of 3m wave heights. There were no visual observations of sea conditions South of Kilkee in the proposed search area. The Met Eireann forecast had a small craft warning for 06.00 hrs but there is no record of this warning being considered.

Clarification; the possible risk of 3meter waves was for the late afternoon.

Given my intimate local knowledge I was confident of what to expect south of Kilkee.

The small craft warning from Met Eireann report is for the East of the country as stated previously.

MCIB RESPONSE: Noted.

Met Eireann: Westerly 3 to 5, decreasing in afternoon to 2 to 4
Wind Guru:

Time	07:00	10:00	13:00
Av wind speed Kts	11	9	8
Gusts kts	16	13	9
wave height m	2.6m	2.4m	2.4m

Can you please clarify date and location for the above data?

MCIB RESPONSE: See Appendix 7.5B.

3.11.1 The operational limits for the Delta RIB are set out in the Irish Coast Guard Boat Operations manual. In brief this states that the limits were daylight and unrestricted visibility only, wind up to and including Force 6 /27 kts and significant wave height of 2 m. Maximum distance from coastline 6 nautical miles. This boat was not permitted to operate in surf.

Clarification; for the first launch we operated within all of the above criteria, having taken localised weather conditions into account.

MCIB RESPONSE: Please refer to para 3.11 and Appendix 7.2.

3.11.2 The second launch at approximately 10.30 hrs, with a crew of three, the Boat Cox, a second Cox and one crewmember (the Casualty), appears to have been authorised with less formality, discussion and risk assessment.

Can you please Clarify to whom it appears to have been less formal as all of the required information was populated in the pre-launch plan for the second launch.

MCIB RESPONSE: Please see para 3.11.2 and Appendix 7.8.

The IRCG Boat Operations & Pre Launch Planning Form for the previous launch appears to have been used again with the notation "continued from this morning" in the top right hand corner. This implies that consensus had been reached that the first launch had not encountered any problems and that wind and sea conditions were the same.

Clarification; the sea conditions had actually improved prior to the second launch and I had a discussion with regard to this with both Kilkee crew members and the DOiC.

MCIB RESPONSE: Noted.

3.11.3 It could not be determined whether any consideration was given to terminate the search operation at any point over the weekend. Irish Coast Guard SAR Emergency Checklist

Correspondence 8.7 Correspondence from Cox on first mission & D Class and MCIB response.

contains search termination criteria for the guidance of operational crews (see Appendix 7.9 Search Termination Criteria).

Clarification; High winds on Sunday the 11th postponed the search for a number of hours.

MCIB RESPONSE:
Noted.

3.11.4 Prior to launching one crewmember had her personal handheld VHF secured to the upper part of her PFD, locked to Channel 16, close to her ear to provide the second VHF cover. This was the crewmember who issued the "MAYDAY" call on Channel 16 following the capsize of the Delta RIB.

Correspondence 8.7 Correspondence from Cox on first mission & D Class and MCIB response.

3.11.5 The transcript of radio traffic shows radio communication problems between MRSC, Valentia and the Delta RIB. At times it was necessary for the Kilkee Base to relay communications between the Coastal Radio Station and the Delta RIB. This was due to line of sight and distance issues for VHF radio communications.

3.11.6 The last radio communications between Team Sierra, the clifftop CGU team, and the Delta RIB was at 11.56 hrs. At 12.20 hrs the Delta RIB reported to Kilkee Station that it was just south of Bishop's Island. At 12.37 hrs it reported it was heading back to Chimney Bay, north of St. George's Head. At 13.06 hrs the CGB reported "we are just off the back of the Pollack Holes. We will just do one search around underneath the shelter and we will head in". At 13.11hrs a "MAYDAY" call was picked up by the Kilkee Base. The call was made by one of the crew using her hand-held radio on Channel 16. This call was not picked up by MRSC, Valentia. A member of the public phoned the Kilkee Station and reported an incident involving the Delta RIB. Kilkee station contacted MRSC Valentia on Channel 67 and by telephone to let them know what had happened and asked them to task the SAR helicopter. At the time both the OiC and DOiC were at the station.

3.11.7 The Delta RIB appears to have been capsized by a large wave striking it beam on to starboard. The three crewmembers were thrown clear of the vessel and all three crewmembers lost their helmets during the incident. The crew were unable to conduct the Coast Guard post RIB capsize instructions due to the severity of the incident and the conditions. A wave righted the vessel shortly after the capsizing. The RIB's manual self-- righting system was not activated and subsequent inspection found the gas cylinder intact and fully charged.

3.11.8 The second Cox managed to swim offshore. The Boat Cox was swept inshore, into a small recess in the cliff and clung to rocks until rescued by Coast Guard rescue helicopter R115. The third crewmember was washed inshore under the cliff with the RIB. Civil Defence drone video footage, which commenced at 13.24 hrs, shows the third crewmember holding on to the port bow section but she was repeatedly washed off by the waves. After approximately three minutes the Casualty lost her grip and was next sighted lying face down in the water and drifting freely with the seas.

3.11.9 From later inspection of the drone footage none of the PFDs had been operated to inflate the airbladders. This was later confirmed by inspection of the PFDs. None of the Personal Locator Beacons (PLB's) had been activated. No hand flares were set off.

Correspondence 8.7 Correspondence from Cox on first mission & D Class and MCIB response.

3.11.10 At the cliff top, several teams from different emergency services had assembled. These included Gardai, Civil Defence and the Fire Service. There were also onlookers on the cliff top who were not members of the emergency services.

3.11.11 The outgoing OiC arrived at the station sometime between 12.30 hrs and 12.50 hrs on the 12th September 2016. There is conflicting evidence as to whether he was briefed on the on-going search operation or had called to return equipment. In and around this time the Delta RIB reported that it was heading back to Chimney Bay and was quickly followed by the "MAYDAY" call. On becoming aware of the distress call the OiC made his way with another colleague to the cliff top to assess the situation and took charge of the incident liaising with other agencies and the Coast Guard Helicopter.

3.11.12 At this time, a privately-owned RIB was being prepared to launch with the intention of assisting in the search. The RIB owner was asked by a member of the Gardai to await the arrival of the DOiC. The DOiC boarded the RIB and departed for the scene of incident. This vessel got close enough to rescue the second Cox who had been able to swim offshore. At approximately 13.44 hrs the rescued second Cox was transferred to the D- Class lifeboat which had been launched to assist. The second Cox was brought to the pier at Kilkee where an ambulance was on standby to take her to hospital.

Clarification; as the cox'n of the D-Class, the casualty was not transferred to the D-Class but remained on the private RIB which returned to the pier, the DOiC did transfer to the D-Class.

MCIB RESPONSE: Report has been amended.

3.11.13 At 14.17 hrs Coast Guard helicopter R115 winched the Casualty out of the water and landed on an adjacent cliff top where paramedics attended to her. They brought the Casualty to Limerick University Hospital where she was pronounced dead at 16.05 hrs.

3.11.14 Following the departure of Coast Guard helicopter R115, Coast Guard helicopter R117 continued with the rescue effort. The cliff top rescue teams, a mixture of personnel from the different services present, abseiled down the cliff face and managed to get a line to the Boat Cox. They were able to reassure the Boat Cox and brief him on the situation. The Boat Cox was recovered by helicopter R117 at 17.25 hrs and brought to hospital.

Post Incident Chronology

3.11.15 The post mortem report of 13th September 2016 on the deceased Crewmember indicated the cause of death as drowning. A skull injury was also identified which might have been a contributory factor but on its own this injury would not have been fatal. The autopsy report conclusions are provisional at the time of publication of this report. It is the role of the Coroner's Office to determine the cause of death.

Correspondence 8.7 Correspondence from Cox on first mission & D Class and MCIB response.

3.12 The Gardai collected equipment from the Coast Guard Station and placed it in plastic bags, with seals attached. These were handed over to the MCIB on the 14th September 2016. The equipment and all other contents of the bags were examined on the 3rd October 2016. · On completion of the examination, the equipment was returned to the IRCG at their depot in Ballycoolin on 13th October 2017. At that time two lifejackets, identified as being worn by crew on the day of the incident were inflated. Both operated and fully inflated.

3.13 Each waistcoat had a red flashing light unit, activated by immersion in water, a GMS Accusat PLB; whistle on lanyard, a kill cord, a penknife, a handheld signal flare, a safety line with stainless steel snap-on clamps and a handheld ICOM VHF transceiver. Of the equipment retained by the Gardaí and returned to the MCIB, there was only one handheld VHF, which was thought to be the unit used to issue the "MAYDAY" call. PLB's 3, 4,5 and 8 were missing. Lifejacket 8 was missing.

3.14 The safety helmets were examined. At the scene of the incident, on the 14th September when the vessel remnants were recovered, it was noted that one helmet had been crushed. All other helmets examined were intact, but on two the inner air bladder was missing.

3.15 The Casualty's drysuit was cut away by the Paramedics attending to her immediately after the incident. The remains of this suit were later inspected by the MCIB. It was so damaged that no conclusive determination could be made concerning its condition prior to the incident.

3.16 After the incident the search operation was taken over by the Civil Defence. The body of the missing person was found on the 24th September 2016 in the same cove as the incident.
Clarification; the person was found approximately 400 Meters further East of the wreck site, in an area that is only accessible by the D-Class.

MCIB RESPONSE:
Noted.

Correspondence 8.7 Correspondence from Cox on first mission & D Class and MCIB response.

4. ANALYSIS

Search and Rescue and Recovery Operations

4.1 In Ireland the overall framework for search and rescue (SAR) is established in the Irish National Search and Rescue Framework document which was issued by the Minister for Transport in March 20101 This document addresses SAR but it does not provide adequate clarity regarding rescue and recovery operations and in particular when a search and rescue mission becomes a search and recovery operation. The framework document does not provide any guidance on any intermediate stages between rescue and recovery operations.

4.2 This incident occurred on the third day of an operation in respect of a person who had been missing since 9th September. Sightings of objects in the water had led to the launch of the CGU boats on 10th September. The likelihood of a rescue rather than a recovery from the sea was severely reduced by the 12th September. There seems to have been no clear analysis as to when the operation changed from rescue to recovery or even whether it had been changed. A recovery operation would require a commensurate analysis of the risks involved and should have resulted in a different strategy being adopted. The teams were not provided with adequate guidance on these considerations.

Decision to launch the Delta RIB.

4.3 The decision to launch a CGB is made by three people under the "Triple Lock System" as described in paragraph 3.5. The manner in which this is implemented is outlined in section 1, Chapter 4 of the Irish Coast Guard boat operations manual (see Appendix 7.7). The investigation found that the only factors considered prior to either launch on the 12th of September were the weather forecast, predicted sea conditions and the availability of boat crew.

The launch log stated a possible 3m swell, which was outside the limit for boat operations.

Clarification; This swell was an estimated wave height and also for later in the afternoon.

No visual confirmation from the cliff tops was made as to the swell and wave heights.

Clarification; Due to my intimate knowledge of the location I was confident of what the sea conditions would be like slightly Southwest of Kilkee bay.

There is no evidence that Met Eireann small craft warning was considered. These findings indicate that the "Triple Lock System" was not adequately adhered to before launching the Delta RIB on the 12th September.

MCIB RESPONSE:
Please refer to para 2.6, 3.5, 3.11, 4.3, 4.4, 4.8, 5.6, 5.7 and Appendix 7.5, 7.6 and 7.8.

Correspondence 8.7 Correspondence from Cox on first mission & D Class and MCIB response.

4.4 Factors which appear not to have been considered included:

- The necessity for launching a CGB.
- The effectiveness of the Delta RIB on a lee shore in breaking swells.
- The operational status of the vessel and functioning of all equipment.
- A co-ordinated plan of searching.
- The operational limits of the craft.
- The risk of personal injury to the crew of the Delta RIB given the operational conditions.
- The availability of a drone as an appropriate search tool.

  Clarification; at no time as the cox'n of the Delta that morning were we informed that the Civil Defence were available as an asset to the KCGU – see appendix 7.6 where the Garda are the only listed asset

MCIB RESPONSE: Noted.

- The risk of personal injury to the crew of the Delta RIB given the likelihood of recovery rather than rescue if the missing person had been in the sea since 9th September.

4.5 The IRCG does not distinguish between "search and rescue" and "search and recovery" operations and does not have a priority rating on CGB callouts. The Search Termination Criteria Document states: "A SAR search should continue until the possibility of success is no longer reasonable and all hope of rescuing survivors is past. If after consultation with those involved, it has been determined that a further search would be of no avail, the SMC (search mission co-ordinator} must consult the On Call Officer before terminating the search."

The capsize incident on the 12th of September

4.6 The incident occurred in a small cove at the base of a cliff to the north and east of Foohagh Point. The area is covered by the chartlet as shown in Appendix 7.4. Local knowledge is that the seabed in the area rises in sharp cliff faces rather than a gradual shelving of the seabed. This can cause a sudden uprising in certain sea conditions and large swells can appear as if from nowhere.

Clarification; East of Knockroe Point, 1 NM East of 'Approximate position of capsize at 12:11' shown on appendix 7.4

Due to this misplacement of 'Approximate position of capsize at 12:11' all other information in relation to this position are also incorrect e.g. the 'Site of Wreck'

MCIB RESPONSE: Please see previous response to para 1.2.

4.7 The cliffs at Foohagh Point are approximately 49 m in height above sea level. The cove where the incident occurred shelves very steeply from 29 m to 11.6 m and then dries. There are numerous rocky shoals in the area, some of which dry. The innermost part of the cove is located at 52° 40.37'N 009° 41.16'W.

Clarification; East of Knockroe Point

MCIB RESPONSE: Please see previous response to para. 1.2.

Correspondence 8.7 Correspondence from Cox on first mission & D Class and MCIB response.

4.8 Over the period of the original operation on the 12th September, the weather conditions were not favourable with high swells and strong winds forecast. This does not appear to have been adequately considered during the launch planning. The predicted wave heights, as per the Met Eireann weather forecasts at 06.00hrs of 2.8 to 3 m swells exceeded the operational limit for the RIB which was 2 m. There was also a "Small Craft Warning" in operation on the day which appears to have been ignored.

Clarification; this information was adequately considered prior to launch as I have stated previously.

MCIB RESPONSE: Please see previous response to para 3.11.

4.9 The Boat Cox lived locally and had undertaken all of the relevant training for boat coxswain. The cove was not searched earlier in the day because there was insufficient water due to the state of the tide. The track taken by the RIB when traversing the cove resulted in it being placed beam on to the direction of the swell at slow speed. The Delta RIB was brought close inshore into the breaking waves where it capsized.

4.10 The three crewmembers lost their helmets during the capsize. The investigation was unable to establish definitively how the helmets were lost. The security of the helmet in use depends entirely on it being properly fitted/inflated and secured according to the suppliers instructions. The post-mortem on the Casualty identified a trauma to the side of the head in a position which should have been protected by the helmet.

4.11 The PFD would only support an unconscious person in a face up position when it was fully inflated. The PFDs inflation mechanism was manual to prevent inadvertent automatic activation. During the incident, none of the three casualties inflated their PFDs. During post incident examinations two of the three PDFs were activated so difficulties in activating the PFDs during the incident may have arisen from difficulty in finding the activation toggle, or a decision by the wearer not to inflate their device.

4.12 In this incident the crew members were thrown well clear of the boat during the capsize and were some distance apart. They found themselves in heavy seas which righted the boat again. The Boat Cox was washed inshore and clung to the rocks until winched off by helicopter. The second Cox swam offshore and was rescued by boat. She had ingested water and required medical attention once brought ashore. The Casualty was washed inshore with the boat on to a rock ledge that was awash under the cliffs. She clung to the grab line on the port bow of the boat, but was repeatedly washed off and went under water. After three minutes she was washed off and did not swim back to the boat. The video footage showed her face down with her PFD un-inflated. The Casualty expended energy holding on to the boat, would have ingested water and probably received the impact to the head during one of the periods when she was submerged. Following the "MAYDAY" message the D Class Coast Guard Boat was launched from Kilkee. There is no record of any pre-launch risk assessment of the D Class launch. This boat was

Correspondence 8.7 Correspondence from Cox on first mission & D Class and MCIB response.

launched in similar sea and wind conditions as the Delta RIB. These conditions were outside the operational capabilities and limits of both of these craft.

Clarification; as you are already aware I was the cox'n of the Delta when it was launched approx. 08:15 on the 12th, on arriving at the Coast Guard Station I was comfortable to launch the D-Class, I was willing to make all efforts possible to rescue my colleagues whilst acting with due care not to endanger myself or any other crew members on the D-Class. e.g. I did not enter the immediate area where the Delta had capsized as I did not deem this to be safe.

MCIB RESPONSE: Please refer to para 3.11.11, 4.12 and Appendix 7.3 and 7.7.

Operational Issues

4.13 The IRCG manages approximately 900 volunteers which requires dedicated resources and systems. While not within the scope of this report, which is focused on the capsize incident on the 12th September 2016, it is reasonable to conclude that the capacity of the Coast Guard to manage such a large number of volunteers places a strain on its ability to manage the day to day operations of the coastal units.

4.14 Prior to the incident, the Irish Coast Guard had been subject of two recent separate reports:

- Value for Money Report published in 2012. This report made recommendations with respect to human resources and training of personnel (see Appendix 7.10 Extract from Value for Money Report).
- Report issued by Maritime SAR Limited following an incident where the Dingle CGU RIB capsized in August 2014. This report made 20 recommendations (see Appendix 7.11for detail).

Clarification; I was never made aware of these findings.

MCIB RESPONSE: Noted.

4.15 The investigation in 2014 did not find any formal recognition of the skills required for OiCs and DOiCs or specific training program for these key personnel. The report into the 2014 Dingle incident identified the high workload and responsibility of the OiC as factors in the incident.

4.16 This current investigation found 'that there were management issues in the Kilkee CGU. A number of coxswains with local knowledge had left the unit. There was no local area Coast Unit Sector Managers (CUSM) for a period and the situation had escalated to the point that IRCG headquarters had intervened as detailed below.

4.17 During the course of this investigation the following facts were established:

Correspondence 8.7 Correspondence from Cox on first mission & D Class and MCIB response.

- Headquarter managers became aware of management issues at the station and held a meeting with the volunteers in July 2016.

- A further meeting was held at the station only hours before the first call out on 9th September 2016. It was announced that the OiC was to step aside and undertake another position with the IRCG. The proposed handover was deferred until 12th September 2016 to allow for notification of the personnel changes to MRSC Valentia and other relevant parties.

4.18 It is normal practice for a Coast Guard Unit to call for assistance from flanking stations, through MRCC, when additional volunteers are required. Doolin responded to this request on the 12h September, which was a Monday, a normal working day. The deceased crewmember was from Doolin and had brought her drysuit and helmet with her. She was supplied with a PFD from the Kilkee station.

Safety Management and Volunteers

4.19 The IRCG consists of full time staff with headquarters in Dublin and with further staff based in the radio centres in Valentia and Malinhead. However, in circumstances such as those described in this report the IRCG is dependent on the role of volunteers who are based in the 55 coast guard stations around the coast. This structure of full time staff managing volunteers leads to complexity in the overall system.

4.20 The relevant legislation in relation to safety, health and welfare at work in Ireland is the Safety, Health and Welfare at Work Act 2005. The Health and Safety Authority is carrying out its own investigation into the incident.

4.21 An effective Safety Management System has at its core a feedback mechanism which reviews operations and analyses them. It uses accident reports and other non-compliances to review procedures and to constantly seek improvement. The IRCG have experienced incidents previously and most notably a Delta RIB capsized in Dingle on the 25th of August 2014. The IRCG carried out an internal accident investigation report, the recommendations of which are annexed to this report. This incident in 2014 has many attributes similar to the present case and a Safety Management System should ensure that the recommendations would be reviewed and implemented. It is apparent that not all of the recommendations were implemented. The IRCG needs to implement an effective and functioning Safety

Correspondence 8.7 Correspondence from Cox on first mission & D Class and MCIB response.

Management System.

Clarification; never made aware of this.

MCIB RESPONSE:
Noted.

4.22 The International Standards Organisation, ISO, in March 2108 adopted the International Standard ISO 45001:2018 Occupational health and safety management systems. The main elements of this standard are as follows:

- Integration with other management systems
- Provide an integrated approach to organizational management
- Ensure the organisation establishes clear policies which are compatible with the overall strategic objectives and direction of the organisation
- Promote continual improvement across the organisation
- Enable the organisation to address and manage risk in the workplace
- Context of the organisation
- Understanding the needs and expectations of the worker and other interested parties
- Leadership, culture and commitment
- Polices linked to overall strategic objectives and direction of the organisation
- Participation and consultation
- Risk and opportunities
- Performance evaluation
- Evaluation of compliance
- Management review

Correspondence 8.7 Correspondence from Cox on first mission & D Class and MCIB response.

Equipment and Training

4.23 The volunteers were supplied with a safety helmet, a drysuit, an inflatable PFD which had pockets for a handheld VHF radio, a flare, a Personal Locator Beacon (PLB), a knife and a safety lifeline.

4.24 In 2013, new helmets and drysuits were provided to both Doolin and 'Kilkee CGUs. There was no evidence of formal instruction or training in the use of this equipment. Full instructions for use and care of this equipment was available to IRCG staff and volunteers on an internal Extranet.

Clarification; never given access to the Internal Extranet.

MCIB RESPONSE: Noted.

4.25 Each safety helmet had an inner air bladder which is designed to be inflated to ensure a proper fit on the wearer's head. The helmet manufacturer's instructions confirm that inflation of the bladder is essential to a proper fit of the helmet and that the strap assembly must be properly secured and adjusted (see Appendix 7.12 Coast Guard fitting and handling instructions). All three crewmembers lost their helmets when they were thrown from the Delta RIB. Two of the helmets recovered after the incident did not have the inner air bladder. The Casualty suffered a head injury during the incident which may have contributed to her inability to return the vessel after being washed away.

4.26 The Marine Safety Helmet documentation states that it complies with Publicly Available Specification PAS 028:2002 for marine safety helmets. This specification specifies the requirements for marine safety helmets for use by occupants of small, fast craft. Also included in this specification are mandatory requirements that are specific to the marine environment for the helmet to be positively buoyant.

4.26 The inflatable PFDs that were supplied to the IRCG were Mullion "Rescue 400 Seaforce Vest" model. These comprised a waistcoat type jacket with two types of buoyancy. Non-inflated, the jacket provided 50 Newtons of buoyancy. The standards to which the lifejackets conformed were EN ISO 12402-S(non-inflated) and EN ISO 12402-6 (inflated) as a Special Purpose PFD. None of the crewmembers inflated their lifejackets for maximum buoyancy after they were thrown in the water. A fully inflated lifejacket can reduce swimming and manoeuvrability and may have been a factor in a wearer's decisions not to inflate.

Correspondence 8.7 Correspondence from Cox on first mission & D Class and MCIB response.

4.27 All IRCG boat crew must attend the bespoke personal survival skills and capsize course. Although all the crew had attended this course, only one of the surviving crewmembers had done so recently using the current PPE and survival equipment. At present IRCG crews are required to attend this course only once. As this is specialised training and hard to replicate during routine training on the bases there is a case to be made for frequent refreshers, particularly when new equipment is introduced.

Boats Used

4.28 The IRCG Delta RIB was being used to carry three volunteers in what was initially a search and rescue operation. At no stage on the 12th of September was the nature of the mission clearly defined. The carriage of personnel on boats is regulated in Ireland by means of the Merchant Shipping Acts. The status of the people being carried depends on the nature of the mission. It can be considered that during a SAR operation that all efforts must be made to save life commensurate with the safety of the rescue boat crew. However, the IRCG boats are not vessels of opportunity as they are dispersed throughout the coast in a planned manner to be readily available for such uses. Therefore, they should be safe and comply with all applicable statutory requirements. These boats should hold passenger boat licences or load line exemption certificates. In this case, as they were being used for search operations, it is considered that the vessels should have held passenger boat licences.

4.29 It was noted in this investigation that the fixed VHF radio installation on the Delta RIB was not operational. The volunteers were aware of this and carried a handheld VHF on Channel 16. However, all vessels fitted with a VHF radio installation must hold a ship's radio station licence and the operators must hold the appropriate operators certificate. Additionally, the IRCG Delta RIB should have held a passenger boat licence and this requires that the radio installation is correctly installed, fitted and operational.

New Technologies

4.30 The decision to launch the Delta RIB and to deploy cliff teams was based on traditional ways of carrying out search and rescue missions and recovery operations. Using boats and teams places volunteers in hazardous situations and requires extensive risk management and safety procedures.

A fundamental tenet 'of safety management systems is to seek to avoid taking a risk if possible. New technologies such as drones may provide alternative means of searching, particularly in recovery operations where they could be an effective way

Correspondence 8.7 Correspondence from Cox on first mission & D Class and MCIB response.

to reduce risks to volunteers and other emergency services. In this incident, the missing person had been reported missing from the cliffs on 9th September and the likelihood of a rescue from the sea, rather than a recovery situation, was very limited.

Correspondence 8.7 Correspondence from Cox on first mission & D Class and MCIB response.

5. CONCLUSIONS

Search and Rescue and Recovery Operation

5.1 The Irish National Search and Rescue Framework does not provide adequate clarity in relation to search and recovery operations as to when a search and rescue operation becomes a search and recovery operation or at any of the intermediate stages.

5.2 The criteria for determining the response to recovery operations as opposed to search and rescue and the appropriate responses were not clearly defined. This is especially in incidents where search and recovery operations take place close to cliffs and in surf conditions.

5.3 The need to deploy, and the activities to be carried out by, the cliff search teams and boats in search and recovery operations was not adequately considered.

5.4 The use of new technologies or alternative means of carrying out search and recovery operations was not adequately considered.
Please clarify what new technologies?

5.5 The criteria for oversight of Kilkee station to ensure that it met pre-determined operational readiness were not established. There was no evidence of any effective management system in place with associated oversight to ensure that it met these criteria before the operation was tasked.

5.6 The "Triple Lock System" to decide on launching a boat was not adequately set out. Neither the roles and responsibilities, nor the acceptance criteria for launching before each launch were adequately documented.

5.7 The Delta RIB was used outside of the IRCG's own defined operational limits.

Delta RIB Issues

5.8 The Delta RIB was not licensed or certified in accordance with the statutory requirements for the activities in which it was engaged.

5.9 The Delta RIB did not hold the required ship's radio station licence.

5.10 The Delta RIB Boat Cox did not hold the required statutory operator's licence. This is a mandatory statutory qualification and is separate to any training provided by the IRCG.

MCIB RESPONSE: Please refer to para 3.9, 3.11.8, 3.11.9, 4.3 and 4.4 of the report.

Correspondence 8.7 Correspondence from Cox on first mission & D Class and MCIB response.

Safety Management Issues

5.11 The capsize of the Kilkee Delta Rib occurred within a wider context of safety management in the Coast Guard as a whole. While this investigation report focuses on the specific Kilkee Delta Rib Casualty it is necessary to consider some of the wider context within which it occurred. It is clear from the analysis that there are a number of specific issues which contributed to the Delta RIB capsize. Each of these issues requires to be addressed as well as addressing the overall wider systemic issues.

5.12 The IRCG does not have an effective Safety Management System as demonstrated by recent incidents and the resulting recommendations which remain outstanding.

5.13 On 12th September the Coast Guard Boat (CGB) was launched in conditions which were outside the operational limits of the vessel. Insufficient consideration was given to the necessity and effectiveness of a boat operation. There were critical deficiencies with the boat's communication and navigation equipment.

Clarification; local conditions were not outside of the operating parameters of the Delta RIB and do not appear to have been taken into account anywhere within this report.

5.14 The IRCG did not factor in the priority nor necessity of launching a CGB for a recovery operation in the circumstances described in this report, nor did it consider the effectiveness of a CGB in the search.

5.16 All Coast Guard operational instructions and procedures are available to all volunteer on the Coast Guard's Extranet system.

Clarification; never given access to the Extranet System.

MCIB RESPONSE: Certain paragraphs have been amended for clarity. Please refer to 2.1.2, 2.6, 3.5, 3.11, 3.11.1, 3.11.2, 4.3, 4.4, 4.8, 5.6, 5.7, 5.14, and Appendices 7.2, 7.6 and 7.8.

MCIB RESPONSE: Noted.

Correspondence 8.7 Correspondence from Cox on first mission & D Class and MCIB response.

6. SAFETY RECOMMENDATIONS

6.1 The Minister for Transport, Tourism and Sport should review the Irish National Search and Rescue Framework to ensure:

- The criteria for determining the response to recovery operations, as opposed to search and rescue, is clearly defined and the appropriate responses to developments during an operation should be set out clearly.
- The criteria for tasking and launching Coast Guard boats is reviewed and clearly documented.

6.2 The IRCG should:

- Ensure that the Irish National Maritime Search and Rescue Framework is embedded in the operation of all activities within the IRCG
- Implement a comprehensive Safety Management System to address the safety management issues identified in this report. This should comply with the appropriate international standards and should address all aspects of the management of the IRCG including volunteers, their management, appointment and training.
- Undertake regular audits and governance reviews of the Management System.
- All vessels operated by the IRCG should comply with the statutory requirements of the Merchant Shipping Acts including crew qualifications.

Correspondence 8.7 Correspondence from Cox on first mission & D Class and MCIB response.

APPENDICES

7.1 Vessel Specification on delivery in 2003

7.2 Coast Guard Boat Operational Capabilities and Limits (Delta RIB)

7.3 Coast Guard Boat Operational Capabilities and Limits (D Class)

7.4 Chart of area of incident

7.5 Met Eireann Weather Report

7.6 Pre-Launch Document for 1st launch

7.7 Triple Lock System

7.8 Pre-Launch Document for 2nd launch

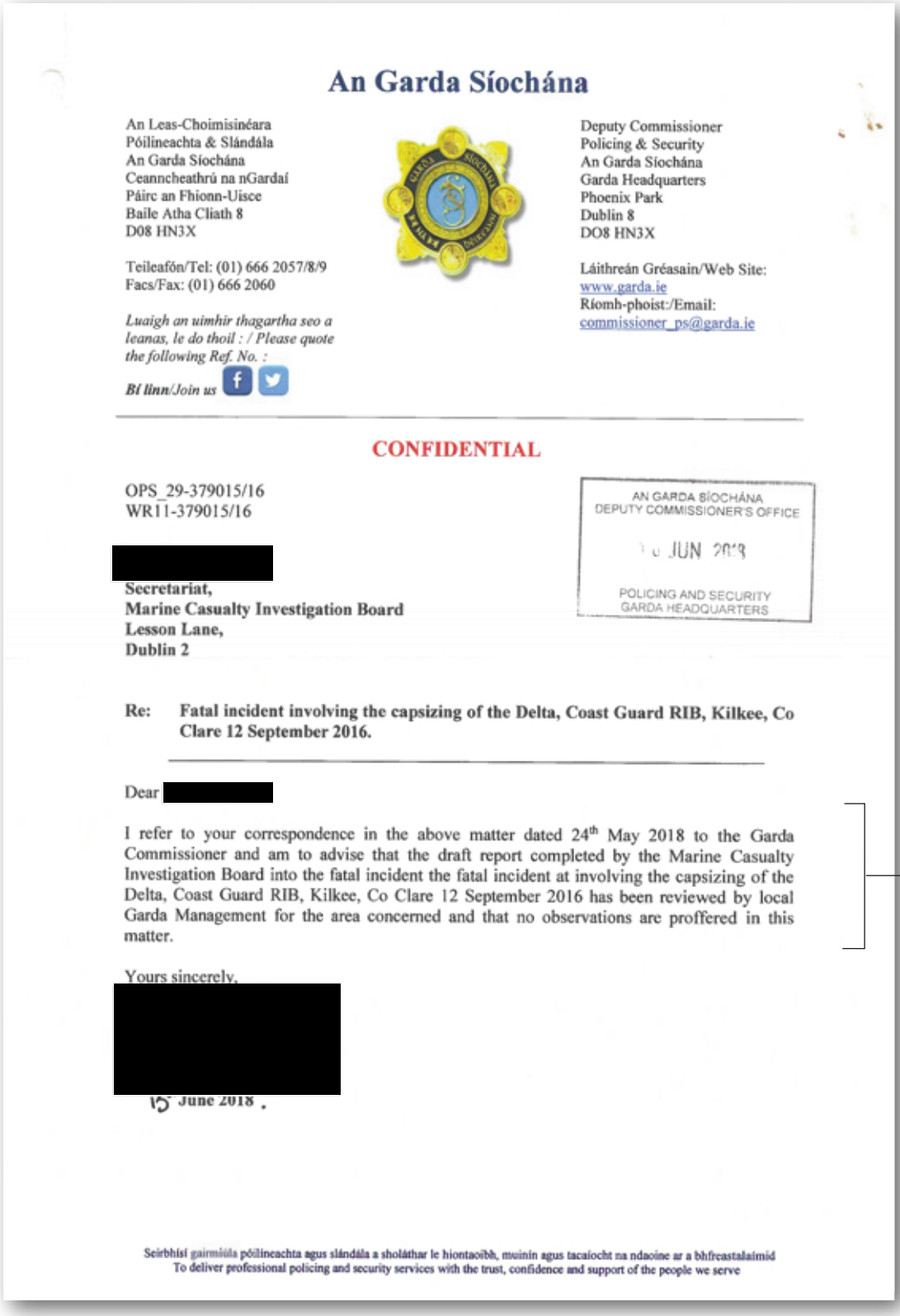
7.9 Irish Coast Guard SAR Emergency Checklist

7.10 Extract from Value for Money Report

7.11 Extract from Dingle Capsize Report

7.12 Coast Guard Marine Safety Helmet fitting and handling instructions

Correspondence 8.8 Correspondence from An Garda Síochána and MCIB response.



An Garda Síochána

An Leas-Choimisinéara
Póilineachta & Slándála
An Garda Síochána
Ceanncheathrú na nGardaí
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Teileafón/Tel: (01) 666 2057/8/9
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Luaigh an uimhir thagartha seo a leanas, le do thoil : / Please quote the following Ref. No. :

Bí linn/Join us

Deputy Commissioner
Policing & Security
An Garda Síochána
Garda Headquarters
Phoenix Park
Dublin 8
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Láithreán Gréasain/Web Site:
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Ríomh-phoist:/Email:
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WR11-379015/16

AN GARDA SÍOCHÁNA
DEPUTY COMMISSIONER'S OFFICE
JUN 2018
POLICING AND SECURITY
GARDA HEADQUARTERS

[redacted]
Secretariat,
Marine Casualty Investigation Board
Lesson Lane,
Dublin 2

Re: Fatal incident involving the capsizing of the Delta, Coast Guard RIB, Kilkee, Co Clare 12 September 2016.

Dear [redacted]

I refer to your correspondence in the above matter dated 24th May 2018 to the Garda Commissioner and am to advise that the draft report completed by the Marine Casualty Investigation Board into the fatal incident the fatal incident at involving the capsizing of the Delta, Coast Guard RIB, Kilkee, Co Clare 12 September 2016 has been reviewed by local Garda Management for the area concerned and that no observations are proffered in this matter.

Yours sincerely,

[redacted]

15 June 2018

Seirbhísí gairmiúla póilineachta agus slándála a sholáthar le hiontaobh, muinín agus tacaíocht na ndaoine ar a bhfreastalaímid
To deliver professional policing and security services with the trust, confidence and support of the people we serve

MCIB RESPONSE:
The MCIB notes the contents of this correspondence.

Correspondence 8.9 Correspondence from Minister for Transport, Tourism & Sport and MCIB response.

[redacted]

From: MINISTER'S OFFICE
Sent: 12 June 2018 14:38
To: [redacted]
Cc:
Subject: MCIB/12/266
Attachments: MCIB.pdf

Follow Up Flag: Follow up
Flag Status: Flagged

Hi [redacted]

[redacted], Private secretary to the Minister has asked me to confirm to you that the Minister has no comments regarding his report.

Kind Regards

[redacted]
Minister's Office

An Roinn Iompair, Turasóireachta agus Spóirt
Department of Transport, Tourism and Sport

Lána Líosain, Baile Átha Cliath, D02 TR60
Leeson Lane, Dublin, D02 TR60

[redacted]

MCIB RESPONSE:
The MCIB notes the contents of this correspondence.

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Telephone: 01-678 3485/86.
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