



MCIB

Marine Casualty Investigation Board
Bord Imscrúdú Taisní Muirí

**REPORT INTO
A FATAL INCIDENT
INVOLVING THE VESSEL
'TOMMY R'
IN DUNMANUS BAY,
WEST CORK,
9th OCTOBER 2019**

**REPORT NO. MCIB/294
(No.8 OF 2020)**

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 to the Minister of Transport - for the avoidance of similar marine casualties in the future, thereby improving the safety of life at sea and inland waterways.

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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Glossary of Abbreviations and Acronyms

CD	Civil Defence
CG	Coast Guard
CoP	Code of Practice: The Safe Operation of Recreational Craft
DSC	Digital Selective Calling
DTTAS	Department of Transport Tourism and Sport*
EU	European Union
FV	Fishing Vessel
GMDSS	Global Maritime Distress and Safety System
GPS	Global Positioning System
GRP	Glass Reinforced Plastic
IRCG	Irish Coast Guard
MRSC	Maritime Rescue Sub-Centre
MSO	Marine Survey Office
OSC	On Scene Commander
PFD	Personal Flotation Device
PLB	Personal Location Beacon
RNLI	Royal National Lifeboat Institution
SAR	Search and Rescue
SITREP	Coast Guard Situation Report
SRU	Search and Rescue Units
STCW	Standards of Training, Certification and Watchkeeping
UTC	Coordinated Universal Time
VHF	Very High Frequency
WCUSAR	West Cork Underwater Search and Rescue

Gal	gallon
hrs	hours
kw	kilowatt
kt	knots
ltr	litre
m	metres
NM	Nautical Mile
N	Newtons
MHz	Mega Hertz

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Produced 12th October 2020.

*The name of the Department, previously the Department of Transport, Tourism and Sport was changed to the Department of Transport with effect from the 17 September, 2020, S.I. No. 351 of 2020 refers.

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1. SUMMARY

1.1 At approximately 08:00 hours (hrs) on the morning of Wednesday the 9th October, 2019 a 5.7 metre (m) open deck boat '*Tommy R*' with one angler onboard departed Dunmanus Harbour for the purpose of fishing in Dunmanus Bay.

At 20:27 hrs the angler was reported overdue. Shortly after a search operation commenced in the Dunmanus Bay area (see Appendix 7.1 Charts of Dunmanus Bay - Chart 1. Dunmanus Bay).

1.2 At 22:59 hrs boat wreckage was found at Drishane Point on the Dunmanus Peninsula. The wreckage was identified as being from the boat '*Tommy R*'. The body of the Casualty was found by divers in an undersea gully off the northwest side of Carbery Island at 16:19 hrs on the 13th October. The body was recovered and brought ashore to Dunmanus Harbour.

Note: All times are local time = Coordinated Universal Time (UTC) +1 unless otherwise stated.

2. FACTUAL INFORMATION

2.1 Vessel Characteristics

Name:	<i>Tommy R</i> '.
Type:	Glass Reinforced Plastic (GRP), open decked boat with enclosed forward wheelhouse and covered foredeck. Marine diesel propulsion.
Overall Length:	6.0 m.
Breadth:	2.3 m.
Depth:	0.93 m.
Freeboard:	0.5 m.
Constructed:	1983.
Hull material(s):	A GRP constructed hull fitted with timber keel, bilge keels, gunnels, capping and belting. The wheelhouse was constructed of plywood with reinforced glass windows and screens. The hull was painted grey with white waterline, black paint to the hull topside capping and belting. Black antifouling below the waterline. The wheelhouse was painted white with grey trim.
Engine:	BETA 10 marine diesel, 8 kilowatt (kw).
Engine fuel:	Diesel Oil.
Fuel Tank:	Steel construction. 45 litre (ltr) (10 gallon (gal)) capacity located in the transom space.
Fuel consumption:	Approximately 0.5 ltr/hr at 50% power (see Appendix 7.2 Photographs No.1 and No.2).

- 2.1.1 The boat *Tommy R* was previously a fishing vessel named the *FV Jamie Andrea*, registered number S.567 (see Appendix 7.2 Photograph No.3 *FV Jamie Andrea* S.567).

The *FV Jamie Andrea* S.567 was removed from the fishing vessel register by application of its owner on the 1st August 2017. The vessel was sold shortly thereafter. The new owner refurbished and repainted the boat and renamed the vessel *Tommy R*. The vessel was sold in September 2019 to the Casualty as a recreational craft. The *Tommy R* as a recreational craft was exempt from compliance with the EU Directive as it was a craft built for own use. However, as a recreational craft it was required to comply with the Code of Practice (CoP):

The Safe Operation of Recreational Craft (2017)¹. As the vessel was being used for sea angling, Section 2.10 of the CoP was particularly relevant to this vessel.

2.2 Voyage Particulars

2.2.1 The entrance to Dunmanus Bay is marked by Three Castle Head on its south shore and Sheeps Head on its north shore. Dunmanus Harbour lies on the bay's south shore, 1 nautical mile (NM) south of Carbery Island. Carbery Island is 15 m high and 780 m long and lies approximately in the middle of Dunmanus Bay. Generally the outer part of the bay's shoreline is steep with deep water close to the shore. The inner part of the bay east of and including Carbery Island has numerous rocks and foul ground extending out from and between the rocky inlets ('coos') projecting from the islands and shorelines.

Carbery Breaker with 2.3 m depth of water below chart datum is located approximately 300 m west of Carbery Island. The island's northwest and southwest shores are foul ground (rocks) extending 280 m seawards (see Appendix 7.1 Charts of Dunmanus Bay, Chart 2. Carbery Island).

2.2.2 The '*Tommy R*' departed Dunmanus Harbour sometime around 08:00 hrs for a day's fishing in Dunmanus Bay. Family members of the Casualty reported that it was known he was going fishing for the day, but particulars of his planned trip were not known in detail. The track of the '*Tommy R*' between the boat's departure and the boat's last position is not known.

2.3 Crew Details

The angler was male, 23 years old and a qualified commercial fisher having attended the National Fisheries College, Castletownbere where he was awarded the following marine qualifications:

- Electronic Navigation Systems (fishing). Sept/Oct 2015
- GMDSS General Operators (Radio) Certificate. September 2015
- STCW Fire Prevention and Fire Fighting. October 2015
- STCW Medical First Aid aboard ship. October 2015
- STCW Elementary First Aid. May 2016
- STCW Personal Survival Techniques. May 2016
- Second Hand Full Certificate of Competency (COC2266) completed. June 2017

1. Updates to the Code of Practice: The Safe Operation of Recreational Craft 2017 (Marine Notice No. 51 of 2019 refers) were published in November 2019. The updates can be downloaded in electronic format at

A description of the Casualty, according to the Maritime Rescue Sub-Centre (MRSC) Situation Report (SITREP1 09 2103Z Oct 19), was that he was wearing yellow oilskin type leggings and that he was not wearing a Personal Flotation Device (PFD).

2.4 Safety Equipment

2.4.1 Life-saving appliances seen onboard by witnesses and subsequently found during the search and identified as being from the 'Tommy R' are as follows:

- Lifebuoys - two, of which one was fitted with 18 m of buoyant heaving line. Both lifebuoys marked 'JAMIE ANDREA S.567'.
- Distress Signals - contained in a 'PainsWessex' (PW) portable watertight canister comprising:
 - 3 x Red, handheld flares.
Date of expiry 06/2017.
 - 3 x Parachute rocket distress flares PW Mk8A.
Date of expiry 06/2017.
 - 1 x Buoyant orange smoke PW Mk9.
Date of expiry 06/2017.
 - 1 x Parachute signal flare. COMET 9/23100.
Date of expiry 09/2011.
 - 1 x Personal Location Beacon (PLB), unactivated, in a pouch, contained in the 'PainsWessex' (PW) portable watertight canister with the flares as listed above. Type: FASTFIND 220. 406 MHz McMURDO Cat:2 Z421 S/N: 220-589019. UIN:1F4E 79B782 FFBFF.
Date of batteries expiry 2021.
- Bubble Compass.

2.4.2 The PLB mentioned above is not recorded on the Commission for Communications Regulation (ComReg) database. ComReg also confirmed there is no record of any registration by the Casualty for a PLB. Whether the PLB was registered or not, it was in a viable condition and once activated Search and Rescue (SAR) agencies would receive a distress signal from the device with a GPS position.

2.5 Type of Casualty

2.5.1 This was a very serious marine casualty resulting in one fatality and the loss of the vessel.

2.6 Emergency Response (All times UTC (Z))

2.6.1 Routine 09 2103Z OCT 19
From MRSC Valentia
To MRSC Valentia SitRep Group.
UIIN2110/19
SAR SitRep ONE

9th October 2019

- 19:27 hrs MRCC Valentia receive a call from a family member advising that his son went fishing and has not returned.
- 19:27 hrs Helicopter Rescue 115 (R115), Castletownbere and Baltimore RNLI lifeboat(s), Goleen and Schull Coast Guard (CG) units tasked.
- 19:42 hrs PAN broadcast answered by Naval Patrol Vessel “L.E. WB YEATS” and “FV TEA ROSE” responded.
- 19:51 hrs Castletownbere lifeboat, Goleen and Schull CG units on scene and commencing search from Three Castles Head to Dunmanus Pier.
- 20:04 hrs Baltimore lifeboat on request to attend search.
- 21:08 hrs Naval Patrol Vessel “L.E. WB YEATS” on scene and assumes co-ordination. Baltimore lifeboat on scene.
- 21:24 hrs Helicopter R117 tasked to replace Helicopter R115
- 21:59 hrs Schull CG unit advises that wreckage seen at Drishane Point, Castletownbere lifeboat sent to investigate. Helicopter R115 in a hover over the area.
- 23:17 hrs Helicopter R117 on scene and commenced search at wreckage datum.

10th October 2019

01:15hrs On Scene Commander (OSC) stands down Search and Rescue Units (SRU) until 06:30hrs, 10th October 2019 for re-commencement of search for missing fisher.

All times UTC

2.6.2 The search continued throughout daylight hours. The coordination of the search was by Valentia Coast Guard Coordination Centre. Searches were conducted by the Shannon and Waterford based Coast Guard helicopters (R115 and R117), Castletownbere and Baltimore RNLI lifeboats, Naval Patrol Vessel ‘L.E. WB Yeats’, ‘FV Tea Rose’ and other local fishing boats.

The Naval Service Diving Unit was on scene from the 11th October for the remaining duration of the search.

2.6.3 The following volunteer dive organisations were involved and conducted underwater searches in the vicinity of Carbery Island - southwest and northern underwater shorelines and gulley's:

- West Cork Underwater Search and Rescue (WCUSAR) dive team on scene from the 12th October for the remaining duration of the search.
- Blackwater SAR Daunt and Cork Sub Aqua were on scene on the 13th October.

2.6.4 On the 13th October 2019 at 16:19 hrs (local time - UTC+1) a body was found by divers in the water northwest of Carbery Island at a depth of 11 m in a gulley/crevice. The body was recovered and brought ashore at Dunmanus Harbour and identified as that of the missing Casualty. Search operations and SRU's were stood down shortly thereafter (see Appendix 7.4 Diver Search Areas, Chart 5. Satellite image - Dive boat track and body location 13th October).

2.7 Weather Conditions (All times are UTC)

2.7.1 MRSC Weather Information:

Routine 09 2103Z OCT 19
From MRSC Valentia
To MRSC Valentia SitRep Group.
UIIN2110/19
SAR SitRep ONE

H - Weather on Scene

Wind: 5 W

Sea: Moderate

Swell: Low Wave

Air Temp: 12.6oC

2.7.2 Met Éireann - Estimate of Weather and Sea State conditions:

Re: Estimate of weather conditions between 13:00 and 16:00 hrs UTC on Wednesday 9th October 2019 in the vicinity of Carbery Island, Dunmanus Bay, Co. Cork.

Estimate of weather and sea state conditions: 12:00 to 18:00 hours UTC:

- Weather: Partly cloudy, scattered showers and sunny spells. Some showers were heavy with isolated thunder.

- Temperature: 11.5 to 14 degrees Celsius.
- Wind: Westerly, Beaufort Force 5 or 6 early afternoon (17 - 27 knots), occasionally reaching Force 7 (up to 29 knots). Gusting up to 34 knots, at times.
- Visibility: Moderate or poor in showers, otherwise good.
- Sea State: Very rough offshore on Atlantic coasts with a heavy swell. Up to 5 metres significant wave height at the M5 buoy, with maximum waves up to 7 metres. Mean wave period ~ 12 seconds. Mean wave direction west-north westerly (280 - 300 degrees) at the M5. Rough swell propagating inshore, 2 - 3 metres significant wave height within Dunmanus Bay, mean wave direction west-southwest (250 - 260 degrees), mean wave period ~ 8 - 9 seconds.
- Sea Temperature: 14.6 degrees Celsius (M5).

(See Appendix 7.3

Fig. 1 Met Éireann - Estimate of weather conditions - Dunmanus Bay, 9th October.

Fig. 2 Met Éireann - Sea Area Map and Beaufort Wind scale.

Fig. 3 Met Éireann - Sea States and Visibility.)

2.7.3 Met Éireann - 24-hour Sea Area Forecast issued at 12:00 Wednesday, 9 October 2019.

Sea Area Forecast until 12:00 Thursday, 10 October 2019.

1. Gale Warning: Nil

Small Craft warning: In operation

2. Meteorological situation at 09:00: A depression of 974 hPa, centred 140 nm to the northwest of Scotland, is generating a fresh to strong and unstable southwest to westerly airflow over Ireland. The flow will slacken overnight as frontal troughs approach Ireland from the southwest.

(See Appendix 7.3

Fig. 4 Met Éireann - 24-hour Sea Area Forecast (9th - 10th October).

Fig. 5 Met Éireann - Small Craft Warning (9th October).)

2.8 Tidal Conditions:

2.8.1 Tide information - [www.tidetimes.co.uk/dunmanus bay 20191009](http://www.tidetimes.co.uk/dunmanus_bay_20191009)

Wednesday 9th October 2019 Times UTC

HIGH TIDE:	01:18hrs	HEIGHT:	2.50m	
LOW TIDE:	07:40hrs	HEIGHT:	0.90m	
HIGH TIDE:	13:45hrs	HEIGHT:	2.70m	Tide range: 1.80m
LOW TIDE:	20.08hrs	HEIGHT:	0.90m	
Sunrise:	07.53hrs			
Sunset:	18.58hrs			

2.8.2 Tide information adjusted to local time (UTC+1).

HIGH TIDE:	02:18hrs
LOW TIDE:	08:40hrs
HIGH TIDE:	14:45hrs
LOW TIDE:	21:08hrs
Sunrise:	08.53hrs
Sunset:	19.58hrs

2.9 Post Mortem Report

2.9.1 The Coroner's autopsy report states that death was due to acute cardio-respiratory failure due to drowning. The report also noted that ethanol and drugs were not detected and there was no evidence of significant trauma. The report did note that there were bruises on the lateral aspect of the left leg above the knee and on the left side of the Casualty's chest. The conclusions of the Coroner's autopsy report are provisional at the time of publication of this report. Determination of death causation is a matter for the Coroner's inquest.

3. NARRATIVE

3.1 The Vessel

3.1.1 The *'Tommy R'* was previously named the *'FV Jamie Andrea'* S.567 and operated as a commercial fishing boat from 2014 up to August 2017 (see Appendix 7.2 Photograph No.3).

3.1.2 Commercial fishing vessels are required to comply with safety standards which are set out in legislation and recommendations in the form of a CoP. The applicable CoP for fishing boats the size of the *'FV Jamie Andrea'* is the 'CoP for the Design, Construction, Equipment and Operation of Small Fishing Vessels of less than 15 m length overall (Revision 2, 2014)' published by the Department of Transport, Tourism and Sport (DTTAS).

This CoP sets out the requirements for fishing vessels in their construction, machinery, equipment and stability and the vessels correct operation so that safety standards are maintained.

The CoP serves as the relevant CoP for section 4(9)(c) of the Fisheries (Amendment) Act, 2003 (No.21 of 2003) (as inserted by section 97 of the Sea-Fisheries and Maritime Jurisdiction Act, 2006 (No.8 of 2006)).

The Irish Maritime Administration of the Department of Transport is responsible for maritime safety. The Marine Survey Office (MSO) of the Irish Maritime Administration is responsible for the implementation of all national and international legislation in relation to safety of vessels including the surveys necessary for the certification of those vessels. The survey of fishing vessels under the CoP is carried out by a panel of surveyors.

3.1.3 The *'FV Jamie Andrea'* was inspected and surveyed on the 27th June, 2014 in accordance with Chapter 1 of the CoP, Section 1.5 - 'Compliance Procedures, Survey, Certification and Maintenance'. A 'Declaration of Compliance' was signed off on the 1st July, 2014. The Declaration was valid until the 27th June, 2018.

The Declaration of Compliance noted, amongst other details, that:

- The vessel's operational area was stated as being based at Schull, operating in Roaring Water Bay and surrounds, within five miles of a safe haven.
- In the authorised person's judgement, the vessel complied with the CoP and was fit for its intended fishing method and for the sea areas in which it was intended to operate.
- The vessel passed a stability check by the authorised person and the vessel's stability was declared as satisfactory.

- 3.1.4 In accordance with Chapter 1 of the CoP, Section 1.5, paragraph 1.5.5.1 an 'Intermediate Declaration by Owner' (which is a declaration by the owner that the vessel's arrangements, fittings and equipment have been maintained in accordance with the CoP) was submitted by the owner and acknowledged by the MSO on the 19th October, 2016.
- 3.1.5 The 'FV *Jamie Andrea*' S.567 was removed from the fishing vessel register by application of its owner on the 1st August, 2017. The vessel was sold shortly after and renamed the '*Tommy R*' by the boat's new owner. The new owner refurbished the boat, replaced the deck, put a new roof on the wheelhouse and painted the boat's exterior. There was no other major work done to the boat. The '*Tommy R*' was sold in September, 2019 to the Casualty. Therefore, at the time of the incident the boat '*Tommy R*' was not registered as a commercial fishing boat and the fishing vessel CoP for the Design, Construction, Equipment and Operation of Small Fishing Vessels of less than 15 m Length Overall (Revision 2, 2014) was not applicable.
- 3.1.6 It was reported that the '*Tommy R*' was used by the Casualty as a recreational craft. Recreational craft are vessels used for leisure or sport purposes and, similar to commercial fishing vessels, must conform to certain legislative requirements as to their construction and safety equipment. The CoP for The Safe Operation of Recreational Craft (2017) was developed by the Irish Maritime Administration and published by DTTAS to establish standards of safety and protection for owners and operators of recreational craft. The CoP has two parts, Part A and Part B. In particular Part B, Chapter 2, Section 2.10 of the CoP deals with sea angling craft such as the '*Tommy R*'.

Part A of the CoP identifies and explains the legislation that applies to recreational craft operating within Irish waters and with which owners and operators of such craft must comply. Statutory requirements arise from Irish maritime legislation, European Union (EU) Directives, and the States obligations under various international conventions adopted by the International Maritime Organisation and other international maritime bodies.

Part B of the CoP contains recommended guidelines for the safe operation of recreational craft. For the purpose of the Code vessels are classed in six categories, four of which refer to coastal waters and identifying specific areas of operation and, similar to the EU Directive 2013/53/EU design categories, are based on wind strength and significant wave heights and are summarised as follows:

- Category A - Ocean. Boats in this category would generally be greater than 10 m in length and undertake ocean passages and be capable of sustaining seas greater than 4 m in height and wind forces greater than Beaufort 8.
- Category B - Boats generally in excess of 7 m in length and cruising around the coasts of Ireland, UK and Northern Europe and offshore passages of between

50 and 500 miles and be capable of sustaining seas up to 4 m in height and wind force Beaufort 8.

- Category C - Inshore. Boats in this category would be expected to be in excess of 5 m in length, operating within 10 miles of land and always four hours from a safe harbour that can be accessed at all times and under all tidal conditions, and be capable of operating in seas up to 2 m in height and wind force up to Beaufort 6.
- Category D - Sheltered waters. Boats in this category would generally be expected to operate in estuaries or inshore coastal waters adjacent to a safe harbour, only be used during daylight hours unless equipped with the necessary navigation lights, and be capable of operating in seas of up to 0.3 m in height with occasional waves of maximum 0.5 m and wind force up to Beaufort 4.

The CoP, Part A design categories and Part B operational categories have common criteria, those being significant wave heights (i.e. capable of operating in seas up to a stated significant wave height) and wind forces on the Beaufort scale (i.e. wind up to a stated force).

The '*Tommy R*' was a recreational craft and being used inshore for fishing. The capability of inshore craft is determined by the vessels size and conditions in which the vessel is to be operated. In the case of the '*Tommy R*' it would be reasonable to deduce that the craft was being operated as a category C recreational craft, i.e. a vessel in excess of 5 m length operating within 10 miles of land and always four hours from a safe harbour that can be accessed at all times and under all tidal conditions, and be capable of operating in seas up to 2 m in height and wind force up to Beaufort 6.

- 3.1.7 The '*Tommy R*' was purchased by the Casualty approximately 3 - 4 weeks before the incident. It was reported that the Casualty used the boat for recreational fishing on several occasions prior to the incident. Although the boat was constructed in 1983 it had passed a CoP survey as a fishing vessel in June 2014. The survey's 'Declaration of Compliance' stated that the vessels stability was declared as satisfactory. An Intermediate Declaration submitted by the owner in October 2016 declared that the vessels arrangements, fittings and equipment had been maintained in accordance with the CoP. There had been no major changes to the boat's construction since 2016 and up to the time the Casualty purchased the '*Tommy R*' in 2019. A family member reported that he was not aware of any significant defects to the boat, that the VHF radio was in working order, the engine was reliable, and that the '*Tommy R*' was stable and manoeuvred well in a seaway.

3.2 Safety Equipment

- 3.2.1 At the time the '*Tommy R*' was sold to the Casualty in September 2019 the boat was fitted with navigation, communications and safety equipment as part of the

sale. A list of items sold with the boat is not available but photographic evidence, witness reports and items in the wreckage identified as being part of the 'Tommy R' indicate the type and scale of navigation equipment provided with the boat when sold in 2019 (see Appendix 7.2 Photograph No.9 - Wheelhouse console).

Included in the sale was:

Navigation and Communication equipment as follows:

- VHF Radio (make and model unknown, no Digital Selective Calling (DSC) function).
- Global Positioning System (GPS) navigation device - GARMIN GPS 128.
- Chart Plotter - GARMIN GPS Map 450.
- Wheelhouse clock (battery operated).

Safety Equipment as follows:

- Lifebuoys - Two, both lifebuoys marked 'JAMIE ANDREA S.567'.
- Bubble Compass.
- Distress Signals - an assortment contained in a 'PainsWessex' portable watertight canister.
- Personal Location Beacon (PLB) 'FASTFIND' contained within the 'PainsWessex' portable watertight canister, mentioned above.

Machinery:

- The engine was a BETA 10 marine diesel complete with 10 gal steel fuel tank located in the transom locker. It was estimated that that a full tank of diesel would last between 45 hours (hrs) at 5 knots (kts) or 90 hrs at 3 kts.

3.2.2 The owners of recreational craft are required to comply with safety standards set out in legislation and recommendations in the CoP. According to the recommended guidelines contained in Part B of the CoP, Chapter 2, Sail and Motorboats - Coastal Operation, the CoP's schedule of lifesaving and personal safety equipment recommends that the following type and scale of equipment that should be carried onboard a Category C boat such as the 'Tommy R' are as follows:

- A suitable PFD/lifejacket for each person onboard of at least 150 Newtons (N) (CE EN396/1).
- Crew safety harness/lifelines for all crew that may have to work on deck at any time.
- Appropriate clothing.
- Jack Lines capable of being rigged port and starboard and extending from the aft of the cockpit to the foredeck for use with crew lifelines.

- Emergency Liferaft Grab Bag for abandoning ship.
- A buoyant heaving line/throw bag.
- Horseshoe type lifebelt with light. Danbuoy with light fitted to one lifebelt.
- Buoyancy sling with floating line - can be fitted in lieu of one horseshoe belt.
- Boarding ladder.
- 4 x handheld distress flares.
- 4 x parachute rocket red flares.
- 2 x orange smoke canisters.

According to the recommended guidelines contained in the CoP, Part B of Chapter 2, Sail and Motorboats - Coastal Operation, schedule of radios and communications equipment, the following equipment is recommended to be carried onboard a Category C boat such as the *'Tommy R'*:

- A suitable fixed marine band VHF radio transmitter with DSC facility.
- A waterproof handheld radio.
- A radio receiver AM/FM, capable of receiving shipping forecasts, and national/local weather forecasts.

3.2.2.1 It is not known if the *'Tommy R'* carried lifesaving and personal safety equipment and radios and communications equipment according to the type and scale as described above. Apart from the clothing and the assortment of flares found in the wreckage, no other lifesaving and personal safety equipment or communications equipment described above was found in the wreckage from the *'Tommy R'*.

3.2.3 At the time the *'Tommy R'* was purchased by the Casualty in September, 2019 there was a fixed VHF radio in the wheelhouse. However, there is no record of a ship radio licence for the *'Tommy R'* which is required in accordance with the Wireless Telegraphy Act 1926, as amended. It would appear that the transfer of the ship radio licence from the *'FV Jamie Andrea'* to the *'Tommy R'* may not have been carried out when the boat's name was changed. The VHF was an old model and did not have a DSC function. It was reported by the 2019 vendor that the radio was working at the time of the sale and it was also reported by another witness that the radio was in working order shortly before the time of the incident. There were no reported VHF communications with or from *'Tommy R'* on the 9th October.

3.2.3.1 If a working AM/FM radio receiver was onboard the *'Tommy R'* then the Casualty would likely have been informed of the Met Éireann weather forecast for the 9th October. It was not confirmed whether or not the *'Tommy R'* had a working AM/FM radio receiver onboard and no item of this description was recovered with the wreckage.

3.2.4 Wreckage recovered on Carbery Island and multiple locations east along the coastline between Drishane Point and the coos east of Furze Island on the 9th and 10th October was positively identified as being from the 'Tommy R'. The wreckage was contained in a plume extending east from the plumes point on Carbery Islands west shoreline and extended to the Dunmanus Peninsula shoreline southwest from Drishane Point to the coos east of Furze Island. Wreckage found according to location included:

- Carbery Island west shore: -
 - work-deck railing with a mooring buoy, a lifebuoy (marked JAMIE ANDREA S.567) and attached buoyant line, a white fender, a sealed PainsWessex flare box (containing flares and a PLB) and a section of boats gunnel capping (fastened to the railing).
 - a broken section of boats bilge keel.
 - a green rubber wellington boot.
 - yellow oilskin leggings (found submerged by divers off the northwest shore).
- Multiple locations along the Shoreline in coos east of Furze Island: -
 - wheelhouse sections including roof, rear panel with clock attached, rear panel door, port side panel (partial section), front starboard panel with glass window (broken window) and with bubble compass and electrical wiring/conduit attached.
 - a lifebuoy (marked JAMIE ANDREA S567).
 - hardwood gunnel coaming (broken section).
 - foredeck section.
 - wheelhouse console shelf (partial section).
 - hull belting (wood, broken sections).
 - deck panels and beams (wood, broken sections).
 - a pollack diveboard.
 - a fishing board wrapped with fishing line and mackerel lures.
 - a GARMIN Map 450 chart plotter attached to a wood ply panel and GPS 128.
- Drishane Point and its local Strand: -
 - hull belting (wood, 3 large broken sections).
 - cordial bottle.

(See Appendix 7.1

Photograph No.6, wreckage found on Carbery Island - west shore.

Photograph No.7, Garmin GPS 128.

Photograph No.8, wreckage found east of Furze Island -wheelhouse.)

3.2.4.1 A PLB was found among the wreckage washed up on Carbery Island, west shore. The PLB was found inside a sealed Pains Wessex watertight flare canister which also contained an assortment of flares (see list of equipment and items found in section 3.2.4). The canister was found tied securely to the ‘*Tommy R*’ work deck railing. The canister was tightly sealed and all the contents found dry and in good condition. The PLB was in a pouch. The PLB batteries were in-date and due change out in 04/2021. The PLB had not been activated.

3.2.4.2 Flares. The contents of the watertight canister washed up on Carbery Island were as follows:

- 3 x handheld red flares.
- 3 x parachute rocket red flares.
- 1 x parachute signal flare.
- 1 x buoyant orange smoke.
- 1 x PLB.

The CoP recommended type and quantity of flares to be carried onboard a Category C boat are as follows:

- 4 x handheld distress flares.
- 4 x parachute rocket red flares.
- 2x orange smoke signal canisters

A discrepancy between the type and quantity of flares found stowed onboard the ‘*Tommy R*’ and the CoP recommended type and quantity of flares amounts to one handheld red flare and one buoyant orange smoke flare. There were no reported sightings of distress flares on the 9th October and it may be assumed the missing flares were not onboard in the canister on that day.

3.2.4.3 Lifebuoys. Two lifebuoys, both marked ‘FV JAMIE ANDREA S567’ were recovered with the wreckage. One lifebuoy was recovered on Carbery Island tied to the work deck railing, the other washed up east of Furze Island with sections of the wheelhouse. The Carbery Island buoy was not used and the wheelhouse buoy may have reasonably washed overboard when the vessel broke apart.

3.2.4.4 Navigation Equipment. The navigation equipment onboard the ‘*Tommy R*’ and recovered with the wreckage included a GARMIN GPS 128 and a GARMIN GPS Map 450 chart plotter. The chart plotter was beyond functioning when recovered. The GPS 128 was operable and likely to have been in operation at the time of the incident, however, data recovery of voyage history and boat track was not possible due to some internal damage as a result of water immersion.

- 3.2.5 Personal Flotation Device (PFD)/lifejacket. The Coast Guard SITREP from MRSC Valentia 09 2103Z Oct 19 described the Casualty as 22 YO Male², yellow oilskins, no lifejacket. A family member reported that there was a lifejacket (PFD) normally kept onboard the 'Tommy R' and that the lifejacket was likely kept in the wheelhouse but not routinely worn by the Casualty. There was no lifejacket recovered during the search operation or in the wreckage (see the list above of equipment and items found in the wreckage in section 3.2.4), and none described by the vendor as part of the equipment sold with 'Tommy R' in September, 2019.
- 3.2.6 Mobile Phone. The Casualty used a personal mobile phone which was reported to have been with him onboard the 'Tommy R' at the time of the incident. It was reported by a family member that the Casualty, while on the boat, routinely kept the mobile phone in the wheelhouse on the instrument panel console.
- 3.2.6.1 The Casualty's mobile phone data provided to the MCIB shows the mobile phone record between the 9th October to the 11th October 2019. All times on the data sheet are local time (UTC +1). The record shows that from 06:20 hrs on the morning of the 9th October the phone was 'active' and data streams to the phone for 16,946 seconds (4 hrs and 42 minutes). It is assumed that the data stopped when the phone powered down (at 11:02 hrs) as the next call to the phone was at 15:16 hrs in the afternoon of the 9th October which was forwarded to voicemail. The phone's data record shows that all calls to the Casualty's phone went to voicemail from 15:16 hrs onwards. The mobile phone data for the phone also shows that there were no calls made from the mobile phone after 06:20 hrs on the 9th October through to the 11th October. The mobile phone was not detected during the search operation or retrieved in the wreckage (see list of equipment and items found in section 3.2.4).

3.3 Weather and Seas

- 3.3.1 A Met Éireann estimate of weather conditions in the vicinity of Carbery Island, Dunmanus Bay on the 9th October between 13:00 hrs and 16:00 hrs indicated that winds were westerly, Beaufort 5 or 6 early afternoon (17 - 27 knots), occasionally reaching Force 7 (up to 29 knots) and gusting up to 34 knots at times. Visibility was moderate to poor. The sea state was estimated as very rough offshore with a rough swell propagating inshore, 2 - 3 metres significant wave height within Dunmanus Bay, mean wave direction (250 - 260 degrees), mean wave period ~8 - 9 seconds.

(See Appendix 7.3

Fig. 1 Met Éireann - Estimate of weather conditions - Dunmanus Bay 9th October.

Fig. 2 Met Éireann - Sea Area Map and Beaufort Wind scale.

Fig. 3 Met Éireann - Sea States and Visibility.)

2. The MCIB notes that the Casualty was 23 YO at the time of the incident.

The Beaufort Scale of wind describes wind speed and sea conditions. The Met Éireann estimate of weather conditions on the 9th October spans a range of wind speeds between a Force 5 'Fresh breeze' at 17 knots to Force 8 'Gale' gusting 34 knots, and maximum wave heights ranging from 2.5metres to 7.5metres. Waves would be broken with foam crests and steaks of white foam. Moderate to poor visibility is described as between 5 NM to 0.5 NM distance.

- 3.3.2 The 24-hour Sea Area Forecast stated that there was a Small craft warning in operation issued at 12:00hrs on 9th October and another issued at 18:00hrs during the day.

(See Appendix 7.3

Fig. 4 Met Éireann - 24-hour Sea Area Forecast (9th - 10th October).

Fig. 5 Met Éireann - Small Craft Warning (9th October).)

3.4 The Incident (All times local time (UTC+1))

- 3.4.1 On the morning of the 9th October, 2019 at approximately 08:00hrs, the Casualty set off from Dunmanus Harbour aboard an open decked boat '*Tommy R*' with the reported intention of recreational fishing for pollack or mackerel. The Casualty was the only person onboard.

The Casualty's regular employment was as a professional fisherman and he was therefore qualified in the use of electronic navigation systems, medical First Aid, personal survival techniques, radio operator to Global Maritime Distress and Safety System (GMDSS) standards and he had a full Certificate of Competency for fishing vessels. On the 9th October he was on a 'day off' from his regular employment.

- 3.4.2 It was reported that the Casualty intended to do some recreational fishing using a diveboard method. A diveboard is a device trolled at the end of a line behind a boat which is moving slowly forward (2 - 3 knots). Diveboards, used inshore, typically work at depths between 15 - 25 m. The diveboard has several fish lures attached and trailing behind the diveboard. Once a lure hooks a fish the diveboard inverts by design and rises to the surface signalling the operator to retrieve the diveboard and unhook the fish. Diveboards may be used without the need for deck equipment. Line(s) may be secured to a robust part of the boat. The operator requires to watch out astern for the appearance of the diveboard as it returns to the surface with the fish.
- 3.4.3 A pollock diveboard, unused and in a wrapper, was found in the wreckage recovered along the shoreline east of Furze Island. Also found with the diveboard was a short wooden fishing board wrapped around with a long length of fish line with mackerel lures attached. Both items were reported as being similar to fishing equipment used by the Casualty.

(See Appendix 7.1
Photograph No.4 - Pollock Diveboard.
Photograph No.5 - Fishing board with mackerel lures.)

3.4.4 There were two separate sightings reported by members of the public of a small boat operating in Dunmanus Bay west of Carbery Island on the 9th October. These sightings occurred at Canty's Cove and Dooneen Coos, both locations are on the south western shoreline of Dunmanus Bay:

- At approximately 08:30 hrs - 09:00 hrs a small boat was seen in Dunmanus Bay from a house at Canty's Cove by a single member of the public.
- At approximately 12:00 hrs a small boat was observed close to the shore at Dooneen Coos by a single member of the public in a car. A person seen onboard the boat was wearing yellow leggings. The boat's colour was not noticed. There were a large number of seagulls in the immediate vicinity of the boat (See Appendix 7.1 Charts of Dunmanus Bay. Chart 1.Dunmanus Bay).

3.4.5 Wreckage of the '*Tommy R*' was found on the west shore of Carbery Island and along the high tide shoreline between Drishane Point and east of Furze Island. The distribution of the wreckage could be described as a plume extending from its point at Carbery Island to it widest extremities along the Dunmanus shores. The body of the Casualty was recovered by divers from the sea at the north west corner of Carbery island. It may reasonably be deduced that the '*Tommy R*' foundered and broke up somewhere off the west shore of Carbery Island and that wreckage of the boat drifted east under the influence of the wind sea direction and the flood tide before the tide turned to ebb after 14:45hrs local time on the 9th October.

(See Appendix 7.1 Chart 3. Satellite image - Wreckage Plume.
Appendix 7.2 Photograph No.10, Carbery Island and Breaker, 11th October.
Appendix 7.4 Chart 4. Diver searches 12th and 13th October.
Appendix 7.4 Chart 5. Satellite image - Diver search boat track and body location - 13th October.)

3.5 Post Mortem Autopsy Report

3.5.1 The Coroner's autopsy report states that death was due to acute cardio-respiratory failure due to drowning. The report also noted that ethanol and drugs were not detected and there was no evidence of significant trauma. The report did note that there were bruises on the lateral aspect of the left leg above the knee and on the left side of the Casualty's chest. The conclusions of the Coroner's autopsy report are provisional at the time of publication of this report. Determination of death causation is a matter for the Coroner's inquest.

4. ANALYSIS

4.1 The Recreational Small Craft - '*Tommy R*'

4.1.1 Fishing vessels in Ireland are regulated under the Sea Fisheries Amendment Acts 1959 to 2006 and any boat intended to be used for such fishing requires a licence under Section 4 of the Fisheries (Amendment) Act 2003 (as inserted by section 97 of the Sea Fisheries and Maritime Jurisdiction Act 2006). For safety purposes fishing vessels are regulated as follows:

- Fishing vessels less than 15 m LoA: These fishing vessels are required to comply with the CoP for the Design, Construction, Equipment and Operation of Small Fishing Vessels of less than 15 m length overall.
- Fishing Vessels from 15 m LoA to 24 m: Fishing vessel in this length category are required to comply with the Merchant Shipping (Safety of Fishing Vessels) (15-24 metres) Regulations 2007, Statutory Instrument No. 640 of 2007.
- Fishing Vessels greater than 24 m: Fishing vessels in this length category are required to comply with EU Directive 1997/70, as amended, and as transposed into Irish legislation by means of Fishing Vessels (Safety Provisions) Regulations 2002 (S.I. No. 418 of 2002). This legislation applies to the requirements of the Torremolinos Protocol, to which Ireland is a party, to vessels in this category. This Protocol has been amended in 2012 by means of the Cape Town Agreement to a standard to encourage ratification.

The '*Tommy R*' was operating as a fishing vessel (the '*FV Jamie Andrea*') up to August, 2017. While operating as a fishing vessel the '*FV Jamie Andrea*' had been surveyed in June 2014 according to the CoP as a vessel of less than 15 m LoA and declared fit for service and for operation in inshore coastal waters. The vessel's stability was declared as satisfactory at the time of the 2017 survey.

4.1.2 The Casualty purchased the '*Tommy R*' for recreational fishing in September 2019. The vessel did not hold a sea fishing boat licence and there was no evidence presented that the vessel was engaged in commercial fishing. Therefore, the above regulatory framework did not apply, and the vessel was not a fishing vessel.

4.1.3 The Casualty used the '*Tommy R*' frequently for recreational fishing in Dunmanus Bay prior to the incident and although the vessel was constructed in 1983 it was reported to be well maintained, without any significant defects and stable and manoeuvrable in a seaway. The '*Tommy R*' was a recreational craft engaged in sea-angling and, as such, comes within the remit of the CoP: The Safe Operation of Recreational Craft.

The CoP consists of two parts as follows:

- Part A: Statutory Requirements for the Safe Operation of Recreational Craft: This part requires that all persons on the deck of a recreational craft less than 7m in length must wear a suitable personal flotation device.
- Part B: Recommended Guidelines for the Safe Operation of Recreational Craft: This part recommends safety requirements, and these are outlined in Section 3.2.2 of this report.

4.1.3.1 There was no evidence presented that the Casualty was wearing a PFD while on deck which is a statutory requirement set out in Part A of the CoP.

4.1.3.2 There was no evidence that the 'Tommy R' had the full complement of safety equipment which is recommended in Part B of the CoP and set out under:

- A suitable PFD/lifejacket for each person onboard of at least 150 Newtons (CE EN396/1).
- Crew safety harness/lifelines for all crew that may have to work on deck at any time.
- Jack Lines capable of being rigged port and starboard and extending from the aft of the cockpit to the foredeck for use with crew lifelines.
- Emergency Liferaft Grab Bag for abandoning ship.
- A buoyant heaving line/throw bag.
- Horseshoe type lifebelt with light. Danbuoy with light fitted to one lifebelt.
- Buoyancy sling with floating line - can be fitted in lieu of one horseshoe belt.
- Boarding ladder.
- 4 x handheld distress flares
- 4 x parachute rocket red flares.
- 2 x orange smoke canisters.

4.2 The Casualty

4.2.1 The Casualty was a qualified commercial fisher with marine qualifications in navigation systems, medical first aid, personal survival techniques and GMDSS radio operation. He was in possession of a Second Hand Full Certificate of

Competency (fishing vessels) since 2017. It would be reasonable to deduce that the Casualty understood weather forecasts, how to navigate and operate small craft, marine communications and maritime distress and safety systems.

According to the post mortem autopsy report there was no ethanol or drugs detected in the blood analysis and there were no signs of significant trauma to the Casualty's body. It is therefore reasonable to deduce that the Casualty was a competent seafarer and not medically incapacitated at the time of the incident

4.3 Safety equipment

- 4.3.1 PFD or lifejacket. The Casualty was reported as not wearing a PFD when he was reported overdue. It was reported by a family member that the Casualty may likely have stored a PFD in the wheelhouse. There was no PFD found in the sea search or subsequently washed up in the wreckage with the wheelhouse parts. The Casualty was not wearing a PFD when found. It would be reasonable to deduce that the Casualty was not wearing a PFD when he entered the sea.
- 4.3.2 Lifebuoys. There were two lifebuoys onboard the *'Tommy R'* one of which was secured to the boats work deck railing. Both lifebuoys were marked 'JAMIE ANDREA S.567' and were recovered as wreckage. The lifebuoy secured to the railing was found on Carbery Island while the other lifebuoy was found ashore east of Furze Island with the wheelhouse roof nearby. It would be reasonable to expect that the Casualty would have used either lifebuoy as a buoyancy aid if he was able to reach either lifebuoy before the *'Tommy R'* sank. There may have been little or no time to grab a lifebuoy before the Casualty entered the sea.
- 4.3.3 VHF Radios. The *'Tommy R'* was fitted with a fixed VHF marine band radio. The fixed VHF radio was reported to be in working order. There were no reports that the Casualty was in possession of a handheld radio and no radios of this description were found in the wreckage from the *'Tommy R'*. It would be reasonable to deduce that if the Casualty was within reach of a VHF when the boat was in danger then a distress call would have been made. There were no reports of any VHF distress calls made from the *'Tommy R'* on the 9th October.
- 4.3.4 Mobile Phone. The Casualty used a personal mobile phone which has not been found. Mobile phone data provided to the MCIB states the phone was active from 06:20 hrs on the day of the incident. The data also shows that there were no calls made from the mobile phone after 06:20 hrs and the phone powered down at 11:02 hrs.
 - 4.3.4.1 It was reported by a family member that when the phone was with the Casualty onboard the *'Tommy R'* the phone was likely kept on the instrument panel console in the wheelhouse. While this may have kept the phone relatively safe

from damage if the boat was moving around, it would have been out of reach to the Casualty if he was outside the wheelhouse.

- 4.3.5 Personal Location Beacon (PLB). Enquiries as to whether the Casualty owned a PLB or whether or not he knew there was a PLB onboard the *'Tommy R'* at the time of the incident are inconclusive. Family members were not aware the Casualty owned a PLB. The previous owner of the *'Tommy R'* reported that he was unaware of a PLB being onboard the vessel when it was sold to the Casualty in September, 2019 but he was aware of the *'PainsWessex'* watertight flare canister (in which the PLB was found) being onboard the boat.

However, the original owner of the *'FV Jamie Andrea'* was in possession of a PLB matching the description of the device found in the watertight canister. He stated that he was not in possession of the PLB after the boat was sold in 2017. Therefore, it may be reasonably deduced that the PLB found in the watertight canister was the same PLB sold with the boat in 2017 but not realised by the second owner when the boat was sold on in 2019.

It may be reasonably deduced that the Casualty:

- may not have been aware that the *'Tommy R'* carried onboard a viable PLB;
- may not have had time enough to open the watertight canister to activate the PLB;
- may have been out of reach of the watertight canister containing the PLB when the boat foundered.

- 4.3.6 Flares. An assortment of flares were found in the sealed *PainsWessex* watertight flare box with the PLB mentioned above (see list of equipment and items found above at 3.2.4 - 3.2.4.4). All flares were in a dry condition and although they had all exceeded their expiry date by two years (06/2017 - 06/2019) may have been considered as being in a viable operating condition. There was no sighting of a distress flare(s) in Dunmanus Bay on the 9th October and it may reasonably be deduced that the missing flares were not onboard before the day of the incident.

The contents of the watertight canister were dry even though the canister was secured to the railing on the open work deck. This indicates that the canister was not opened during the time of the incident. It may be reasonably deduced that the Casualty:

- may not have had time to open the watertight canister in order to activate a distress flare before the boat foundered; and/or
- may have been out of reach of the watertight canister containing the distress flares when the boat foundered.

4.4 Weather and Seas.

4.4.1 There was an estimated swell propagating inshore of 2 - 3 m significant wave height during the afternoon with a mean wave period of approximately 8 - 9 seconds. Met Éireann issued a Small Craft warning at 12:00 hrs and again at 18:00 hrs during the day. The estimate of weather and sea state conditions in the vicinity of Carbery Island between 12:00 - 18:00 hrs UTC was as follows:

- Wind: Westerly, Beaufort Force 5 or 6 early afternoon, occasionally reaching Force 7 and gusting up to 34 kts (Force 8) at times.
- Sea State: Rough swell propagating inshore, 2 - 3 m significant wave height within Dunmanus Bay. Met Éireann sea state table shows that maximum wave heights ranging from 2.5 m to 7.5 m may be experienced.

The seas in Dunmanus Bay were rough.

4.4.2 According to the design and operating 'Category C' criteria for an inshore boat such as the 'Tommy R', the weather and sea state conditions in the vicinity of Carbery Island exceeded the CoP design and operating criteria for a 'Category C' recreational small craft and are considered out of the limits for the safe navigation and operation of the boat 'Tommy R' in Dunmanus Bay on the 9th October 2019.

4.5 The incident. Times are local time (UTC+1)

4.5.1 The 'Tommy R' departed Dunmanus Harbour at approximately 08:00 hrs, low tide. The boat's whereabouts during the day and up to the time the search commenced is a source of conjecture. The boat's chart plotter data was erased due to water immersion and the Casualty had not informed anyone of his intentions other than fishing for the day in Dunmanus Bay. The Casualty was likely trolling for pollack using the diveboard method of fishing in several locations along Dunmanus Bay. Pollack are known to congregate around rocks and small sea mounts.

4.5.2 It is considered likely the Casualty avoided the more adverse weather conditions found towards the entrance to the Bay and instead was operating in the more sheltered waters of the Bay close to the rocky shorelines east of Canty's Cove and Dooneen Point and west of Carbery Island.

There were two reported sightings of a small boat operating west of Carbery Island on the 9th October. The reported sighting of a boat at approximately 9:00 hrs from Canty's Cove was of a small boat operating in Dunmanus Bay. The distance from shore was uncertain. The reported sighting of a boat at approximately 12:00 hrs was in Dooneen Coos. The sighted boat was close inshore and near enough for the observer to notice that the person onboard was wearing yellow and that a large number of seagulls were surrounding the boat.

4.5.3 Although the two sightings were not positive in terms of the 'Tommy R', the sightings did indicate that:

- a small boat (or boats) was/were operating in Dunmanus Bay three miles west of Carbery Island (approximately one nautical mile (nm) distance between the two sightings) and in the vicinity of the shoreline west of Dunmanus Harbour; and
- some fishing activity was likely taking place onboard one of the boats and that the operator onboard that boat was wearing some form of yellow clothing.

4.5.3.1 If there had been two boats, then it would be reasonable to assume the operators of either of the boats would have reported to the search and rescue authorities later that day or the next day, but no one reported in. Therefore, it may be reasonably deduced that the small boat sighted at Canty's Cove at approximately 9:00 hrs and Dooneen Coos at approximately 12:00 hrs was the same boat, the 'Tommy R', with the Casualty onboard and that the Casualty did not appear to be in difficulty at that time.

4.5.4 High tide was at 14:45 hrs (local time). Sunset was at 19:58 hrs (local time). It would be reasonable to surmise that the Casualty planned to return to Dunmanus Harbour sometime after 14.:45 hrs and before sunset.

Carbery Island is approximately 2.7 NM east of Dooneen Coos. Assuming the last sighting of the 'Tommy R' was at approximately 12:00 hrs (local time) at Dooneen Coos, the 'Tommy R' at 4 kts would take approximately 40 minutes to cover the distance and have some time remaining before the tide started to ebb after 14:45 hrs. The 'Tommy R' may have reached the area west of Carbery Island by approximately 12:45 hrs before the high tide.

4.5.5 Wreckage of the 'Tommy R' was found within a 'plume' extending east from Carbery Island's west shore and spreading out to wash up on the shoreline between Drishane Point and the inlets east of Furze Island. It would be reasonable to deduce that the wreckage drifted east from the site of the wreck of the 'Tommy R' under the influence of the wind sea direction and the flood tide before the tide turned to ebb after 14:45 hrs (see Appendix 7.4 Wreckage area Chart 5. Wreckage plume).

Coast Guard searchers found the first pieces of wreckage at the high tide mark at Black Rock, 1.3 - 1.5 NMs directly east of the northwest shore of Carbery Island. Estimating a speed of 1 - 1.5 kts of the wreckage over the ground and the prevailing wind and sea direction it is surmised that the Black Rock wreckage took approximately 1 - 1.5 hrs to wash up at the high tide mark at 14:45 hrs. That timing would put the 'Tommy R' location as off the northwest side of Carbery Island between 13:15 hrs and 13:45 hrs when the boat foundered and broke up.

- 4.5.6 Wreckage found on Carbery Island comprised mostly of small undamaged items which would likely float free as the boat broke up. A large section of deck rail (fitted around the boats work deck gunnels from the port side of the wheelhouse along the ports side, around the transom and partly along the starboard side) would be expected to sink under its own weight. However, the rail appeared to have been buoyed by the attached assortment of buoys, fenders and the watertight flare canister, all of which were relatively unmarked. The rail was not distorted or bent out of shape and still had a section of the boat's gunnel capping attached. All items were found within reach of the Carbery Island shoreline searchers or cast up on the islands rocky shore (see Appendix 7.2 Photograph No.6 - Carbery Island west shore - wreckage).
- 4.5.7 Wreckage found along the shoreline between Drishane Point and east of Furze Island comprised of large sections of the wood ply wheelhouse, a lifebuoy, small timber components originating from the wheelhouse console and the foredeck, and hull topside belting and gunnel capping pieces. Some sections of the wheelhouse were large, relatively unmarked and had come apart at the joins. The roof and rear section including the wheelhouse door panels were found mostly intact (see Appendix 7.2 Photograph No.8 - Wheelhouse sections and assorted timbers).
- 4.5.8 The hull has not been located.
- 4.5.9 The type and condition of wreckage from the '*Tommy R*' can indicate whether the boat struck rocks and broke up against the shore or whether the boat was overwhelmed by the sea and broken up by wave action:
- Wreckage from a boat broken up against the shore would be badly smashed and splintered. Sections of the hull would also likely be found along the shore.
 - Wreckage from a boat broken up by wave action would remain largely in its component parts (wheelhouse roof, aft door, panel sections and the work deck rail etc.) and the hull would likely sink close to where the vessel foundered.

Considering the type and condition of the wreckage it is reasonable to surmise that the '*Tommy R*' was overwhelmed and broken up by wave action.

- 4.5.10 Carbery Island has a series of steep underwater contours rising sharply from the depths of 30 - 40 m to the shoreline on its northwest and southwest shores. Carbery Breaker is situated west of Carbery Island over a sea mount that remains submerged 2- 4 m below chart datum.

The wave swell in Dunmanus Bay with significant wave heights of between 2 - 3 m and maximum wave heights of 2.5 m to 7 m and a mean wave period of 8 -

9 seconds would be amplified by the influence of the steep underwater contours at Carbery Breaker and the northwest and southwest shores of Carbery Island, resulting in a pronounced swell with dangerously steep seas and frequently breaking waves extending from the Breaker to the rocky shorelines and foul ground northwest, and shores west and southwest of Carbery Island. These sea conditions would be extremely hazardous and a danger to a small boat operating in the vicinity of these breaking seas.

4.5.11 The Casualty was an experienced and qualified fisher and very familiar with Dunmanus Bay and its shoreline. It would be reasonable to presume the Casualty was well aware of the dangers presented by Carbery Breaker and the shoreline of Carbery Island. Therefore, it would also be reasonable to presume the Casualty would not have, by choice, entered the dangerous seas of Carbery Breaker or the treacherous foul grounds north, west and south of Carbery Island.

4.5.12 A number of scenarios must be considered involving the Casualty, the '*Tommy R*' and the seas off Carbery Island:

a. The boat lost propulsion and drifted into danger.

If this were the case there would have been time to call for assistance. However, there was no evidence that the Casualty called for help or indicated by other means that he was in distress or the boat was in danger. This scenario is considered unlikely and is discounted.

b. The Casualty steered the boat into danger.

The Casualty was experienced and very familiar with the Bay. This scenario would have the Casualty in the wheelhouse with the VHF radio, and maybe a lifejacket to hand. It is considered unlikely that the Casualty would lose his spatial awareness close to the dangers presented by Carbery Breaker or the foul grounds west of the Island and would have avoided these dangers. This scenario is considered unlikely and is discounted.

c. The '*Tommy R*' was navigating in rough seas which became so severe that the boat was overwhelmed and sank.

The Casualty was an experienced seaman and it is considered unlikely that he would have consciously navigated into these sea conditions. However, the Casualty may have been distracted. For instance, pulling in the fishing gear or some similar activity and the boat was overwhelmed by a sudden breaking sea. If the boat was overwhelmed quickly there would be little time to send a distress signal or grab a lifesaving device. This scenario is considered possible.

- d. The Casualty was either injured, incapacitated or unconscious and the boat steered uncontrolled into danger.

The Casualty would not be able to send a distress signal or grab a lifesaving device. The post mortem report indicated that the Casualty had no significant signs of trauma to his body and ethanol and drugs were not detected in blood samples. It may therefore be deduced that the Casualty was not incapacitated. This scenario is considered unlikely and is discounted.

- e. The Casualty fell overboard, and the boat steered, uncontrolled, into danger.

The seas were rough, the waves frequent, steep and unpredictable. In this scenario the boat's deck would present a difficult platform to negotiate. If for instance the Casualty moved outside the wheelhouse, pulling in the fishing gear or some similar activity, there would be a likelihood of the boat moving unpredictably with considerable risk of the Casualty falling overboard. The postmortem report showed that the Casualty had a bruise on the lateral aspect of the left leg above the knee. This bruise would be consistent with the Casualty coming into contact with the work deck rail as he fell overboard. The Casualty would not have been in a position to send out a distress signal or grab a lifesaving device. With no one onboard the '*Tommy R*' may then have steered uncontrolled into seas which overwhelmed the boat and caused it to break up and sink. This scenario is considered possible.

- 4.5.13 From the type and condition of the wreckage it may be deduced that the boat's sinking was rapid leaving little time for the Casualty, if he was onboard and not incapacitated, to send out a distress signal, call for help, grab a lifesaving device or prepare to abandon the boat.

The evidence outlined above indicates that the most probable scenarios causing the loss of the Casualty and the '*Tommy R*' are that sometime after 13:00 hrs on Wednesday the 9th October 2019:

- the Casualty fell overboard, and the boat steered uncontrolled into danger until it was overwhelmed, broke up and was sunk.

or

- the '*Tommy R*' with the Casualty onboard was navigating in rough seas which became so severe that the boat was overwhelmed and quickly sank.

Both scenarios described above are consistent with the evidence from the wreckage. The boat's wheelhouse broke up and floated free while the hull sank at this time. The prevailing wind, seas and flood tide caused the buoyant wreckage of the boat to drift east towards the western shoreline of Carbery Island and the Dunmanus Peninsula. The location of the hull remains unknown at this time.

Both scenarios are also consistent with the additional evidence that the Casualty was found off the north shore of Carbery island, a distance of approximately 0.5 NM from Carbery Breaker. It would be reasonable to deduce that the Casualty's body was carried by wind, seas and flood tide to where he was found by divers on the 13th October in a gulley north of Carbery Island.

- 4.5.14 The post mortem autopsy findings of the bruise to the Casualty's left leg supports the scenario where the Casualty fell overboard (ref: 4.5.12 e. on previous page). If that were the case then it would be likely the uncontrolled 'Tommy R' boat steered into Carbery Breaker or the breaking seas northwest of Carbery Island where the boat was overwhelmed, broke up and sunk.
- 4.5.15 The Maritime Safety Strategy published in 2015 has identified a number of issues relating to recreational craft (<https://www.gov.ie/en/publication/d00485-maritime-safety-strategy/>). The strategy makes the point that it is up to each individual who takes to the water to take personal responsibility for their actions. The document contains analysis of the safety culture in the Irish Maritime Sector between 2002 to 2013 inclusive and highlights the following facts:
- Figure 1, Section 2 of the document shows that between 2002 and 2013 inclusive, fatalities in the recreational craft sector amounted to 67, of which 44 fatalities were due to a vessel capsizing, resulting in drowning/hypothermia and a further 20 fatalities were due to persons falling overboard/drowning which accounted for 64 of the 67 fatalities over that period.
 - Figure 2, Section 2 showed that the vessel categories most at risk in relation to fatalities are recreational craft which amounted to 49% of the total number of fatalities onboard Irish vessels.
 - Figure 6, Section 2 showed that the top ten factors contributing to loss of life at sea on all maritime craft and vessels included, among other factors:
 - Unsuitable or inadequately maintained safety equipment onboard or lack thereof.
 - Failure to plan journeys safely, including failure to take sea/weather conditions into account.
 - Non-wearing of a PFD (lifejacket/buoyancy aid).
(see Appendix 7.5 - Maritime Safety Strategy 2015 - Extracts.)
- 4.5.16 Annex 2 of the Maritime Safety Strategy document contains a sectoral analysis of the main factors contributing to maritime fatalities in relation to recreational craft and showed that 39% of fatalities occurred on an open boat while a further 21% of fatalities occurred on a powered recreational craft - Annex 2, Figure (i) refers.

Based on an analysis of MCIB investigation reports, combined with information from Irish Coast Guard (IRCG) incident reports in a number of instances, a ranking of the prevalence of the factors contributing to loss of life is set out in Figure (iii). At the forefront is:

- failure to plan journeys safely, including failure to take sea/weather conditions into account; and
- non-wearing of a PFD (lifejacket/buoyancy aid).

Both the above factors were found to be very significant contributors to this incident.

- 4.5.17 The Maritime Safety Strategy document states that the maritime sector in Ireland is governed by a range of domestic, European and international legislation that reflect best practice as regards maritime safety and that the need for an enhanced maritime safety culture in the sector, to which personal responsibility is intrinsically linked, is a key underlying issue. While the strategy provides for the strengthening of safety obligations in a number of instances, the focus is on ensuring more rigorous enforcement of existing legal requirements. The strategy document encourages individuals and organisations to take their obligations seriously and change their behaviour to comply with maritime safety law and to avoid irresponsible behaviour that puts their own lives, and the lives of others, at risk.

5. CONCLUSIONS

- 5.1 It is concluded that the most probable cause of the Casualty was that sometime after 13:00 hrs the Casualty fell overboard from the 'Tommy R' close to the northwest shore of Carbery Island. The 'Tommy R' steering would have been uncontrolled and the boat would have come into close proximity of the Carbery Breaker or the seas northwest of Carbery Island. The boat would then have been overwhelmed, broken up and sunk by a breaking sea.
- 5.2 There are a number of factors that contributed to the loss of the Casualty and boat 'Tommy R':
- The weather was adverse, there was a small craft warning in operation and the seas were rough in Dunmanus Bay.
 - The Casualty was operating on his own in very dangerous seas off Carbery Breaker and Carbery Island.
 - The Casualty was not wearing a PFD.
 - The vessel was not suitable for the sea conditions existing in the vicinity of Carbery Island on the day.
- 5.3 The pathologists Post Mortem autopsy report provided to the MCIB states that the main findings at autopsy were in keeping with acute cardio-respiratory failure due to drowning. The results of toxicology analysis provided to the MCIB are provisional at the time of publication at the time of this report. The determination of the cause of death is a matter for the Coroner's inquest. The findings of the pathologist as to the cause of death of the Casualty is consistent with the conclusion of this report.
- 5.4 The Maritime Safety Strategy 2015, Actions No. 28 and No. 30 as set out are relevant to the issues raised in this report.

6. SAFETY RECOMMENDATIONS

- 6.1 The Minister for Transport should issue a Marine Notice reminding the operators of recreational craft that it is a statutory requirement to wear a Personal Flotation Device (PFD) when on the deck of a vessel of less than 7 m in length overall.
- 6.2 The owners and operators of recreational craft should observe and comply with the recommendations contained in the Code of Practice: The Safe Operation of Recreational Craft (2017).

7. APPENDICES

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Appendix 7.1 Charts of Dunmanus Bay

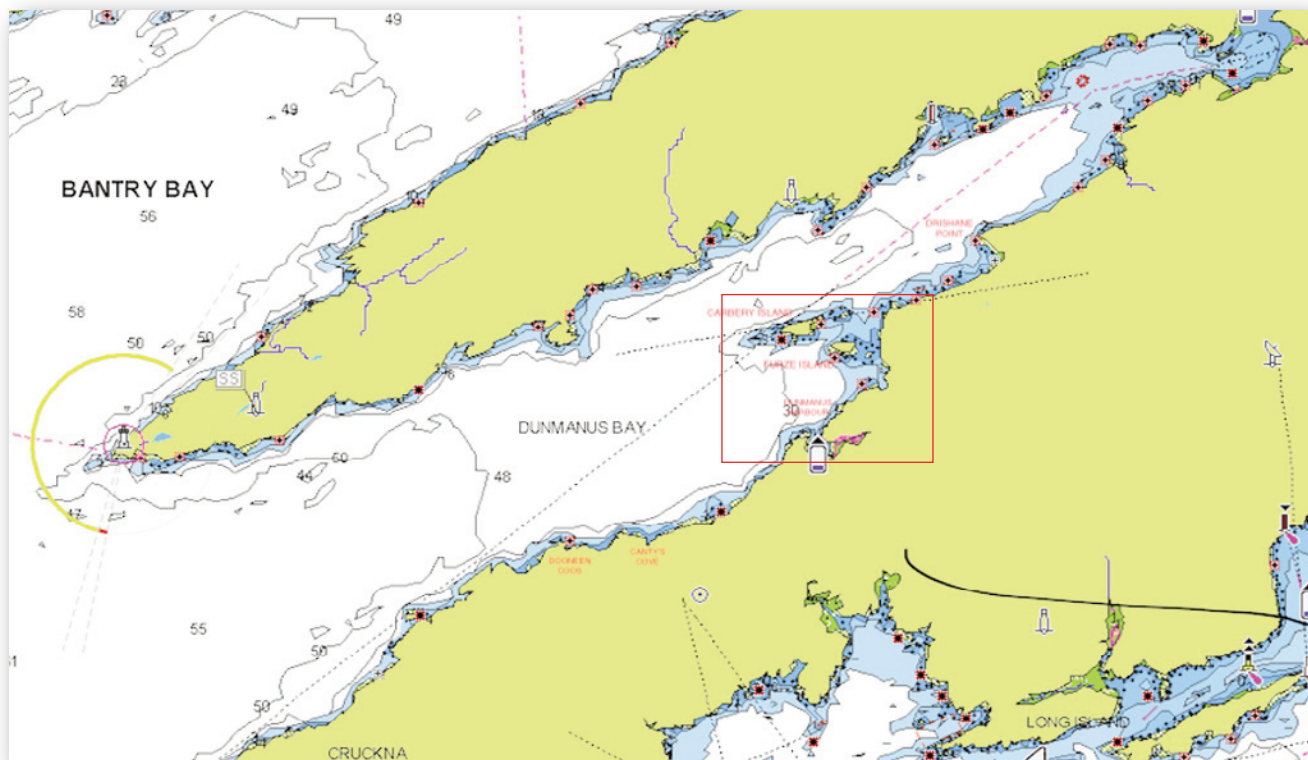
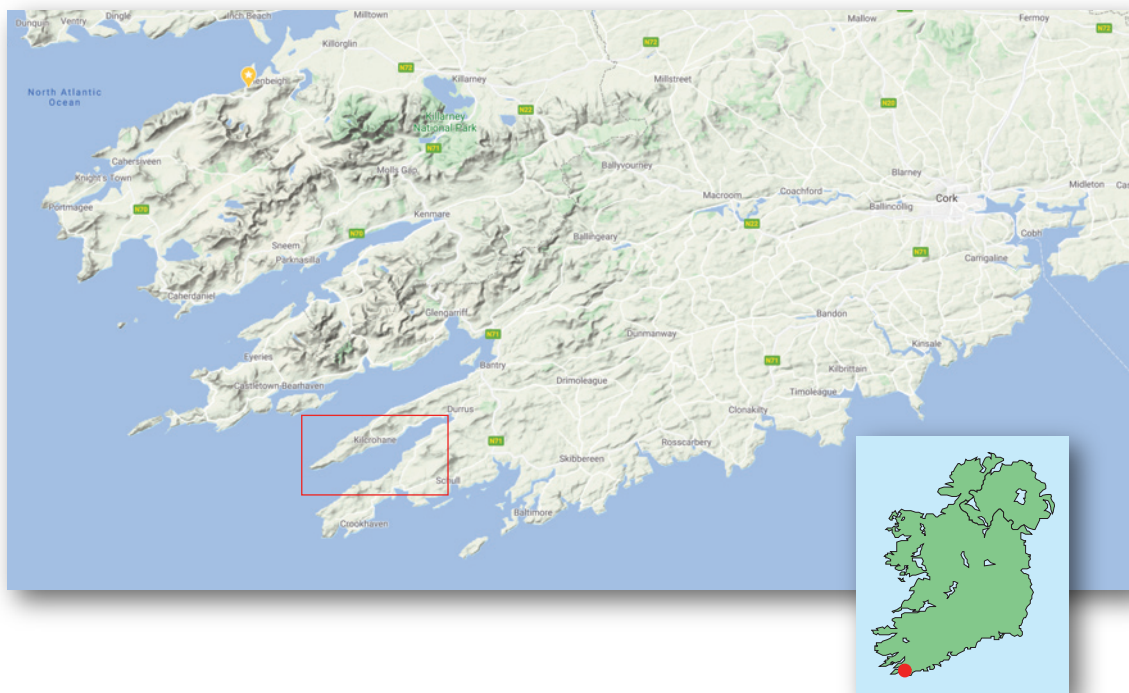


Chart 1 - Dunmanus Bay.



Appendix 7.1 Charts of Dunmanus Bay



Chart 2 - Carbery Island.

Appendix 7.1 Charts of Dunmanus Bay

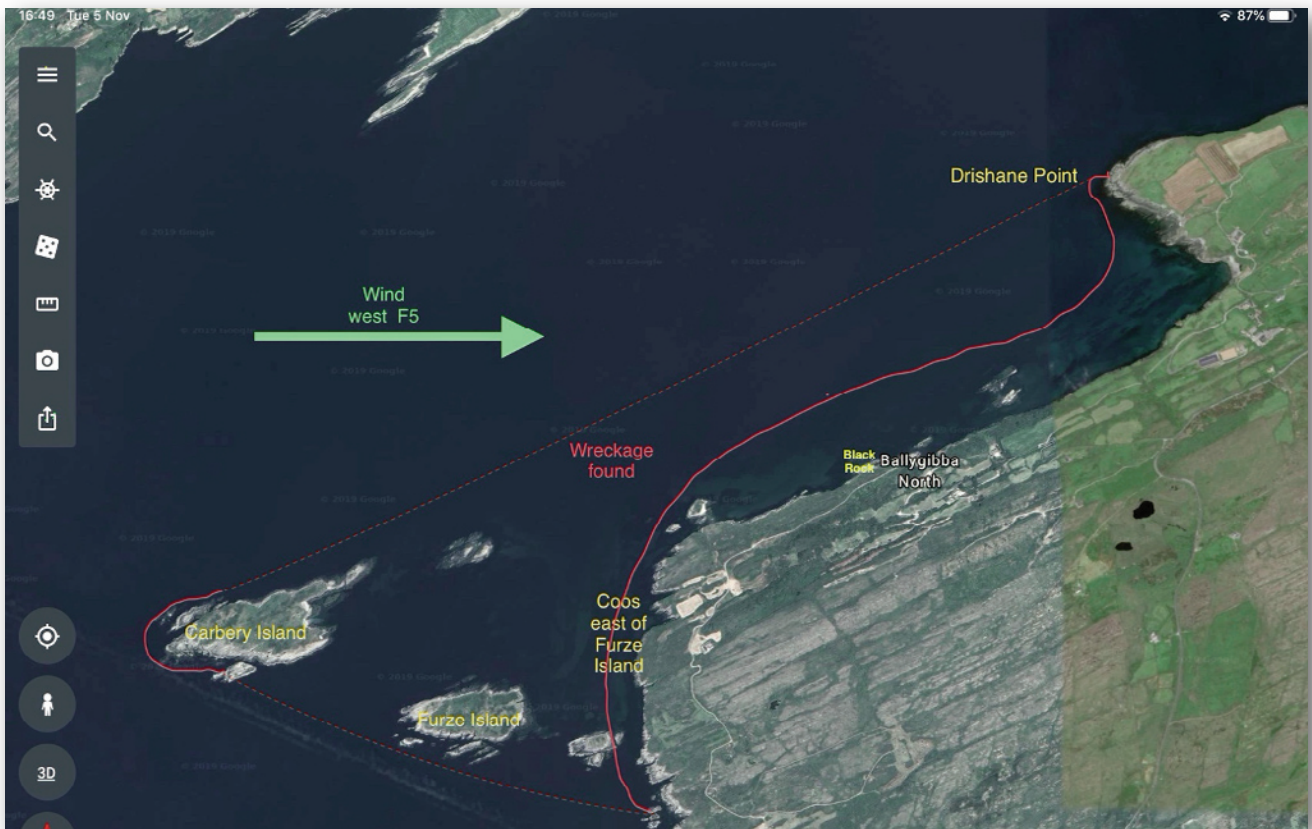


Chart 3 - Satellite image indicating Wreckage Plume.

Appendix 7.2 Photographs



Photograph No.1 - *'Tommy R'* at moorings.



Photograph No.2 - *'Tommy R'* for sale 2019.



Photograph No.3 - *'FV Jamie Andrea'* S.567.

Appendix 7.2 Photographs



Photograph No.4 - Pollock Diveboard.



Photograph No.5 - Yellow leggings with fish lures attached.

Appendix 7.2 Photographs



Photograph No.6 - Wreckage found on Carbery Island - west shore.



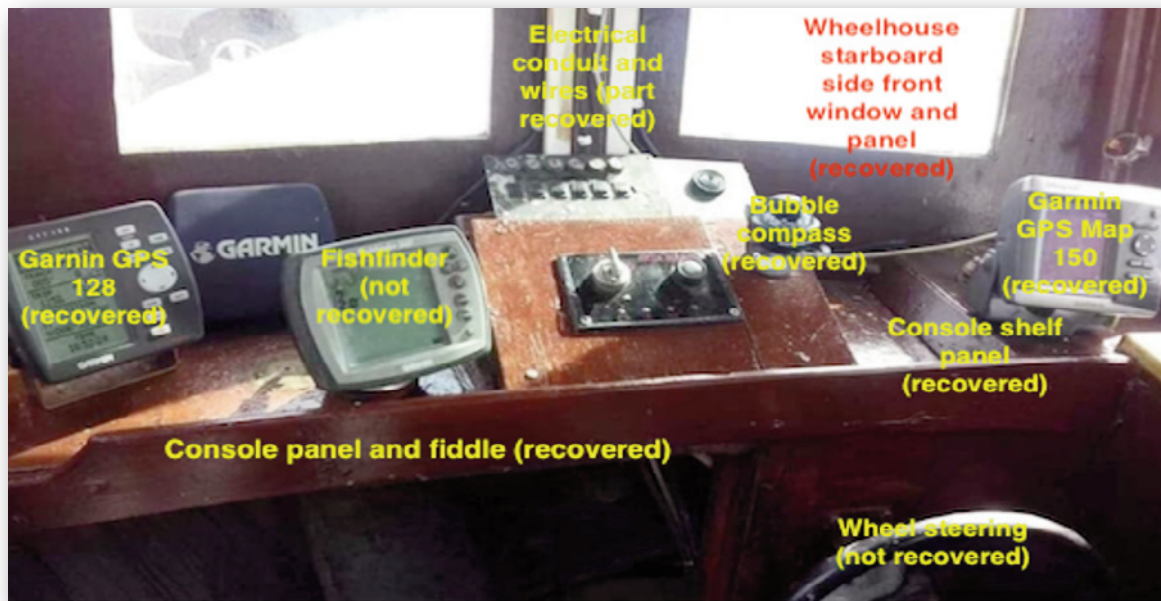
Photograph No.7 - Garmin GPS 128.

Appendix 7.2 Photographs



Photograph No.8 - Wreckage found east of Furze island - wheelhouse,

Appendix 7.2 Photographs



Photograph No.9 - Wheelhouse console.



Photograph No.10 - Carbery Island and Breaker - 11th October.

Appendix 7.3 Met Éireann Weather Reports



Met Éireann

The Irish Meteorological Service

Climate Services

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Our Ref. **WS1730/1911_7**

Your Ref. **MCIB/12/294**

Re: Estimate of weather conditions between 13:00 and 16:00 hours UTC on Wednesday 9 October 2019 in the vicinity of Carbery Island, Dunmanus Bay, Co. Cork (51°32.38'N, 9°40.38'W).

Synopsis: A fresh to strong west to southwesterly airflow covered the country with an active weather system (trough line) embedded in the flow.

Estimate of weather & sea state conditions:

12:00 – 18:00 hours UTC:	
<u>Weather:</u>	Partly cloudy, scattered showers and sunny spells; some showers were heavy with isolated thunder.
<u>Temperature:</u>	11.5 to 14 degrees Celsius.
<u>Wind:</u>	Westerly, Beaufort Force 5 or 6 early afternoon (17 – 27 knots), occasionally reaching Force 7 (up to 29 knots). Gusting up to 34 knots, at times.
<u>Visibility:</u>	Moderate or poor in showers, otherwise good.
<u>Sea State:</u>	Very rough offshore on Atlantic coasts with a heavy swell. Up to 5 meters significant wave height at the M5 buoy, with maximum waves up to 7 meters. Mean wave period ~12 seconds, mean wave direction west-northwesterly (280 – 300 degrees), at the M5. Rough swell propagating inshore, 2 – 3 metres significant wave height within Dunmanus Bay, mean wave direction west-southwest (250 – 260 degrees), mean wave period ~8 – 9 seconds.
<u>Sea Temperature:</u>	14.6 degrees Celsius (M5)

Please address all correspondence to legal@met.ie and please kindly quote the reference number **WS1730/1911_7**

Appendix 7.3 Met Éireann Weather Reports



Met Éireann

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Appendix 7.3 Met Éireann Weather Reports



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APPENDIX 1. Sea Area Map & Beaufort Scale of Wind

Marine Weather Services Sea Area Map

- Headlands
- M Irish Marine Weather Buoys
- Inland Lakes
- # Land-Based Automatic Stations
- △ Coastal Weather Stations
- ⊞ Kinsale Energy Gas Platform

Beaufort Scale of Wind

Force	Description	Speed*		Specification -sea	Wave height** (metres)
		knots	km/hr		
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 hoaps 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 7.3 Met Éireann Weather Reports



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APPENDIX 2. Sea States & Visibility

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:

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)

Please Note:

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

Appendix 7.3 Met Éireann Weather Reports

**Met Éireann****The Irish Meteorological Service**

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APPENDIX 5. Sea Area Forecasts

24-hour Sea Area Forecast

Updated at 0000 / 0600 / 1200 / 1800

Sea Area Forecast until 1200 Thursday, 10 October 2019**Issued at 1200 Wednesday, 9 October 2019****1. Gale warning: Nil****Small craft warning: In operation**

2. Meteorological situation at 0900: A depression of 974 hPa, centred 140nm to the northwest of Scotland, is generating a fresh to strong and unstable southwest to westerly airflow over Ireland. The flow will slacken overnight as frontal troughs approach Ireland from the southwest.

3. Forecast for Irish coastal waters from Fair Head to Howth Head to Carnsore Point and for the Irish Sea

Wind: West force 4 or 5, occasionally force 6 this afternoon. Later backing southwesterly force 4 or 5.

Forecast for Irish coastal waters from Carnsore Point to Slyne Head to Fair Head

Wind: West force 6 or 7 and gusty. Backing southwesterly and decreasing force 4 or 5 overnight, later increasing force 6 or 7.

Weather for all Irish coastal waters and the Irish Sea: Showers, some heavy with a few isolated thunderstorms. Some fair weather also.

Visibility for all Irish coastal waters and the Irish Sea: Moderate or poor in showers, otherwise good.

Warning of Heavy Swell: for a time on Atlantic coasts

4. Outlook for a further 24 hours until 1200 Friday 11 October 2019: Fresh to strong southwesterly winds, increasing strong to gale force and gusty southwesterly during Thursday. Widespread rain, drizzle and mist.

Appendix 7.3 Met Éireann Weather Reports



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Text of Gale Warning
Nil

Text of Small Craft Warning
<ol style="list-style-type: none"> 1. Westerly winds will reach force 6 or higher this afternoon and evening on Irish coasts from Carnsore Point to Loop Head to Fair Head. 2. Southwest winds will reach force 6 or higher on Thursday morning from Carnsore Point to Loop Head to Bloody Foreland.

Coastal Reports	12 Noon Wednesday, 09 October 2019
Malin Head Automatic	West, 24 Knots, Gust 37 Knots, Fair, 11 Miles, 995, Rising slowly
Dublin Airport	West-Southwest, 11 Knots, Cloudy, 16 Miles, 1001, Steady
Buoy M5 51° 41'N 6° 42'W	West, 18 Knots, Wave ht: 2.8 m, The visibility at Tuskar is greater than 10 Miles, 1005, Steady
Roches Point Automatic	West-Southwest, 11 Knots, Cloudy, 14 Miles, 1005, Steady
Sherkin Island Automatic	West-Southwest, 18 Knots, Fair, 9 Miles, 1006, Steady
Valentia Automatic	West, 17 Knots, Gust 28 Knots, Recent rain, 9 Miles, 1005, Steady
Mace Head Automatic	West, 20 Knots, Gust 40 Knots, Rain shower, 3 Miles, 1001, Rising slowly
Belmullet Automatic	West, 14 Knots, Recent rain, 6 Miles, 999, Steady
Buoy M1 53° 8'N, 11° 12'W	Report not available
Buoy M2 53° 29'N, 5° 26'W	West-Southwest, 20 Knots, Wave height not available, 1000, Rising slowly
Buoy M3 51° 13'N, 10° 33'W	West, 21 Knots, Wave height not available, 1007, Steady
Buoy M4 55° 0'N 10° 0'W	West, 24 Knots, Wave height not available, 996, Steady
Buoy M6 53° 4'N 15° 56'W	West-Northwest, 21 Knots, Wave ht: 4.8 m, 1004, Rising slowly

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

Sea Crossings	State of sea until 1200 Friday 11 October 2019
Dublin - Holyhead	Mostly moderate.
Rosslare - South Wales	Moderate, rough at times on Thursday.
Cork - South Wales	Rough to very rough.
Rosslare - France	Rough to very rough.
Cork - France	Rough to very rough.

Appendix 7.4 Diver Search areas

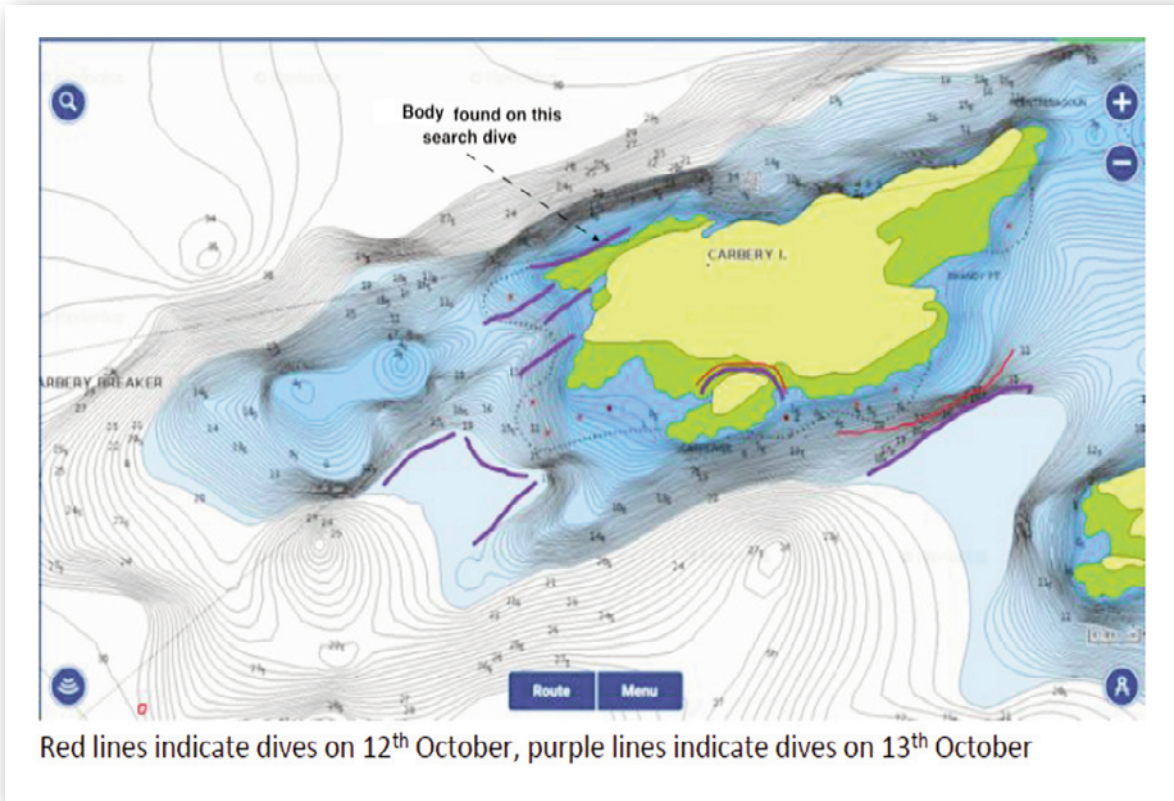


Chart 4 - Diver searches 12th and 13th October.

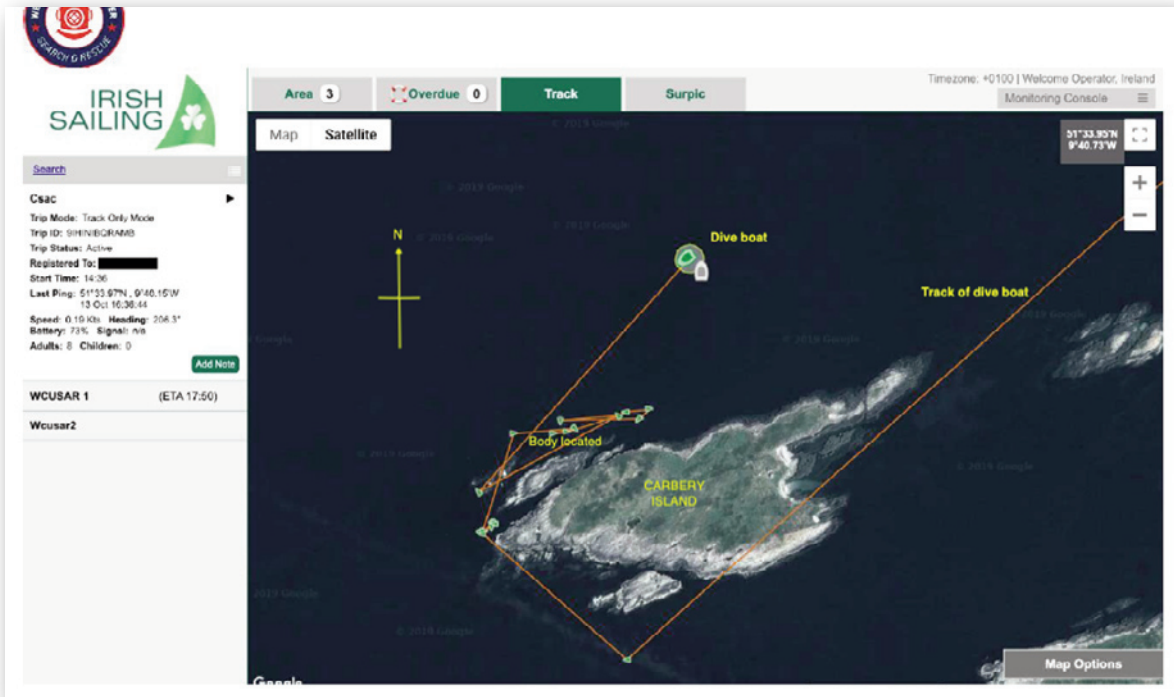


Chart 5 - Satellite image - Dive boat track and body location 13th October.

Appendix 7.5 Maritime Safety Strategy - Extracts

Section 1:

Maritime safety in context

1. This Section sets out the context for maritime safety in Ireland, the role of the Irish Maritime Administration (IMA), the collaborative nature of maritime safety, and the background to the preparation of the strategy.

Maritime safety in Ireland.

2. Maritime safety, including the development of high quality marine emergency response services, is one of the key priorities of the Department of Transport, Tourism and Sport, which has invested an average of over €67 million per annum in maritime safety during the past five years (2010-2014).
3. The number of maritime fatalities in Ireland, at an average of 11 per annum, is low. While it is difficult to make cross-jurisdictional comparisons due to differences in the methods by which statistics are compiled, there is no evidence to suggest that Ireland's overall maritime safety record is out of line. However, each life lost is one too many, and is devastating for families and communities. This strategy seeks to reduce the risks to maritime safety, thereby reducing the number of incidents arising, and eliminating fatalities in the sector.
4. The genesis of this maritime safety strategy was the emergence of recurring causal factors in marine casualty investigation reports and recognition of the extent to which maritime fatalities and incidents could be avoided. When maritime casualties arise, the independent Marine Casualty Investigation Board (MCIB) investigates what occurred and makes safety-related recommendations to the Minister for Transport, Tourism and Sport.

Role of the Irish Maritime Administration.

5. In 2013, the Department's maritime divisions were brought together to form the Irish Maritime Administration to integrate the planning and delivery of maritime services under a single national office. The IMA comprises the Marine Survey Office (MSO) which has responsibility for the implementation and enforcement of ship safety legislation, the Irish Coast Guard (IRCG) which provides a marine emergency response and ship casualty and pollution response service, Maritime Safety Policy Division (MSPD) which has responsibility for developing policy and legislation for maritime safety, Maritime Transport Division (MTD) which has responsibility for providing a framework for the provision of port services, and a new Maritime Services Division (MSD) which provides administrative support for the delivery of maritime safety, emergency response and ship source pollution prevention. In establishing the IMA, an action plan was put in place to improve the effectiveness and efficiency of maritime safety services delivery, which included addressing gaps in safety services and the introduction of a major Information Technology systems development programme to support the delivery of services. The plan also included an action

Appendix 7.5 Maritime Safety Strategy - Extracts

relating to the preparation of a new targeted maritime safety strategy, resulting in the publication of this document.

6. The IMA's maritime safety remit relates to safety on recreational craft, fishing vessels, passenger vessels and cargo ships and it is these areas that are covered by the strategy. It should be noted that persons such as swimmers and those engaged in shoreline activities (e.g. angling, sea-cliff climbing) are outside the scope of the strategy; they are addressed through other safety initiatives (on which further information is available at safetyonthewater.ie).
7. Much of the IMA's work is focused on preventing casualties and incidents on maritime vessels, by setting guidelines and standards for vessels and seafarers, by inspections and certification, and by enforcement. Ireland has a substantial body of existing legislation on maritime safety, which reflects international best practice and is driven by international and European obligations.
8. The MSO fulfils the role of the maritime transport safety regulator and, in that context, it carries out a comprehensive regime of inspections covering issues such as safety, security, living and working conditions, and accessibility. This work encompasses recreational craft, fishing vessels, passenger vessels and cargo ships on the Irish flag (whether operating internationally or domestically); certification of Irish seafarers including fishers and recreational craft users; and security in Irish ports. It also includes risk-based inspections on foreign-flagged ships calling to Irish ports using the internationally agreed methodology of the Paris Memorandum of Understanding on Port State Control. The MSO carries out an average of 1,300 inspections every year.
9. Despite the range of preventative measures in place, maritime casualties and incidents arise, and this requires a responsive search and rescue service to save lives. The IRCG manages a high-quality marine emergency management service and implements best practice rescue regimes to minimise fatalities when incidents do occur. In 2012, a new ten-year Search and Rescue helicopter contract was commenced, providing helicopters to the IRCG which meet the highest international standards. An average of 180 lives are saved annually by the IRCG, who task a range of search and rescue organisations and resources to respond to casualties and incidents, with almost 2,170 lives being saved since 2002.

Maritime safety as a collaborative effort, with individual responsibility.

10. Of its nature, maritime safety is a wide-ranging issue which impacts on a variety of government departments, agencies, bodies, fishers, seafarers, passengers, recreational users, representative groups, industries, volunteer responders and individuals. Efforts are continuing in a number of organisations to improve maritime safety. This strategy does not seek to re-state or duplicate these efforts but aims to take account of them in pursuit of a common goal.
11. However, it is clear that the activities of the IMA and the organisations mentioned above cannot, on their own, lead to improved maritime safety. It is up to each individual who takes to the water to take personal responsibility for their actions. Irresponsible behaviour, and failure to operate safely puts at risk the individual's own

Appendix 7.5 Maritime Safety Strategy - Extracts

life, the life of others on board, and potentially imposes an unacceptable level of risk on the emergency/rescue services.

Development of the strategy

12. Part of the process of preparing the strategy involved consultation with key stakeholders and the general public, with written submissions being received from a range of interested parties (see list at Annex 3), and agencies and organisations being invited to a discussion. That process informed the development of this document, but it is only the start of closer engagement with those involved in the sector. Many of the submissions raised complex issues which merit more in-depth analysis, and actions to address these issues are included in the strategy insofar as possible.
13. Also as part of strategy development, the recurring causal factors contributing to maritime casualties were analysed. The next Section sets out these factors in some detail and identifies the top ten factors contributing to maritime fatalities in Ireland, which the actions set out in this strategy aim to address.

Section 2:

Maritime fatality and incident statistics.

1. This Section provides details on maritime fatality and incident statistics in Ireland and identifies the chief recurring factors contributing to the fatalities. The contributing factors identified are based on the information available from MCIB investigation reports and IRCG experience and statistics. Details of recurring factors by sector are set out in Annex 2.

Maritime fatality statistics

2. In the 12 year period from 2002 to 2013, there were 137 fatalities which were related to recreational craft, fishing vessels, passenger vessels, and cargo ships. Details are set out in Figures 1 and 2 below. The vessel categories most at risk in relation to fatalities are recreational craft and fishing vessels, followed by passenger vessels and cargo ships.

Figure 1: Fatalities in the maritime sector 2002-2013 inclusive

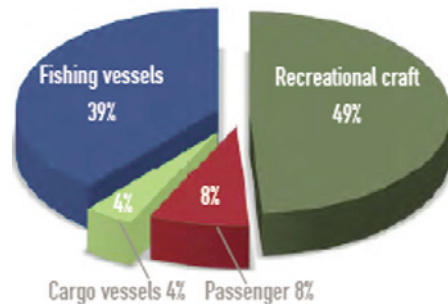
Recreational Craft: 67 fatalities	
44	due to vessel capsizing, resulting in drowning/hypothermia;
20	due to persons falling overboard/drowning;
1	due to collision with another vessel, resulting in drowning; and
2	due to engine cutting out and persons attempting to swim to safety, resulting in drowning.
Fishing Vessels: 53 fatalities	
39	due to vessel running aground, sinking or capsizing, resulting in drowning/hypothermia;
9	due to crew members falling overboard/drowning; and
5	due to accidents on board.
Passenger Vessels: 11 fatalities*	
5	due to vessel running aground, sinking or capsizing, resulting in drowning/hypothermia;
3	due to accidents on board; and
3	due to passengers falling overboard/drowning.
Cargo Ships: 6 fatalities	
4	due to accidents on board;
2	due to crew members falling overboard/drowning.
Total number of fatalities: 137	

Source: Based on MCIB reports and IRCG Annual Statistics, 2002-2013 combined.

*Note: 5 of the passenger vessel fatalities resulted from a single incident, before passenger boat regulations were introduced.

Appendix 7.5 Maritime Safety Strategy - Extracts

Figure 2: Percentages of maritime fatalities arising by vessel type



Source: Based on MCIB reports 2002-2013 and IRCG Annual Statistics, combined.

- It is striking to note that 99% of maritime fatalities are male, with an average age of 44 years. This is of relevance to the development of information and communication campaigns to promote maritime safety. Figure 3 below sets out some data relating to the gender and age profile of maritime fatalities.
- Of the total number of fatalities in the period, the youngest was aged 14 and died in an incident involving a passenger vessel. The youngest fatality in the recreational craft sector was aged 15. The youngest fatality in the cargo and fishing sectors were 20 and 21 respectively. The oldest fatality overall was aged 73, in an incident involving a passenger vessel. The average age of all maritime fatalities in the period was 44 years of age. Overall, the vast majority of fatalities (135, or 99%) were male, with only two female fatalities (both of which occurred in the recreational craft sector).

Source: Based on MCIB reports 2002 - 2013

IRCG call-out statistics

- In the 12 year period from 2002 – 2013 the IRCG handled a total of 10,377 distress/urgency calls involving fishing vessels, recreational craft and merchant vessels (averaging 865 such incidents per annum).
- A significant majority of IRCG callouts are to assist recreational craft, with a total of 6,722 incidents in the period (averaging 560 such incidents per annum). The trend shows that incidents involving recreational craft have been increasing, which can in part be attributed to recent prolonged periods of warm summer weather as well as an increasing amount of people taking to our waters and enjoying summer holidays around the coastal areas of Ireland.
- There are also significant numbers of incidents involving fishing vessels, with a total of 2,888 incidents in the period (averaging 241 such incidents per annum). Incidents involving fishing vessels have declined since 2003, although that decline has levelled off in recent years. This general decline can be attributed to the general adherence to regulatory and safety requirements within the Irish fishing fleet, which were introduced as a result of the recommendations of the Fishing Vessel Safety Review Group in 1996.

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8. The number of incidents involving merchant vessels (which comprise cargo ships and passenger vessels) has remained fairly constant, with a total of 767 incidents in the period (averaging 64 such incidents per annum).
9. MCIB investigation reports indicate that there are similarities in the events which contribute to the loss of life in the maritime sector. Based on analysis of MCIB reports, on fatalities arising since 2002, combined with information from IRCG incident reports, ten factors have been identified which tend to arise most frequently, as set out in Figure 6 below. Contributory factors by sector are considered in Annex 2 of this document.
10. Although the focus is on fatalities, similar factors contribute to incidents where there has been no loss of life. Thus, by tackling the factors highlighted, both fatalities and incidents overall can be reduced. The prevalence of these factors is borne out by the practical experience of the IRCG in its management of emergency response in the maritime sector. Each of the factors listed is important and it is noteworthy that there are often multiple factors identified in relation to each fatality.
11. A common underlying factor when reading through the MCIB reports over the years is the need for an enhanced culture of safety in the maritime sector; this factor is therefore listed first. There is a strong sense that insufficient attention is paid by individuals to maritime safety as a matter of course. Taking to the water is so familiar that it risks being taken for granted, and basic safety checks overlooked. The safety culture will only change when it becomes second nature for people to think 'safety first' when planning and undertaking a voyage or water-based activity.
12. It is important to note this list of recurring factors is not exhaustive but highlighting these factors has enabled us to set out a range of actions in the strategy to target these contributory factors in particular. There are steps which individuals can take, and there are a range of actions which the IMA will lead and deliver to strengthen the maritime safety environment.

IRCG incident reports were considered in relation to fatalities involving divers, sailboarders and surfers, as incidents involving these fatalities were not investigated by the MCIB.

Figure 6: Top ten factors contributing to loss of life at sea in Ireland– all maritime craft and vessels:

- The need for an enhanced maritime safety culture.
- Unsuitable or inadequately maintained safety equipment on board, or lack thereof.
- Lack of crew training.
- Failure to plan journeys safely, including failure to take sea/weather conditions into account.
- Non-wearing of personal flotation device (lifejacket/buoyancy aid).
- Vessel unseaworthy, unstable and/or overloaded.
- Inadequate enforcement of regulations.
- Impairment due to fatigue or the influence of alcohol and/or drugs.
- Inadequate crewing levels/solo operation.
- Unsuitable clothing being worn on board.

Source: Based on MCIB reports 2002 – 2013 and IRCG Annual Statistics, combined.

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13. Given that the highest number of casualties and incidents arise in the recreational and fishing sectors, it is important to target those high-risk sectors in particular when developing maritime safety initiatives. Fewer fatalities arise in the passenger and cargo sectors, but there is no room for complacency in those low-risk sectors as the potential consequences of a major incident could be severe.
14. The MCIB reports have indicated that a lack of compliance with maritime safety requirements can be a factor in marine casualties and that better enforcement could address this issue. Enforcement can be improved, and additional deterrents can be put in place, but these actions alone will not be enough – a dramatic change in attitudes and practice across the maritime sector is the main requirement to improve maritime safety.
15. The next Section sets out some practical steps individuals can take in accepting their personal responsibility for maritime safety.

Section 3:**Taking Personal Responsibility for Maritime Safety.**

1. The IMA cannot act alone in improving maritime safety in Ireland. This Section sets out a range of practical steps which individuals, families, communities and organisations can take to improve maritime safety, and to help to prevent maritime fatalities and incidents from occurring.
2. Every trip on the water should be a safe one, which means planning for a safe trip every time, behaving responsibly once afloat, and maximising the chances of survival in the water should an incident occur.
3. Influences on safety behaviour are many and varied, as are the ways that the safety message can be conveyed and kept relevant and refreshed. There is a diverse range of interested parties in the maritime sector, be they individuals, families, communities, voluntary groups, fisheries organisations, sporting organisations, representative groups, public bodies or agencies. All those involved should think about what they themselves can do at a practical day-to-day level to improve safety and to save lives and prevent accidents, including what can be achieved by working together.
4. A number of behaviours have been identified to illustrate the kinds of practical actions that could make a significant difference to reducing maritime fatalities and incidents. The list is not exhaustive but should act as a guide to the type of practical initiatives that can be put into action. The actions are particularly relevant to the fishing and recreational sectors where most fatalities arise.

What individuals can do when taking to the water

5. Think 'safety first', which includes:
 - 5.1 Planning all voyages, even if they are short and familiar;

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- 5.2 Taking weather and sea conditions into account;
- 5.3 Having a safe vessel, safe equipment, well-maintained and serviced engines, and safe operations (including loading and stability);
- 5.4 Having well trained, competent, crew; everyone on board should know what their role is;
- 5.5 Logging a traffic report with the Coast Guard, keeping in touch, and letting someone on shore know what route is being taken, what the estimated time of arrival to shore is, and what to do if that time is exceeded;
- 5.6 Recognising the safety implications of fatigue;
- 5.7 Avoiding alcohol and drugs before or during a voyage;
- 5.8 Wearing suitable Personal Flotation Devices (PFDs - lifejackets and buoyancy aids) and suitable clothing;
- 5.9 Making sure that the right emergency communications equipment is carried, that it works and is properly registered, and that it is used properly; and
- 5.10 Calling for assistance from the Irish Coast Guard at the first sign of trouble, even if it is just to set up a safety watch.

What families and friends can do

- 6. Families and friends can:
 - 6.1 Encourage those who take to the water to take maritime safety seriously and to always think about safety issues (e.g. weather conditions and forecasts, tides, wearing Personal Flotation Devices, logging journey information, using emergency beacons, and maintaining emergency contacts for each trip);
 - 6.2 Discourage persons from taking to the water if weather conditions are unfavourable and/or if they have not heeded safety requirements; and
 - 6.3 Telephone the Irish Coast Guard on 112 immediately if concerned in any way about someone who has taken to the water (e.g. is late returning).

What organisations can do

- 7. Agencies, organisations and representative bodies can:
 - 7.1 Incorporate an enhanced focus on personal responsibility for maritime safety at every opportunity, including as part of training courses;
 - 7.2 Consider where the safety message needs to be targeted, how that target audience is best reached, and how they can do this in their own activities, including using technologies such as the internet and social media; and
 - 7.3 Work on joint initiatives and on co-ordinating their safety messages, including in media campaigns, providing safety information, workshops and coming together regularly to pool their expertise and resources.

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8. The next Section outlines the actions the IMA will lead and implement to address the risks to maritime safety, seeking to eliminate maritime fatalities and reduce incidents requiring the assistance of the emergency services.

Section 4:**What the IMA can do to support a better maritime safety culture**

1. This Section outlines the actions the IMA will lead and implement, in the context of this strategy, to address the risks to maritime safety and to support a better maritime safety culture. A table summarising the actions and timeframes is at Annex 1.
2. Essentially, the actions outlined in this Section are centred on promoting personal responsibility for maritime safety, improving search and rescue, and implementing preventative measures, including a robust inspection and regulatory framework, and an enhanced enforcement regime. They are designed, in a holistic way, to tackle the top ten factors contributing to maritime fatalities which have been identified.
3. The actions are grouped under five over-arching strategic objectives which are:

Information and Communication Intensification of efforts to promote maritime safety awareness, through a process of information and communication, and the promotion of more effective communication between key stakeholders.

Search and Rescue Operations Improvement in Coast Guard search and rescue operations management, using advanced technologies, to increase survival rates when incidents occur.

Standards An appropriate regulatory regime in place for the seaworthiness of vessels and craft and the competency of operators and/or crew.

Enforcement Building on the current enforcement regime.

Data and Evaluation The development of a robust system for collecting and disseminating maritime accident statistics in the maritime safety sector. Evaluation of the progress being made under this strategy.

Strategic Objective: Enforcement

13. The maritime sector in Ireland is governed by a range of domestic, European and international legislation that reflect best practice as regards maritime safety. While the strategy provides for the strengthening of safety obligations in a number of instances, the focus is on ensuring more rigorous enforcement of existing legal requirements. Individuals and organisations must take their obligations seriously and change their behaviour to comply with maritime safety law and to avoid irresponsible behaviour that puts their own lives, and the lives of others, at risk.
14. Therefore, the IMA will build on the current enforcement regime.
15. In pursuit of this strategic objective, the IMA will take the following actions:
Action 27: A forum will be established for maritime safety enforcement authorities to

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exchange experiences and identify areas for improvement. A priority will be to review the practical implementation of the Maritime Safety Act 2005 and the guidelines associated with that Act. (Establish forum in 2015).

Action 28: The possibility of extending Fixed Payment Notices to more offences (e.g. failure to wear Personal Flotation Devices on fishing vessels as required by law), will be examined. (Start in 2016).

Action 29: An enhanced flag state inspection regime on fishing vessels will be implemented to promote adherence to maritime safety requirements in the sector. (Start in 2016).

Action 30: Prosecutions of maritime safety related offences will be publicised, with the purpose of deterring non-compliance with relevant legislation. (Throughout 2015-2019).

ANNEX 2

Sectoral analysis of factors contributing to maritime fatalities

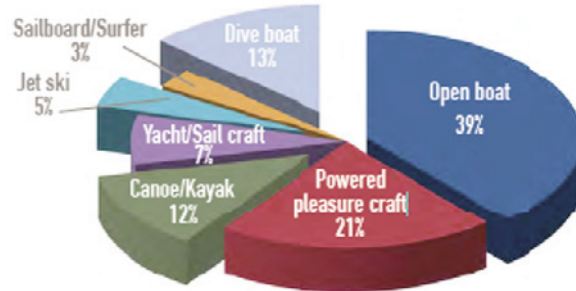
1. This Annex outlines, by sector, the main factors contributing towards fatalities in relation to recreational craft, fishing vessels, passenger vessels and cargo ships. Although the data refers to fatalities, it is noteworthy that the factors contributing towards incidents where there has been no loss of life are similar.

Recreational craft

2. The recreational craft sector accounts for almost half (49%) of all maritime fatalities and the majority (65%) of all IRCG callouts in the sectors concerned. The sector includes sailing craft, motorboats, ski boats, craft with outboard engines, personal watercraft (jet-skis), canoes, kayaks and non-powered craft. Regulation of recreational craft in Ireland is focused on the safe operation of craft, the provision of certain items of safety equipment, the carriage and use of personal flotation devices (PFDs) (lifejackets/buoyancy aids), and the manufacture and sale of safe recreational craft under the EU Recreational Craft Directive. The IMA's Code of Practice for the Safe Operation of Recreational Craft (available on www.dttas.ie and www.safetyonthewater.ie) provides information on legislative requirements and gives safety advice on best practice to operators and owners of recreational craft.
3. There were 67 fatalities in the recreational sector in the period from 2002-2013. Figure (i) below shows the percentages of types of craft involved. 26 of the fatalities involved an open boat; 14 fatalities involved a powered pleasure craft; 9 fatalities involved a dive boat; 8 fatalities involved a canoe or kayak; 5 fatalities involved yachts or sail craft; 3 fatalities involved personal watercraft (jet-skis); and 2 fatalities involved a sailboard/surfer.

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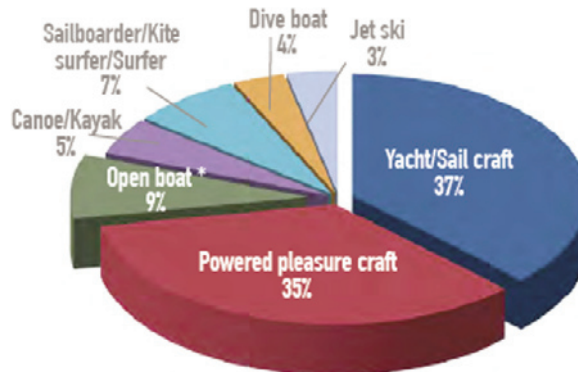
Figure (i): Recreational craft fatalities by vessel type



Source: Based on MCIB reports 2002-2013 and IRCG Annual Statistics, combined

- 4 6,722 distress/urgency calls were received by the IRCG in the period 2002-2013, involving the recreational craft sector (averaging 560 per annum). Exact figures are not available for the full period in question, due to changes in the way IRCG data was compiled prior to 2003, however, based on the data available for 2003-2013, an indicative breakdown of the type of craft involved is provided in Figure (ii) below.

Figure (ii): Recreational craft Distress/Urgency Calls by vessel type



Source: IRCG Annual Statistics 2003-2013
 * For comparison purposes, 'Open boat' in this figure covers row boat and angling boat.

5. Based on analysis of MCIB investigation reports, combined with information from IRCG incident reports in a number of instances, the most prevalent factor contributing to loss of life in the recreational sector is the failure to plan journeys safely, followed by significant factors such as non-wearing of a personal flotation device (lifejacket/buoyancy aid); lack of crew training; and deficiencies in safety equipment on board. IRCG incident reports were considered in relation to fatalities involving divers, sailboarders and surfers, as incidents involving these fatalities were not investigated by the MCIB. A ranking of the prevalence of the factors is set out in Figure (iii) below. The need for an enhanced maritime safety culture in the sector, to which personal responsibility is intrinsically linked, is a key underlying issue.

SECTION 36 PROCESS

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

It is a requirement under Section 36 that:

- (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 under Section 36. 'Noted' does not mean that the Board either agrees or disagrees with the observation.

Response(s) received following circulation of the draft report are included in the following section.

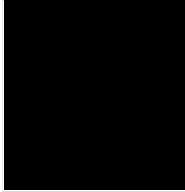
8. SECTION 36 - CORRESPONDENCE RECEIVED

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

Correspondence 8.1 Relative of deceased and MCIB response



RE Draft Report On The Boat 'Tommy R'

Dear Sir/Madam

Thank you for sending the draft report on the loss of [REDACTED] and his boat 'Tommy R' on the 09-10-2019.

Overall in my opinion, as a draft report, it is not bad. However, there are a number of inaccuracies in the report and some facts omitted which might help to unravel the mystery of what happened on that fateful day. Or at least give a fairer account.

They are as follows-

Summary

1.1 Referred to [REDACTED] as an 'Angler' which is not correct. An angler is generally one who fishes with rod and line. Also, there is often an anti-commercial fishing undertone associated with anglers. [REDACTED] was a proud commercial fisher by profession and would **never** describe himself as an angler even though he did plenty of fishing for pleasure.

1.2 States wreckage was found on the western shore of Carbery Island at 22.59. There was no wreckage found on Carbery at 22.59. The first wreckage on Carbery was seen at 4.30 am on the 10-10-2019 by family and locals.

Crew details 2.3 and 3.25 states [REDACTED] was 22 years old. He was 23 and one week from his 24th birthday (DOB 15-10-1995).

2.1 Overall length of the boat given as 5.7 metres. I am sure that the hull was an O'Sullivan Seamróg 20 (6.06 metres)

2.3 States that when casualty was reported overdue he was described as wearing yellow oilskins and that he was not wearing a Personal Floatation Device (PFD). It was 'I' who reported the casualty overdue but I didn't say anything about a PFD. However, later that night as the helicopter was hovering over the Mucklagh Rocks, I contacted the

MCIB RESPONSE:
Noted.

MCIB RESPONSE:
Noted - please see para. 4.1.2.

MCIB RESPONSE:
Noted and the report has been amended

Correspondence 8.1 Relative of deceased and MCIB response

Coastguard to say that he probably wasn't wearing his lifejacket.

2.6.3 Omitted is that [REDACTED] volunteer diver and his team, dived on Friday evening 11-10-2019 , on the west side of Carbery Island and made a sweep through the South Gulley as requested.

MCIB RESPONSE:
Noted.

2.6.4 States that the body was found NW of Carbery Island. The body was actually found off the North side of the Island about half way along.

3.2.4 States that a Garmin Chart Plotter was found on the West shore of Carbery Island. The Chart Plotter, GPS 128 and the Fishfinder were all found in a cave between the Mucklagh Rocks and Drishane strand.

MCIB RESPONSE:
Noted and the report has been amended

3.4.5 Stated again incorrectly that wreckage was found on Carbery's west shore at 22.59 and that the body was recovered at the NW corner of Carbery Island.

MCIB RESPONSE:
Noted.

4.3.1 States that the casualty was reported as not wearing a PDF when reported overdue.

MCIB RESPONSE:
Noted and the report has been amended

4.5.3 Shoreline East of Dunmanus Harbour should read **west of** Dunmanus Harbour

Chart 3 Satellite image- wreckage plume
There was no wreckage from the Tommy R found South of the cuas East of Furze Island.

As well as the above , there is no mention in the report of the 'man of war' jellyfish which were abundant in the bay at the time. When daylight came on the 10-10-2019 we could see them everywhere around Carbery Island. They were also washed up on the beaches and rocks around the bay. Never had I seen this before. We could not but think how anyone could have avoided them. The Post Mortem didn't pick up anything as far as we know.

MCIB RESPONSE:
Noted.

There is no doubt that [REDACTED] was a very experienced seaman beyond his young age having fished trawlers from Rockall to the English Channel as well as in small boats from the age of 7,coupled with excellent training at the BIM Fishery School, Castletownbere .

Correspondence 8.1 Relative of deceased and MCIB response

The report rightly states in 4.5.1 that the boats whereabouts during the day and up to the time of the search is a source of conjecture.

After the funeral, time was spent searching for the hull of the boat with echo sounder and underwater camera before the weather broke, but nothing was found. We hoped finding the hull would help to take some of the guesswork out of what happened. But it was not to be. Personally I believe that without more sightings of the boat on that day or ideally, having the GPS track for that day, it is fair and reasonable to say at this time that only the sea holds the mystery of what happened.

Again, thank you for sharing the draft report and be assured that if I can be of any further help , feel free to contact me.

Yours sincerely,

[Redacted signature]

MCIB RESPONSE:
Noted.



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