REPORT INTO THE LOSS OF THE FISHING VESSEL "ST. OLIVER" ON THE 17TH SEPTEMBER, 2004.

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

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1. SYNOPSIS

1.1 Shortly after high water springs on the night of the 17th Sept 2004, the fishing vessel "St.Oliver" departed Leitir Ard in Bertrabuoy Bay at approximately 19:15 hours local time on passage to the fishing port of Rossaveal. The run of 25 nautical miles was expected to take approximately three hours giving an E.T.A. of 22:15 hours or thereabouts.

The weather at the time of departure was S.S.W. at 29 kts gusting to 40 kts. with outbreaks of heavy rain. The crew, consisting of four were in contact with their families at various stages of the voyage reporting that conditions were bad but they expected to reach their destination on time.

The vessel failed to reach its destination having grounded and broken up on Duck Island at 21:00hours approximately. All four crew perished.

2. FACTUAL INFORMATION

2.1 PARTICULARS OF THE VESSEL "ST.OLIVER"

Built:	1975 – Board Iascaigh Mhara Boatyard Dingle, Co. Kerry.
Owner:	Mr. John Dirrane Knocknacarra, Co. Galway.
Purchased:	1999

Description: Shelterdecked wooden hull of iroko planking on oak frames, cruiser stern, engine room forward with steel wheelhouse aft. The shelter deck was fabricated and installed by Mooney (Boats) Ltd. Killybegs, Co. Donegal in 1990/1991. The vessel was painted dark blue with white superstructure, red anti fouling and a white water line. The vessel is described as multipurpose used in trawl and seine net fishing (See photograph at Appendix 8.1).

Overall Length:	19.81 metres
Registered Length:	19.11 metres
Registered Breadth:	6.31 metres
Registered Depth:	2.71 metres
Gross Registered Tonnage:	70.97 Re-measurement in 2003 to 103 G.T.
Port of Registry:	Sligo SO 601
Official Number:	401518

Main Engine:	Kelvin Diesel Engine Type: TASC8 Eight Cylinders 272.33 kW This unit was installed new in 1990/91 and had new pistons, liners etc. fitted in April 1997.
Gearbox:	Reintjes Type: WAF 440 This unit was installed new with the main engine.
P.T.O.Gearbox:	Hytek, installed new with main engine.
Aux Engine:	Lister Diesel Engine 32.5 H.P. This unit drives a 24V transmotor and GGG General service pump.
Electrics:	24 Volt and 110 volt systems. Two by banks of 4 six 6 volt batteries.

Fish Hold:	Refrigerated with Premier system. Installed new in 1998
Bunkers:	Two x 700 gallons fuel oil tanks.
Fresh Water:	One by 300 gallon capacity tank situated in fish hold starboard side.

2.2 During the change of ownership survey carried out by John J. McNelis & Co. in September of 1999, the following bridge and navigation equipment were found to be onboard:

- Robertson AP 45 Auto Pilot – new in 1998.
- KVH Gyro compass with ICD remote display – new in 1998
- Sodena Turbo Plotter which included computer, monitor, keyboard, converters, input for GPS, output to auto pilot and Irish Coast Line charts – new in 1998.

2.3 In 2000 a safety equipment inspection was carried out by Board Iascaigh Mhara detailing the following items on board the "St. Oliver".

2.3.1 Life Saving Appliances
- 2 x 6 man inflatable liferafts
- Hydrostatic release units
- Portable radio equipment
- 2 lifebuoys (I with Man overboard unit + 1 with 18 metres buoyant line)
- Lifejackets for each person
- 4 x line throwing apparatus
- 12 x parachute flares

2.3.2 Fire Fighting Appliances
- 1 x hand pump fitted outside machinery space
- I x fire hose
- I x plain nozzle capable of producing 6 metre jet of water
- I x spray nozzle
- Engine room water spray extinguishing system
- Engine room: extinguishers 2 x 9 Ltr foam, (4.5 + 6) kg dry powder.
- Galley / Messs room: 2 x 2kg Co2
- Accommodation: 1 x 9 ltr foam

2.3.3 Additional Items
- First Aid equipment
- Fire blankets
- Fire alarms
- Bilge pumps
- Bilge alarms
- Gas alarms

2.4 In July of 2001, a survey of equipment for the certificate of compliance was carried out by Maritime Radio Affairs Unit. This included technical approval of equipment and GMDSS compliance. The survey lists the following equipment onboard.

• VHF Transceiver:	Sailor 4822
• DSC Controller	Sailor 4822
• DSC Watchkeeping Receiver, Ch. 70	Sailor 4822
• MF Transmitter	Furuno FS1562 -15
• MF Receiver	Furuno FS1562 -15
• MF DSC Controller	Furuno FS1562 -15
• MF DSC Watchkeeping receiver	Furuno FX1562 - 15
• Navtex Receiver	Furuno NX300
• Satellite E.P.I.R.B.	Kannad 406WH
• Radar Transponder	Jotron Tron
• Portable two-way VHF radiotelephone	ICOM 1500E
• Main source of energy	220 V
• Reserve source of energy	24V Lucas
• Radar 9GHz	Furuno 805D
• Navigational aid	Echo Sounder
• Navigational aid	Furuno GP31

2.5 The crew of the "St. Oliver" on the 17th Sept 2004 consisted of the following persons:

1. **Mr. John Dirrane of Inishmor, Co.Galway.** Mr.Dirrane, the Skipper of the "St. Oliver" is described by his fellow colleagues as an experienced fisherman with many years service in the fishing industry. Records indicate that Mr. Dirrane held a Second Hand Special Certificate of Competency. Mr. Dirrane also held a long-range G.M.D.S.S. radio Certificate.

2. **Mr. Michael Faherty of Inverrin, Co. Galway.** Mr. Faherty was also a well-respected fisherman with many years experience. Mr. Faherty and Mr. Dirrane fished together for a number of years until eventually buying their own boats. Records indicate that Mr. Faherty was the holder of a Second Hand Limited Certificate of Competency and skippered his own vessel successfully.

3. **Mr. Joseph Connolly of Carna, Co. Galway.** Mr. Connolly was a very well respected businessman in the community. He owned and ran a boat repair yard and built up a reputation as a master craftsman in boat repair work and engine maintenance. Previously he had fished out of Glinsk for a number of years. He was a very experienced seaman although he is not known to have any formal qualification other than a Radio G.M.D.S.S. restricted operators certificate.

4. **Mr. Michael Mullen of Clifden, Co. Galway.** Mr. Mullen had attended a training course in Greencastle Fishing College, Co. Donegal and was the youngest member of the crew. He had not been fishing for very long but was described as being very keen and enthusiastic.

3. EVENTS PRIOR TO THE INCIDENT

3.1 On Friday 17th September 2004 at approximately 13:00 hours (corresponding with low water), the fishing vessel "St. Oliver", having completed a 17 day period of repair work was made ready to be lowered down to the edge of the slip in preparation for launching at high water that evening at approximately 18:50 hours at Letterard, Carna. Although a delay in starting the main engine was experienced the engine was running from 17:00 hours approximately.

3.2 During the lay-up period the "St. Oliver" was painted, had some new nails placed in the timbers and had a degree of caulking carried out. New anodes were fitted to the keel and rudder and a length of angle iron was welded to the rudder.

3.3 Mr. John Dirrane (owner of the boat), Mr. Michael Mullen (crew man) worked on the boat in addition to Mr. Joseph Connolly (owner of boat yard) who later that evening joined the vessel as crew for the intended voyage. The repair work was also carried out by Mr. Colm Mulkerrins, Mr. Ciaran McDonagh, Mr. John O'Malley and Mr. Patrick Connolly.

3.4 Mr. Colm Mulkerrins recalls leaving the site for a period during the afternoon and returning to the slip at approximately 17:30 hours that evening in preparation for the launch of the "St. Oliver". Shortly before 19:00 hours Mr. Ciaran McDonagh and Mr. Donal McDonagh arrived to lend a hand with letting go the boat.

3.5 Witnesses recollect that particular day as being fine and sunny and calm waters in the vicinity of the slip. The time then was approximately 18:00 hours. Although there are conflicting reports of weather conditions at the time of departure it is conceivable that it may have appeared calm in the vicinity of the slip, which was in comparative shelter from the elements. However Meteorological reports for the time and location, record the wind as being South to South West force 7 to gale force 8.
Mr. Colm Mulkerrins in his deposition states that at the time of departure (19:15 hours approximately), there was a "bad shower of rain and high wind". Mrs. Connolly, wife of Joseph recalls her husband stating that he would not fancy going out on the boat, as he knew that the weather was bad with a big sea running.

3.6 Mr. John Dirrane (Skipper) and Mr. Michael Mullen (crew) were both onboard the vessel awaiting the arrival of Mr. Michael Faherty who had agreed to assist in crewing the vessel to Rossaveal. Mr. Faherty arrived at approximately 19:00 hours and boarded the "St. Oliver" immediately by inflatable dinghy.

3.7 Just prior to departure, Mr. Joseph Connolly was asked to accompany the crew to Rossaveal. It should be noted for the record that Mr. Connolly had accompanied the crew on the arrival trip from Rossaveal to his boat yard

because of his local knowledge of the area. Mr. Joseph Connolly joined the rest of the crew and the vessel departed at about 19:15 hours.

3.8 Timing of events are as follows:

9:15 hours: "St. Oliver" departs Letterard in Bertraghboy Bay en route to the Fishing Port of Rossaveal with the following four crew on board:

Mr. John Dirrane	(Skipper)
Mr. Michael Faherty	(Extra Skipper)
Mr. Michael Mullen	(Crew)
Mr. Joseph Connolly	(Crew)

The approximate distance via the most direct route is 25 nautical miles. The vessel was expected to make a speed of between 7 and 8 knots, implying an E.T.A. of approximately 22:30hours consistent with all communication from crew.

19:40 hours: (a matter of 25 minutes after departure) Mrs. Joseph Connolly rang her husband. She believes that Mr. Connolly stated that they were 7 Miles from Inishlackan and that their E.T.A. was still 22:30 hours at Rossaveal. It would appear that Mrs. Connolly misheard what her husband said and confused 7 miles with 0.7 miles, the latter being consistent with the perceived speed of the vessel believed to be in the region of 7 knots. This would also conform to an E.T.A. of 22:30 hours for Rossaveal.

20:10 hours: Mrs. Carmel Faherty made contact with her husband Michael and confirmed E.T.A. for 22:30 hours.

20:23 hours: Mr. Michael Mullen sent a text message to a friend indicating that the seas were very rough. The text message indicated that the vessel's two computers were down and that there seemed to be an element of doubt as to the vessel's position. This amounts to the most significant piece of evidence so far uncovered as it suggests a problem onboard.

20:45 hours: Mrs Una Dirrane contacted her husband John. She learned from him that the weather was not good but maintained that they would be in Rossaveal for 22:00 hours that evening. She received no indication that anything was amiss.

21:03 hours: Some 15 minutes after the last contact with the vessel, the alarm was raised with the Irish Coast Guard. It should be noted that this initial alarm was raised when the "St. Oliver's" EPIRB (Emergency Position Indicator Radio Beacon) was activated.

3.9 The investigation revealed that of the several routes the vessel could have taken there are three likely courses, and of these, the one in particular favoured by the local fishermen, is the inner passage. Described here as Route (1). (See Chartlets 1 and 2 at Appendix 8.2).

Route (1) a distance of approximately 25 nautical miles would take the vessel out from Bertraghboy Bay turning SSW between Inishlackan to the West and Inishstreh to the East towards an area marked Big Sound. The vessel would then turn due South and when between Macdara's Island to the North East and Tonyeal Rocks to the South West alter course to the South East. This should take the vessel clear of Duck Island by a distance of one mile passing to the South.

Passing between Inishmuskerry Island to the North and Namackan Rocks to the South the track should then route the vessel North of Redflag Island, adjusting it's course to South South East and passing between Golam Head to the East and Eagle Rock to the West. From there the vessel would take an Easterly route to the approaches to Rossaveal harbour.

This route would be consistent with the calculated E.T.A. originally given based on an average speed of approximately 8 knots.

Had all gone to plan the vessel should have been abeam of Duck Island at approximately 20:40hours with a distance of approximately 15 nautical miles to run.

Apart from Electronic navigation systems onboard, visual bearings would normally be available for the passage, initially from Inishnee Point light at the Northern entrance to Bertaghboy Bay having a range of 5 miles and later from Deer Island light. It must be remembered that the effectiveness of these lights as an aid to navigation would be seriously diminished on that particular night due to heavy rain from 20:00 to 21:30 hours in that location. In addition with the New Moon taking place on 14th September it would have been extremely dark and overcast.

3.9.1 Route (2) would have taken the vessel to the South of Namackan Rocks adding an additional mile to the distance but affording greater sea room in view of the weather conditions prevalent at the time. South South West force 7 to Gale force 8 with a sea height of 5.5 to 5.7 metres.

This route would also have conformed to ETA's previously given.

3.9.2 Route (3) would have steered the vessel past Deer Island to the South on a South Westerly course clearing Mile Rocks to the North and Skerd Rocks to the South. Then rounding Skerd Rocks on a South Easterly course, adjusting course to East South East to a position South of Namackan Rocks and on to the approaches to Rossaveal.

The route planned by the Skipper is not known, one can only suggest when factoring in the allowed steaming time of approximately 3.25 hours at an average speed of 7.5 knots the resolved distance would be in the order of 25 to 26 miles. This lends credence to either route (I) or route (2) originally being chosen.

The investigation is further hampered in that the E.T.A.'s given during the course of the passage would suggest that the vessel was further along its track, past Duck Island and nearer its destination of Rossaveal than appears to have been the case.

4. THE INCIDENT

4.1 At 21:03 hours on the night of the 17th September 2004, the alarm was raised with the Irish Coast Guard. The initial alarm was raised when the "St. Oliver's" E.P.I.R.B. (Emergency Position Indicator Radio Beacon) was activated. The signal from this beacon was picked up by satellite and automatically forwarded to RCC (Rescue Co-ordination Centre), Kinloss in Scotland. This is the normal route for alerts of this nature. The initial alert signal did not contain a position for the distress. This alarm was forwarded to MRCC (Marine Rescue Co-ordination Centre) Dublin where it was received at 21:03 hours.
Following assessment of the alert message, MRCC Dublin forwarded it to MRSC (Marine Rescue Sub-Centre) Valentia at 21:06 hours. MRSC Valentia commenced a communications search and made marine radio broadcasts to shipping seeking information as to the whereabouts of the "St. Oliver".

4.2 The Irish Coast Guard SAR (Search and Rescue) Helicopter based at Shannon Airport was tasked at 21:25 hours and commenced its search on scene at 22:15 hours.

4.3 The Aran Island Lifeboat was notified at 21:38 hours. At 22:31 hours Costello Bay Coast Guard Unit was notified and by 23:00 hours the Naval Vessel "LE Ciara" was proceeding.

4.4 During this period satellite passes were progressively updating the position of the E.P.I.R.B. thus narrowing down the search area. At 23:06 hours Rescue Helicopter 115 located the vessel's EPIRB. By 23:13 hours a visual confirmation was made by the Helicopter crew of the wreckage of the "St. Oliver" on Duck Island. The Helicopter reported weather conditions at this time as follows: wind direction 210 degrees velocity 45 Knots. A full sweep was made of the area and a winchman was lowered down to search a life raft and the located wreckage.

4.5 Shortly after midnight Cleggan Coast Guard Unit and Clifden RNLI were alerted and tasked to carry out shore searches. It should be noted that weather conditions were outside the limitations for Clifden Lifeboat and other inshore Search and Rescue craft at the time. Again, due to the severe weather, which was now reported to be South Westerly gale force 8 to strong gale force 9 with a 5 metre sea, the "LE Ciara" was unable to launch its rescue craft. By this time the Aran Lifeboat was on scene but was unable to approach the vicinity of the wreckage again due to adverse weather conditions.

5. EVENTS AFTER THE INCIDENT

5.1 In addition to the Coast Guard and RNLI parties searching the coastline, a number of locals began forming separate search parties. It was during one of these searches on Mynish that debris was observed to be coming ashore. The time was now 01:00 hours on the 18th September 2004. On further inspection the body of Mr. Michael Faherty was discovered. The body, having been identified, was transferred to University College Hospital Galway (UCHG).

5.2 A second Rescue Helicopter was now despatched from Dublin to assist. The shoreline search was continuing along Mynish and expanded to Finish Island where some debris had come ashore, however efforts were hampered due to tide and weather conditions.

5.3 At 03:45 hours on the 18th of September the EPIRB was recovered and searches of Duck Island continued by Rescue Helicopter 116. The Rescue Helicopter was stood down at 07:00 hours and replaced by Helicopter 110 at 08:40 hours. By this time several Coast Guard units, RNLI Lifeboats and several volunteers in various other boats were conducting searches of the outlying islands. An extensive search of the shoreline was in progress with hundreds of volunteers joining as the morning progressed.

5.4 At approximately 11:00 hours on the 18th September a search team led by Garda Thomas Naughton and a group of locals made a landing on Duck Island where the body of Mr. Joseph Connolly was soon discovered. The body was later transferred to UCHG. A short time later another party made the discovery of the remains of Mr. Michael Mullen located about 40metres from where Mr. Connolly was found. Over the coming days the searches became more expanded with additional volunteers joining established search parties in the hopes of locating Mr. John Dirrane. Navy divers and local divers mounted numerous dives subject to tidal and weather conditions. Helicopter sorties continued along with several watercraft searches offshore.

5.5 Expectations were running low as to ever rescuing Mr. John Dirrane alive and efforts were now concentrated on recovering a body. It would however be another six days of searching before the body of Mr. Dirrane was located.

At approximately 15:00 hours 24th September 2004 the body of the deceased was discovered by local fishermen about 100 metres East of Duck Island in about 6 metres of water. The body was later transferred to UCHG for autopsy.

5.6 Inspection of the wreckage:
The wreck was located on the Southern side of Duck Island in the vicinity of Mweenish Island. The vessel had broken up into a number of sections that remained in the locality of the grounding (See photograph at Appendix 8.3).

- Steel wheelhouse and accommodation with winch gear.
- Bow section (Comprising of approx. for'd 1/3rd of vessel.)
- Mid keel section comprising of keel, garboard planking and five adjacent planks.
- Main engine and gear box located away from hull
- Propeller, tail shaft and aft section of hull in way of shaft bearing housing.

An aft section comprising of the rudderstock, which was sheared from rudder, steering rams and counter section were located approximately 200 metres from the main body of the wreck.

The remaining sections of the hull comprising of planking, frames and equipment had disintegrated and were spread across the island and portions of the mainland.

The rudder, though never recovered was reported by Garda divers to be lying directly off shore from point of impact, although this now appears to be hearsay. Locals searching for missing crewmembers had significantly disturbed the main body of the wreck.

5.6.1 Findings are as follows:

The main engine and gearbox were located completely separate from the hull. Details recovered from the transmission builder's plate reveal it was not the original unit installed on the vessel as it was built in 1990, and was indeed installed in 1990/91.

The gearbox control lever was set in the "ahead" position. There were no fuel system fittings e.g. fuel filters etc. remaining on the engine. There did not appear to be any evidence of a fire on the engine.

Within the wheelhouse, the engine throttles appeared to be in the "ahead" mode. The vessels essential VHF radios and electronics were in position.

It was not possible to inspect the vessels propeller as it was partly submerged in the surf, however two blades were visible and appeared intact and correctly profiled with some tip damage. It was later discovered that the tip damage referred to was old damage.

5.6.2 Findings are as follows:

Inspection of sections of the remaining hull revealed that there had been new caulking fitted, there was evidence of the original caulking still in use and serviceable. It was apparent that planking had been reclenched in areas and there were excessive nails present .The hull below the water line had been repainted recently.

The majority of sections of timbers inspected appeared in reasonable condition, and free of significant rot or damage.

Some rot was noted on the top of the counter post where it is housed in a steel box section.

One section of planking (1 metre long) was noted as being charred on one side as if exposed to fire, however it was the only case noted and was located some considerable distance from the wreck.

5.6.3 On the main keel section (midships – for'd) there is evidence of point of impact damage. The steel keel box has split open and the underlying timber keel has suffered extensive damage. It was not possible to access this section due to tidal conditions. The gearbox and adjacent planks on this section do not appear to be damaged and the paintwork was in good condition.

5.6.4 A section consisting of the rudderstock, (minus rudder and palm flange), steering rams and counter timbers were located some 150 metres from the main body of the wreck. It was noted that the rudder stuffing box gland nuts were recently fitted and were loose, nonetheless there was packing still present under the gland follower. The rudderstock appeared to have moved vertically downwards a distance of some 75mm from its original location.

The stock had sheared, and both the rudder and the connecting palm were missing. There appears to have been some evidence of repair work being undertaking on this area in the past as evidenced by the bevelling of the end of the shaft and what appears to be welding repairs.

5.6.5 The latest records available of the vessel refuelling was on 23rd July and 28th of July 2004 where she took onboard 2,326 litres and 4,251 litres of gas oil respectively.

5.6.6 Radio Equipment:

As circumstances allowed, a number of items of radio equipment were recovered from the vessel and sent to Maritime Radio Affairs unit for examination. Unfortunately certain other items were removed and never passed on to the investigation team, in particular the GPS equipment, which was seen onboard during the initial stages of the inspection but went missing when efforts were being made to recover these items. The significance of the GPS equipment cannot be played down as upon interrogation this unit could reveal the path taken by the vessel prior to grounding. Efforts were made by the investigation team to establish whether the University of Edinburgh with its access to satellite information could have located the vessel's progress during a pass. However this proved unsuccessful.

Of the items of radio equipment recovered three items were examined in detail in the hopes that some information could be learned.

- Furuno FS1562 transceiver control unit, this unit appeared to be in good condition but suffered from seawater ingress.
- Emergency battery change over switch box, this was undamaged with the exception of the switch being broken off the box. In the event of a vessel suffering a loss of electrical power such a switch would require to be manually thrown to the emergency position to connect to the reserve battery power, which is designed to supply power to radio equipment for at least six hours.

- Emergency Position Indicator Radio Beacon- E.P.I.R.B. Type Kannad 406 WH. This unit when activated transmits its unique identification message on the 406.025 MHz frequency. This unit may be operated in two ways. Manual activation is achieved by unscrewing a metal top under which a metal foil is located, this foil when broken gives access to a switch which may then be thrown to activate the unit. The purpose of the metal foil is to retain the switch in the "off" position.

Automatic activation occurs when the unit immersed in water activates a hydrostatic release system that opens a canister and permits the EPIRB to float free. The flow of seawater between two cells housed inside the unit forms a circuit thus activating the alert. An additional feature of this type of unit consists of a test facility that is used to carry out a functional test of the equipment without activating the alarm.

During the early hours of the 18th September 2004 the EPIRB was retrieved by the winchman. On inspection, the metal foil had been broken and the switch was in the "on" position, indicating that the unit was manually activated. This then begs the question as to why a radio distress was not made.

6. CONCLUSIONS

6.1 Due to the fact that all four crew perished and the lack of evidence obtained from the wreck site, what occurred the night of 17th September 2005 on board the "St.Oliver" remains shrouded in obscurity.

6.2 The investigation attempted to piece together the sequence of events leading up to the grounding of the vessel on Duck Island. In doing so the most likely routes the vessel may have taken were examined and narrowed down to routes (1) and (2) as outlined on chartlet 1. The preferred route being the shorter i.e. the Inner passage, however it is more likely that in view of the sea conditions that met the vessel on clearing Bertraghbboy Bay they would have opted for route (2) a passage between Skerd Rocks and Namakan Rocks before turning East. This route would have offered greater sea room taking the vessel away from danger but into very heavy seas. None of the communications from the crew to their respective wives suggested anything wrong. ETA's throughout were given as between 22:00 and 22:30 hours. The only indication of anything amiss was a text message from Mr. Michael Mullen to a friend wherein Mr. Mullen states that the weather is very rough, their two computers are down and consequently they hardly know where they are going.
He finishes with the message that he will give his friend a call later. This is the only suggestion that something was wrong.

The investigation concluded that the computers referred to were the chart plotter and either the radar or GPS. This malfunction may be the result of a circuit breaker activating or a short circuit in the system. The question remains unanswered as to whether or not other equipment was affected and if so had the emergency battery power supply not been switched over at that time.

6.3 The investigation again concentrated on the time frame between communications to wives and more importantly ETA's given. The investigation could not reconcile with these ETA's as they persistently put the vessel further ahead contrary to the vessel's perceived speed of between 7 to 8 knots. It is quite possible at this stage that there was an element of confusion as to their actual position in view of the above text message. Had other items of navigational equipment malfunctioned will never be known. It should be noted that their location now very close to Duck Island would have obstructed their view of Deer Island and Rock Island lights. In any case their observance of these lights would be further hampered by the poor visibility conditions that were known to be prevalent at that time.

6.4 The extent of destruction suffered by the "St. Oliver" following grounding makes it difficult to draw any comprehensive conclusions.

6.5 The possibility of the vessel suffering mechanical power failure or steering failure which would likely result in the vessel broaching onto the rocks may be ruled out as the evidence does not support this.

It would appear, however, that the vessel ran aground on the reef while underway, based on:

- The location of the engine controls observed in the "Ahead" position.
- The point damage to only one section of the keel - bow.
- The relatively good condition of the underwater paint and planking near the keel.
- The relatively undamaged propeller blades.
- The location of the engine/gearbox.

The position of the control levers could be brought into question as they could have been moved during the subsequent search operation.
There was insufficient evidence remaining to indicate an engine failure due to fuel related problems. Items remaining on the engine did not appear to have been disturbed. There was no evidence of a fire on the engine.

6.6 While the vessel showed signs of over nailing on hull planking, and signs of rot were detected on sections, it would be considered consistent with her age and purpose, and not considered to be at such an advanced stage as to cause structural failure. There was evidence that the hull was maintained and caulking renewed on a regular basis. While it was noted that both the rudder and stuffing box gland bolts were loose, packing was still present and considering the position of the stuffing box on the water line it is unlikely that water ingress was a problem.

The rudder section, though missing, from the section containing the steering gear and stock was located directly aft of the point of impact and would appear to have been in place on grounding.

Maintenance records for the vessel were examined but revealed nothing of significance.

6.7 The absence of a VHF radio distress message or indeed a mobile phone call suggests that the crew were caught unawares. It is entirely feasible that the EPIRB was activated subsequent to the grounding (the EPIRB is activated in the manual mode by unscrewing a small plastic cover, puncturing a metal foil strip and throwing a switch, a task that would have been practised on a regular basis). Mrs. Connolly suggests that the engine controls in the "ahead" position would be consistent with attempting to manoeuvre the vessel out of danger. The investigation does not support this assumption as all the material evidence points to the vessel being driven onto the rocks on "Duck" Island head on.

This is supported by the point damage to the keel, which on impact splayed the keel box open; there was relatively little underwater paint damage or planking damage either side of the keel.

The suggestion here is that had the crew been aware of the impending danger they would attempt to turn the vessel away from the Island and would have struck at a broad angle. Evidence of this would be side impact damage of which on examination there was none.

Examination of the EPIRB unit revealed that the battery should have been replaced a year earlier. It is interesting to note that had this unit in its current state been presented during a radio survey it would have failed.

6.8 After careful examination of the evidence no comprehensive conclusions can be drawn. However an element of doubt/confusion appears to have existed as to the vessels whereabouts on the night of 17th Sept 2004 due to the apparent malfunction of items of navigation equipment.

The possibility then exists that in the absence of any tangible or conclusive knowledge of the vessels position, a decision was made to head towards land in the hopes of recognising some shore lights and thus establishing position.

It must be remembered that the weather conditions were severe, visibility was very poor and the wind was now gusting to strong gale force 9 (See Weather Report at Appendix 8.4). The vessel would be making a lot of leeway to the North towards land. This has been confirmed by computer model analysis run by the Marine Institute factoring in wind and tide conditions for that night based on all available information.

7. RECOMMENDATIONS

7.1 The reasons behind the loss of the "St. Oliver" will never be known but it should, if for no other reason, reinforce the need for all mariners to prepare every voyage properly by adhering to the basics principles of voyage planning. These preparations should be more encompassing after a vessel has been laid up for any period and in particular out of the water during that time.

7.2 The International Maritime Organisation (IMO) has adopted Assembly Resolution A.893 (21) which outlines provisions for effective passage planning. In response to this, The Irish Department of Communications, Marine and Natural Resources has produced Marine Notice No.5 of 2002 (See Appendix 8.5).

This notice offers guidance on the development of a plan for voyage or passage, as well as the close and continuous monitoring of the vessel's progress and position during the execution of such plan. It is an "aide memoir" of items to be considered prior to making any voyage and considers fundamentals like a safe route to be followed, adequate fuel for the intended voyage, charts, adequate manning levels, obstacles that may be encountered, weather forecast etc. Mariners should also comply with the provisions of the following:

Marine Notice No. 9 of 2002 Applies to the keeping of a safe navigational watch on board fishing vessels (See Appendix 8.6).

Marine Notice No.19 of 2002 refers to a publication known as the fisherman's pilot.

Marine Notice No.13 of 2003 deals with Met Eireann Sea area Forecasts.

Marine Notice No. 22 of 2002 outlines requirements for maintenance of EPIRBS.

Marine notice No. 32 of 2001 refers to servicing of Inflatable liferafts, Inflatable boars, Inflatable lifejackets and hydrostatic release units.

Marine notice No. 14 of 2000 deals with the use of Lifejackets and Personal flotation devices.

Marine Notice No. 19 of 2003 refers to Maritime Radio procedures on small craft.

8. LIST OF APPENDICES

8.1 Photograph of "St. Oliver" prior to launching.

8.2 Chart Extracts showing Duck Island and Inner Passage.

8.3 Photograph of "St. Oliver" taken the morning after the incident.

8.4 Meteorological weather report for the period 18:00 to 24:00 hrs 17th Sept 2004 for the Carna area.

8.5 Copy of Marine Notice No. 5 of 2002: Voyage Planning.

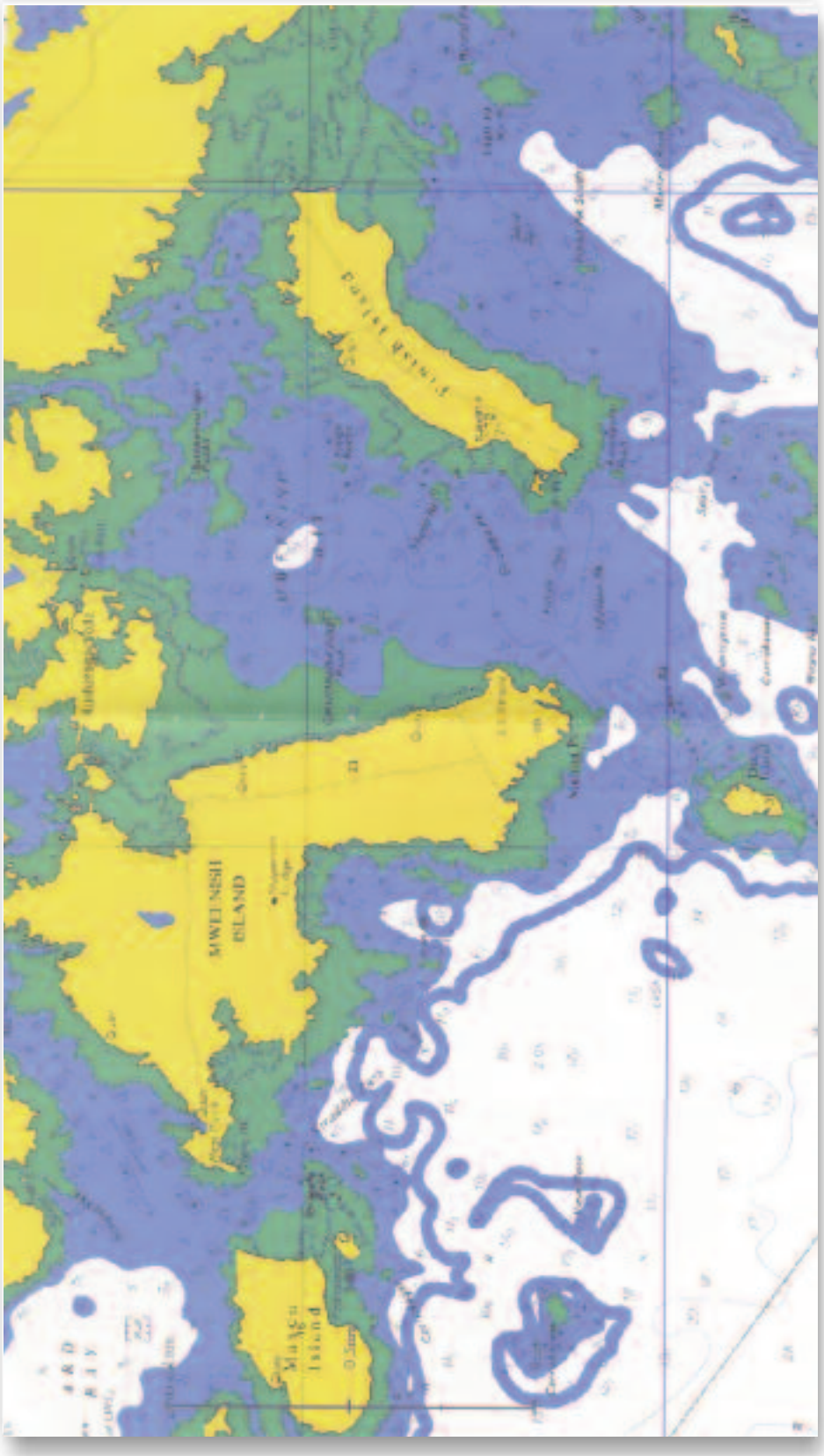
8.6 Copy of Marine Notice No. 9 of 2002: Keeping a Safe Navigational Watch on Fishing Vessels.

8.7 Irish Coast Guard Summary of events.

Appendix 8.1

The photo below was taken prior to launching.

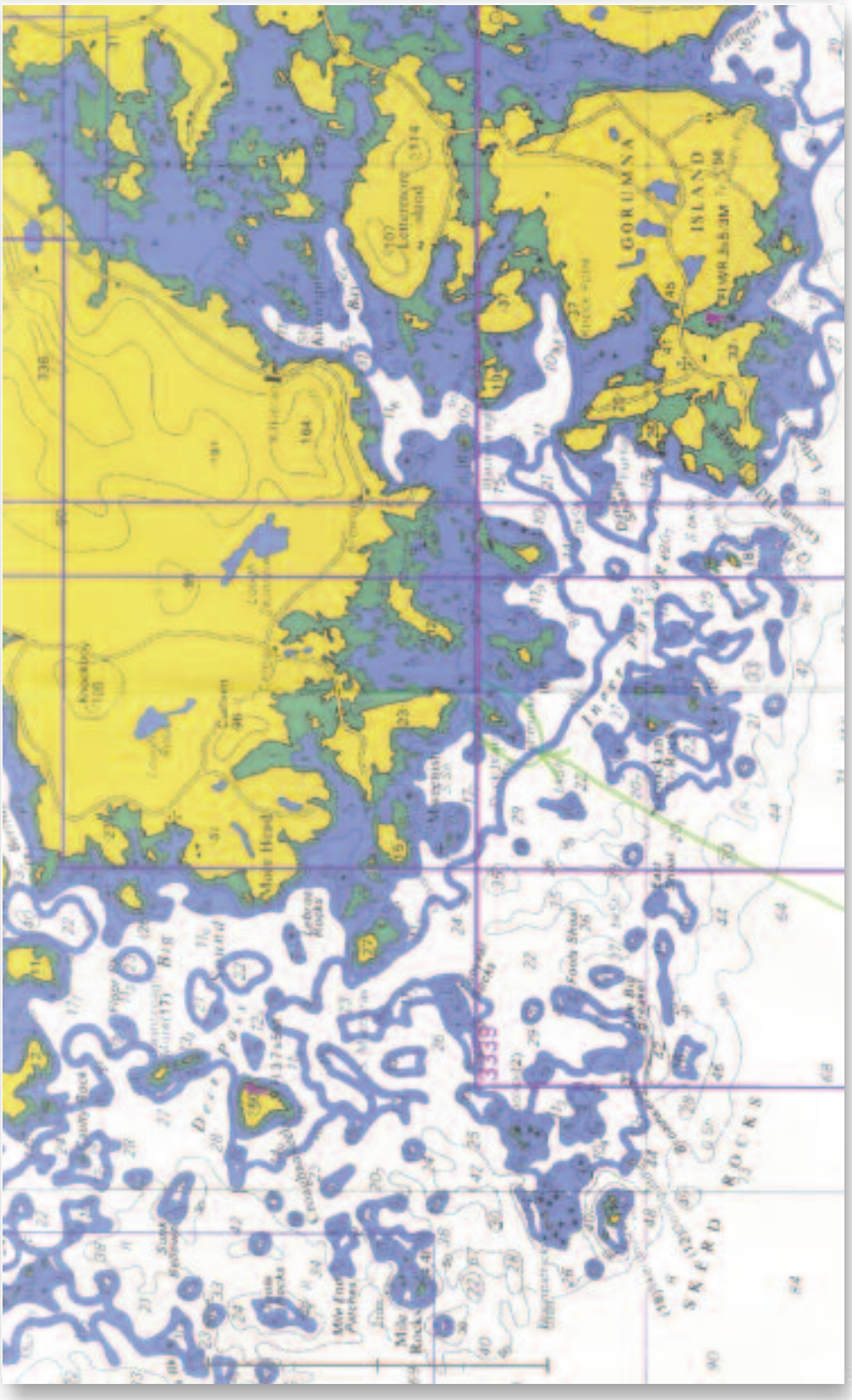
Appendix 8.2



2709 2709**UNDER ZOOM** | 1:30000 | Metres | x6.7 | datum WGS 84 | 5 nm |Roundstone and Approaches (pixels 1:1.180569

Not to be used for navigational Purposes

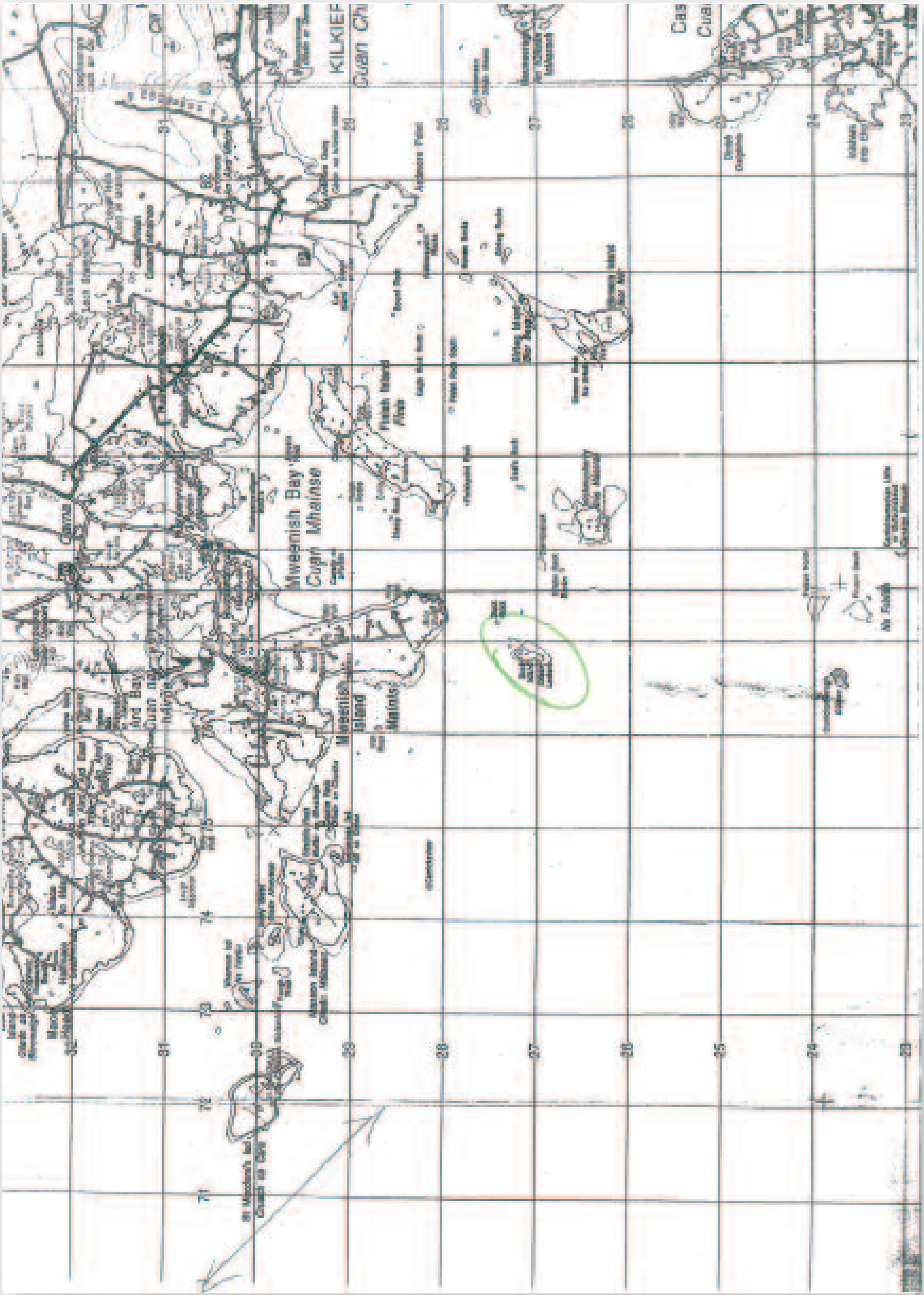
Appendix 8.2



2420 2420 1:1 ZOOM | 1:150000 | Metres | x8.0 | datum WGS 84 | 19 nm |Aran Islands to Broad Haven Bay (pixels 1:1.002941)
Copyright Euronav Limited. Warning: NOT for navigation!

Not to be used for navigational Purposes

Appendix 8.2



Not to be used for navigational Purposes

Appendix 8.1

The photo below was taken the morning after the incident.

Appendix 8.4

MET ÉIREANN
The Irish Meteorological Service

Glasnevin Hill,
Dublin 9, Ireland.

Cnoc Ghlas Naíon,
Baile Átha Cliath 9, Éire.
www.met.ie

Tel: +353-1-806 4200
Fax: +353-1-806 4247
E-mail: met.eireann@met.ie

Capt Nick Cantwell
Dept of Communications, Marine and Natural Resources
MCIB
Marine Survey Office
26/27 Eden Quay
Dublin 1

21 October 2004

Our Reference: WS 3018/2

Dear Capt Cantwell,

Please find enclosed as requested a weather report for the sea area between Carna and Clifden for the 17th September 2004 between 1800 hours and 2400 hours.

Yours Sincerely,

Willemien van Hoeve, MSc.
Marine Meteorologist
Met Éireann
Research & Applications Division

Encl:

1. Weather Report
2. Terminology
3. Sea area forecast as issued at 06:00 UTC on 17/09/2004
4. Sea area forecast as issued at 11:00 UTC on 17/09/2004
5. Sea area forecast as issued at 17:00 UTC on 17/09/2004

Appendix 8.4

MET ÉIREANN
The Irish Meteorological Service

Glasnevin Hill, Dublin 9, Ireland.
Cnoc Ghlas Naíon, Baile Átha Cliath 9, Éire.
www.met.ie
Tel: +353-1-806 4200
Fax: +353-1-806 4247
E-mail: met.eireann@met.ie

Weather Report for sea area between Carna and Clifden on 17th September 2004 between 1800 hours and 2400 hours.

General Situation:
Complex area of low pressure systems were situated to the North West of Ireland, and associated rain belts moved eastwards later in the period. Strong south-southwesterly airflow covered the area which veered to a westsouthwesterly wind later.

From 18:00 to 22:00 hours (Local Time):
Winds: South to Southsouthwest force 7 to gale force 8
Weather: Outbreaks of rain heavy especially between 20:00 and 21:30 hours
Visibility: Poor in rain otherwise moderate
Sea state: Very rough

From 22:00 to 24:00 hours (Local Time):
Winds: Southwest to Westsouthwest force 6 to 7
Weather: Showers
Visibility: Mainly moderate
Sea state: Very rough

The table below shows the observations of the weather buoy M1 (stno=62090) which lies approximately 50 nm west of the area with conditions very similar to the area under investigation:

stno	utc	dir	Speed (knots)	Gust (knots)	Seatemp (degC)	Seaheight (meters)
62090	17/09/04 18:00:00	190	29	42	14.8	4.9
62090	17/09/04 19:00:00	190	27	40	14.7	5.3
62090	17/09/04 20:00:00	200	27	42	14.7	5.2
62090	17/09/04 21:00:00	220	31	42	14.7	5.5
62090	17/09/04 22:00:00	230	26	41	14.7	5.7
62090	17/09/04 23:00:00	250	23	42	14.7	5.3

Appendix 8.4

TERMINOLOGY

Wind direction in degrees from North
Wind speed and gusts in knots
Temperatures in degrees Celsius
Significant wave height in meters

Wave Heights:

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 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 by an experienced seaman when making visual observations of wave height.

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.

STATE OF SEA Descriptive terms	Height in meters
Calm	0 – 0.1
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

Appendix 8.4

Sea Area Forecast until: 0600 hours Saturday, 18-Sep-2004
Issued at 0600 hours Friday, 17-Sep-2004

1. Gale warning: In operation
Small Craft warning: see gale warning

2. Meteorological Situation at 03 hours: A wave depression is approaching from the Atlantic and will pass close to the northwest coast of Ireland during this evening and early night. It's associated cold front will cross eastwards over the country during tonight preceded by a strong southerly airflow.

3. Forecast for coasts from Fair Head to Carnsore Point to Mizen Head and Irish Sea:

Wind: Southwest force 4 or 5. Backing southwest to south and increasing today force 5 to 7, further increasing to gale force 8 later this evening and tonight.

Weather: Dry apart from a few scattered showers. Rain spreading from the west later this evening and night.

Visibility: Generally good today. Becoming moderate, locally poor later in rain

Forecast for coasts from Mizen Head to Slyne Head to Fair Head:

Wind: Southwest force 5 to 7. Backing southwest to south during the day and increasing to gale force 8, and reaching strong gale force 9 in places this evening. Veering westerly force 6 or 7 tonight.

Weather: Scattered showers, but heavy rain spreading from the west later today. A clearance to showers following tonight.

Visibility: Good at first, but becoming moderate to poor in rain.

4. Outlook for a further 24-hours until 0600 hours, Sunday, 19-Sep-2004: Winds becoming west to southwest on all coasts, fresh to strong generally, but up to gale force at times on north and northwest coasts. Rain continuing to clear away eastwards as blustery showers spread from the west.

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Warning of heavy Atlantic swell : NIL

Text of Gale warning
South to southwest gales will develop today on Atlantic coasts and will extend this evening and tonight to remaining Irish Coastal Waters and to the Irish Sea.

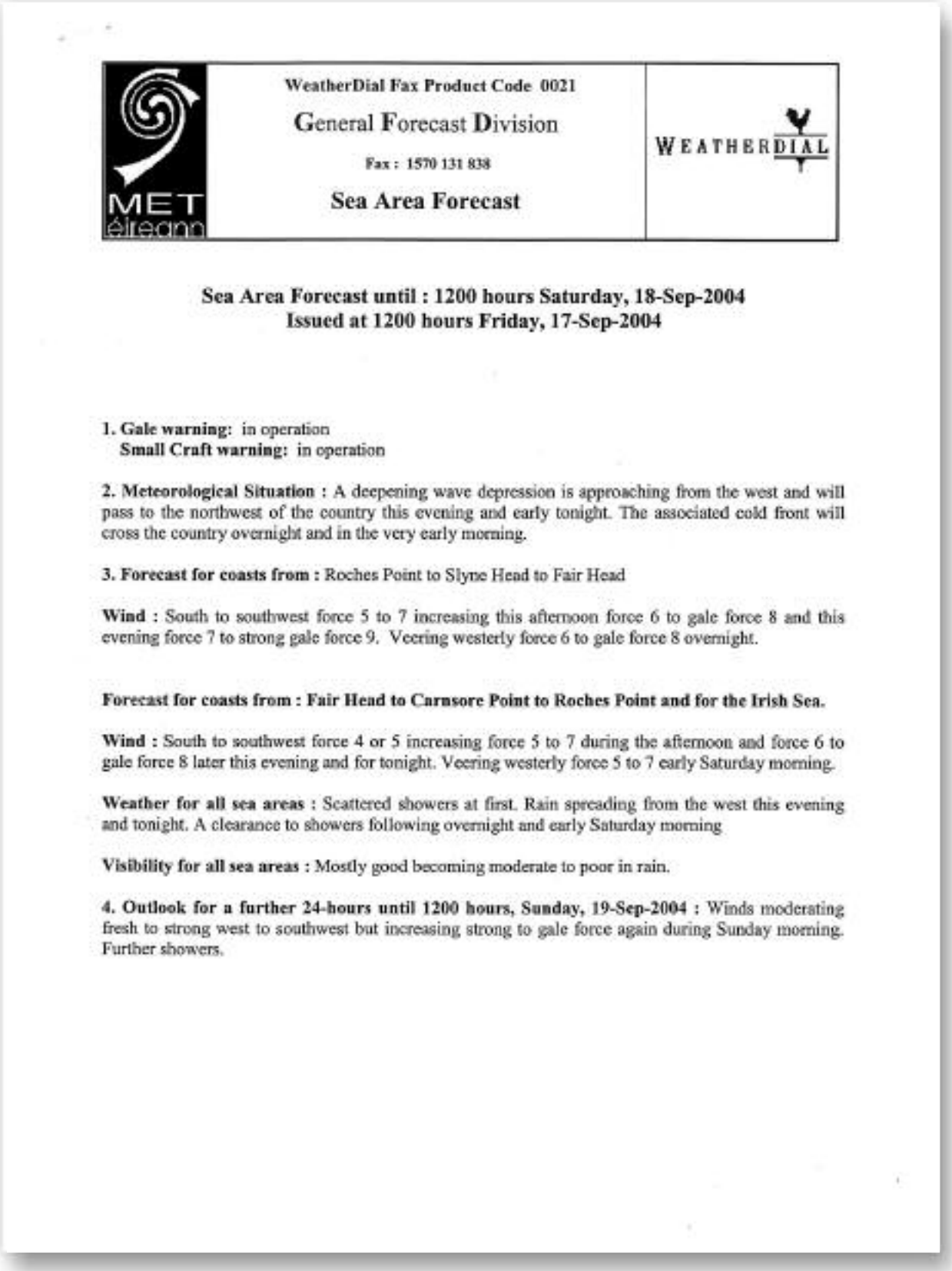
Text of Small Craft Warning
South to southwest winds will reach force 6 or higher today on all coasts

Coastal Reports	at 5 AM
Malin Head	South, 16 Knots, Cloudy, 16 Miles, 1005, Falling slowly
Rosslare	South-Southwest, 07 Knots, Cloudy, 10 Miles, 1013, Steady
Roches Pt (Automatic)	South-Southwest, 09 Knots, 4 Miles , 1012, Falling slowly
Valentia	South-Southwest, 12 Knots, Cloudy, 10 Miles, 1011, Falling slowly
Belmullet	Southwest, 19 Knots, Gust 32 Knots, Cloudy, 15 Miles, 1006, Steady
Dublin Airport	South-Southwest, 09 Knots, Cloudy, 10 Miles, 1011, Steady
Buoy M1 53° 8'N, 11° 12'W	Southwest, 21 Knots, Gust 31 Knots, WAVE HT 04.9 m, 1008, N/A
Buoy M2 53° 28'N, 5° 26'W	Southwest, 10 Knots, WAVE HT N/A m, 1011, N/A
Buoy M3 51° 13'N, 10° 33'W	N/A, N/A Knots, WAVE HT 04.6 m, N/A, N/A
Buoy M4 54° 40'N 9° 4'W	South-Southwest, 20 Knots, WAVE HT 03.2 m, 1006, N/A

Sea Crossings	State of sea for the next 48 hours
Dublin - Holyhead	Moderate, increasing to rough by evening
Rosslare - South Wales	Mostly Rough
Cork - South Wales	Rough
Rosslare - France	Rough increasing to very rough for a time
Cork - France	Rough increasing to very rough for a time

Next update before 1300 hours
A detailed forecast may be obtained by dialling ***Weatherdial*** on 1550 123 855.
Calls cost € 0.95 per minute (Incl. VAT).

Appendix 8.4



WeatherDial Fax Product Code 0021

General Forecast Division

Fax : 1570 131 838

Sea Area Forecast

WEATHERDIAL

Sea Area Forecast until : 1200 hours Saturday, 18-Sep-2004
Issued at 1200 hours Friday, 17-Sep-2004

1. Gale warning: in operation
Small Craft warning: in operation

2. Meteorological Situation : A deepening wave depression is approaching from the west and will pass to the northwest of the country this evening and early tonight. The associated cold front will cross the country overnight and in the very early morning.

3. Forecast for coasts from : Roches Point to Slyne Head to Fair Head

Wind : South to southwest force 5 to 7 increasing this afternoon force 6 to gale force 8 and this evening force 7 to strong gale force 9. Veering westerly force 6 to gale force 8 overnight.

Forecast for coasts from : Fair Head to Carnsore Point to Roches Point and for the Irish Sea.

Wind : South to southwest force 4 or 5 increasing force 5 to 7 during the afternoon and force 6 to gale force 8 later this evening and for tonight. Veering westerly force 5 to 7 early Saturday morning.

Weather for all sea areas : Scattered showers at first. Rain spreading from the west this evening and tonight. A clearance to showers following overnight and early Saturday morning

Visibility for all sea areas : Mostly good becoming moderate to poor in rain.

4. Outlook for a further 24-hours until 1200 hours, Sunday, 19-Sep-2004 : Winds moderating fresh to strong west to southwest but increasing strong to gale force again during Sunday morning. Further showers.

Appendix 8.4

Warning of heavy Atlantic swell : NIL

Text of Gale warning
South to southwest gales will develop later this afternoon and evening on coasts from Roches Point to Slyne Head to Malin Head, with strong gales at times this evening and early tonight on northwestern coast. Gales will extend to remaining sea areas later this evening and overnight.

Text of Small Craft Warning
South to southwest winds will reach force 6 at times later this afternoon and early evening on coasts from Fair Head to Carnsore Point to Roches Point

Coastal Reports	at 12 Noon
Malin Head	South-Southwest, 20 Knots, Gust 30 Knots, Fair, 32 Miles, 1006, Steady
Rosslare	Southwest, 12 Knots, Cloudy, 13 Miles, 1012, Falling slowly
Roches Pt (Automatic)	South-Southwest, 12 Knots, 5 Miles , 1012, Steady
Valentia	South-Southwest, 16 Knots, Cloudy, 10 Miles, 1011, Falling slowly
Belmullet	South-Southwest, 28 Knots, Gust 42 Knots, Cloudy, 10 Miles, 1005, Falling slowly
Dublin Airport	Southwest, 16 Knots, Fair, 21 Miles, 1011, Steady
Buoy M1 53° 8'N, 11° 12'W	South-Southwest, 24 Knots, WAVE HT 04.7 m, 1007, Falling slowly
Buoy M2 53° 28'N, 5° 26'W	South-Southwest, 19 Knots, WAVE HT 01.3 m, 1011, Falling slowly
Buoy M3 51° 13'N, 10° 33'W	South-Southwest, 17 Knots, WAVE HT 04.0 m, 1012, Falling slowly
Buoy M4 54° 40'N 9° 4'W	N/A,

Sea Crossings	State of sea for the next 48 hours
Dublin - Holyhead	Increasing Rough this evening, later Moderate
Rosslare - South Wales	Increasing Rough this evening, later Moderate to Rough
Cork - South Wales	Increasing Rough this evening, later Moderate to Rough
Rosslare - France	Rough
Cork - France	Rough

Next update before 1900 hours
A detailed forecast may be obtained by dialling ***Weatherdial*** on 1550 123 855.
Calls cost € 0.95 per minute (Incl. VAT).

Appendix 8.4

WeatherDial Fax Product Code 0021

General Forecast Division

Fax : 1570 131 838

WEATHERDIAL

Sea Area Forecast

Sea Area Forecast until : 1800 hours Saturday, 18-Sep-2004
Issued at 1700 hours Friday, 17-Sep-2004

1. Gale warning: in operation
Small Craft warning: NIL

2. Meteorological Situation : A deepening wave depression to the west of Ireland is moving northeastwards. The associated cold front will cross the country overnight. A showery westerly airflow will follow tomorrow.

3. Forecast for coasts from : Roches Point to Slyne Head to Fair Head

Wind : South to southwest force 7 to gale force 8 imminent. Occasionally strong gale force 9 tonight. Veering west force 6 to gale force 8 early tomorrow.

Forecast for coasts from : Fair Head to Howth Head to Roches Point and the Irish Sea

Wind : South to southwest force 4 to 6, soon increasing force 7 to gale force 8. Later veering west force 5 to 7.

Weather for all sea areas : Rain becoming widespread tonight. A clearance to showers early tomorrow.

Visibility for all sea areas : Moderate to poor in rain. Becoming good tomorrow except in showers.

3a. Warning of Heavy Swell : on southwest, west and north coasts.

4. Outlook for a further 24-hours until 1800 hours, Sunday, 19-Sep-2004 : Fresh to strong westerly winds later backing west to southwest and increasing gale or possibly strong gale force. Scattered showers at first. Rain in the west and northwest later.

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Warning of heavy Atlantic swell : on southwest, west and north coasts.

Text of Gale warning issued 1615 hrs, Friday 17-9-04
South to southwest winds will reach gale or strong gale force this evening and tonight on all coasts of Ireland and on the Irish Sea.

Text of Small Craft Warning
NIL

Coastal Reports	at 4 PM
Malin Head	South-Southwest, 25 Knots, Gust 34 Knots, Cloudy, 26 Miles, 1003, Falling slowly
Rosslare	South-Southwest, 13 Knots, Gust 25 Knots, Cloudy, 8 Miles, 1011, Falling slowly
Roches Pt (Automatic)	South, 15 Knots, 5 Miles , 1010, Falling
Valentia	South, 12 Knots, Light rain, 6 Miles, 1008, Falling
Belmullet	South-Southwest, 24 Knots, Gust 38 Knots, Light rain, 5 Miles, 1003, Falling
Dublin Airport	Southwest, 12 Knots, Cloudy, 21 Miles, 1009, Falling slowly
Buoy M1 53° 8'N, 11° 12'W	South, 24 Knots, Gust 36 Knots, WAVE HT 05.0 m, 1003, Falling
Buoy M2 53° 28'N, 5° 26'W	South, 20 Knots, WAVE HT 01.3 m, 1009, Falling
Buoy M3 51° 13'N, 10° 33'W	South-Southwest, 22 Knots, WAVE HT 04.5 m, 1009, Falling
Buoy M4 54° 40'N 9° 4'W	N/A,

Sea Crossings	State of sea for the next 48 hours
Dublin - Holyhead	Moderate, occasionally rough.
Rosslare - South Wales	Rough.
Cork - South Wales	Rough to very rough.
Rosslare - France	Rough to very rough.
Cork - France	Rough to very rough.

Next update before 0100 hours
A detailed forecast may be obtained by dialling ***Weatherdial*** on 1550 123 855.
Calls cost € 0.95 per minute (Incl. VAT).

Appendix 8.5

Department of the Marine and Natural Resources

Roinn na Mara agus Acmhainní Nádúrtha

MARINE NOTICE
NO. 5 OF 2002

NOTICE TOALL SHIP OWNERS, SHIPS MASTERS, NAVIGATION OFFICERS, SKIPPERS AND SECOND HANDS OF FISHING VESSELS

Voyage Planning

This Marine Notice is in response to a number of grounding and collision incidents that occurred off the Irish Coast in recent times. A common thread in many of these incidents is the neglect to complete and execute a voyage and passage plan.

As a consequence vessels have gone aground due to inadequate monitoring of positions, failure to realise the vessel was in danger and improper use or non-use of equipment such as radar and echo sounders. Vessels have collided, due in part to inadequate passing distances off areas or points of danger such as islands, shallow banks and headlands thus restricting their sea room to take avoiding action.

Voyage and passage planning comprises of four fundamentals: Appraisal, Planning, Execution and Monitoring.

The International Maritime Organisation (IMO) has adopted Assembly Resolution A.893 (21). The text of the Guidelines is reproduced as follows:

ANNEX TO IMO RESOLUTION A.893 (21) GUIDELINES FOR VOYAGE PLANNING

1 Objectives

1.1 The development of a plan for voyage or passage, as well as the close and continuous monitoring of the vessel's progress and position during the execution of such a plan, are of essential importance for safety of life at sea, safety and efficiency of navigation and protection of the marine environment.

1.2 The need for voyage and passage planning applies to all vessels. There are several factors that may impede the safe navigation of all vessels and

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additional factors that may impede the navigation of large vessels or vessels carrying hazardous cargoes. These factors will need to be taken into account in the preparation of the plan and in the subsequent monitoring of the execution of the plan.

1.3 Voyage and passage planning includes appraisal, i.e. gathering all information relevant to the contemplated voyage or passage; detailed planning of the whole voyage or passage from berth to berth, including those areas necessitating the presence of a pilot; execution of the plan; and the monitoring of the progress of the vessel in the implementation of the plan. These components of voyage/passage planning are analysed below.

2 Appraisal

2.1 All information relevant to the contemplated voyage or passage should be considered. The following items should be taken into account in voyage and passage planning:

a) the condition and state of the vessel, its stability, and its equipment; any operational limitations; its permissible draught at sea in fairways and in ports; its manoeuvring data, including any restrictions;

b) any special characteristics of the cargo (especially if hazardous), and its distribution, stowage and securing on board the vessel;

c) the provision of a competent and well-rested crew to undertake the voyage or passage;

d) requirements for up-to-date certificates and documents concerning the vessel, its equipment, crew, passengers or cargo;

e) appropriate scale, accurate and up-to-date charts to be used for the intended voyage or passage, as well as any relevant permanent or temporary notices to mariners and existing radio navigational warnings;

f) accurate and up-to-date sailing directions, lists of lights and lists of radio aids to navigation; and

g) any relevant up-to-date additional information, including:

1. mariners' routeing guides and passage planning charts, published by competent authorities;

2. current and tidal atlases and tide tables;

3. climatological, hydrographical, and oceanographic data as well as other appropriate meteorological information;

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4. availability of services for weather routeing (such as that contained in Volume D of the World Meteorological Organization's Publication No. 9);

5. existing ships' routeing and reporting systems, vessel traffic services, and marine environmental protection measures;

6. volume of traffic likely to be encountered throughout the voyage or passage;

7. if a pilot is to be used, information relating to pilotage and embarkation and disembarkation including the exchange of information between master and pilot;

8. available port information, including information pertaining to the availability of shore-based emergency response arrangements and equipment; and

9. any additional items pertinent to the type of the vessel or its cargo, the particular areas the vessel will traverse, and the type of voyage or passage to be undertaken.

2.2 On the basis of the above information, an overall appraisal of the intended voyage or passage should be made. This appraisal should provide a clear indication of all areas of danger; those areas where it will be possible to navigate safely, including any existing routeing or reporting systems and vessel traffic services; and any areas where marine environmental protection considerations apply.

3 Planning

3.1 On the basis of the fullest possible appraisal, a detailed voyage or passage plan should be prepared which should cover the entire voyage or passage from berth to berth, including those areas where the services of a pilot will be used.

3.2 The detailed voyage or passage plan should include the following factors:

1. the plotting of the intended route or track of the voyage or passage on appropriate scale charts: the true direction of the planned route or track should be indicated, as well as all areas of danger, existing ships' routeing and reporting systems, vessel traffic services, and any areas where marine environmental protection considerations apply;

2. the main elements to ensure safety of life at sea, safety and efficiency of navigation, and protection of the marine environment during the intended voyage or passage; such elements should include, but not be limited to:

   a) safe speed, having regard to the proximity of navigational hazards along the intended route or track, the maneuvering characteristics

Appendix 8.5

of the vessel and its draught in relation to the available water depth;

b) necessary speed alterations en route, e.g., where there may be limitations because of night passage, tidal restrictions, or allowance for the increase of draught due to squat and heel effect when turning;

c) minimum clearance required under the keel in critical areas with restricted water depth;

d) positions where a change in machinery status is required;

e) course alteration points, taking into account the vessel's turning circle at the planned speed and any expected effect of tidal streams and currents;

f) the method and frequency of position fixing, including primary and secondary options, and the indication of areas where accuracy of position fixing is critical and where maximum reliability must be obtained;

g) use of ships' routeing and reporting systems and vessel traffic services;

h) considerations relating to the protection of the marine environment; and

i) contingency plans for alternative action to place the vessel in deep water or proceed to a port of refuge or safe anchorage in the event of any emergency necessitating abandonment of the plan, taking into account existing shore-based emergency response arrangements and equipment and the nature of the cargo and of the emergency itself.

3.3 The details of the voyage or passage plan should be clearly marked and recorded, as appropriate, on charts and in a voyage plan notebook or computer disk.

3.4 The ships' master prior to the commencement of the voyage or passage should approve each voyage or passage plan as well as the details of the plan.

4 Execution

4.1 Having finalized the voyage or passage plan, as soon as time of departure and estimated time of arrival can be determined with reasonable accuracy, the voyage or passage should be executed in accordance with the plan or any changes made thereto.

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4.2 Factors which should be taken into account when executing the plan, or deciding on any departure there from include:

1. the reliability and condition of the vessel's navigational equipment;
2. estimated times of arrival at critical points for tide heights and flow;
3. meteorological conditions, (particularly in areas known to be affected by frequent periods of low visibility) as well as weather routeing information;
4. daytime versus night-time passing of danger points, and any effect this may have on position fixing accuracy; and
5. traffic conditions, especially at navigational focal points.

4.3 It is important for the master to consider whether any particular circumstance, such as the forecast of restricted visibility in an area where position fixing by visual means at a critical point is an essential feature of the voyage or passage plan, introduces an unacceptable hazard to the safe conduct of the passage; and thus whether that section of the passage should be attempted under the conditions prevailing or likely to prevail. The master should also consider at which specific points of the voyage or passage there may be a need to utilize additional deck or engine room personnel.

5 Monitoring

5.1 The plan should be available at all times on the bridge to allow officers of the navigational watch immediate access and reference to the details of the plan.

5.2 The progress of the vessel in accordance with the voyage and passage plan should be closely and continuously monitored. Any changes made to the plan should be made consistent with these guidelines and clearly marked and recorded.

Secretary-General
Department of the Marine and Natural Resources
Leeson Lane
Dublin 2

5th April 2002

Any enquiries concerning Marine Notices should be addressed to:
Maritime Safety Division
Tel: 01-6199358 Fax: 01-6620774 email: marine.notices@marine.gov.ie

Appendix 8.6

Department of the Marine and Natural Resources
Roinn na Mara agus Acmhainní Nádúrtha

MARINE NOTICE
No. 9 Of 2002

NOTICE TO ALL OWNERS, OPERATORS, SKIPPERS, SECOND HANDS AND CREWS OF FISHING VESSELS, AND TO NAUTICAL SCHOOLS

Keeping A Safe Navigational Watch On Board Fishing Vessels

The International Maritime Organisation (IMO) has adopted Resolution A.484 (XII) "Basic Principles to be Observed in Keeping a Navigational Watch on board Fishing Vessels" relating to the principles to be observed in order to ensure that a safe navigational watch is maintained.

These principles were in effect reviewed and updated by the International Convention on Standards of Training, Certification and Watchkeeping for Fishing Vessel Personnel 1995.

The basic principles are reproduced in the Annex to this Notice and should be observed by all concerned.

Candidates for all fishing certificates of competency will be expected to have a thorough knowledge of the content and application of the basic principles.

Marine Notice 39 of 1999 is hereby withdrawn as this Notice supersedes it.

Secretary-General
Department of the Marine and
Natural Resources
Dublin 2

12th May 2002

Any enquiries concerning Marine Notices should be addressed to:
Maritime Safety Division
Tel: 01-6199358 Fax: 01-6620774 email: marine.notices@marine.gov.ie

Appendix 8.6

BASIC PRINCIPLES TO BE OBSERVED IN KEEPING A NAVIGATIONAL WATCH ON BOARD FISHING VESSELS

1 These basic principles are to be observed by skippers and watchkeeping personnel to ensure that a safe navigational watch is maintained at all times.

2 The skipper of every fishing vessel is bound to ensure that watchkeeping arrangements are adequate for maintaining a safe navigational watch. Under the skipper's general direction, the officers of the watch are responsible for navigating the vessel safely during their periods of duty when they will be particularly concerned with avoiding collision and stranding.

3 The basic principles, including but not limited to the following, should be taken into account on all fishing vessels. However, very small fishing vessels may be excluded from fully observing the basic principles. References to the wheelhouse should, in such vessels, be construed as meaning the position from which the navigation of the ship is controlled.

4 En route to or from fishing grounds

4.1 Arrangements of the navigational watch

4.1.1 The composition of the watch should at all times be adequate and appropriate to the prevailing circumstances and conditions and should take into account the need for maintaining a proper look-out.

4.1.2 When deciding the composition of the watch the following factors, inter alia, should be taken into account:

(i) at no time should the wheelhouse be left unattended;

(ii) weather conditions, visibility and whether there is daylight or darkness;

(iii) proximity of navigational hazards which may make it necessary for the officer in charge of the watch to carry out additional navigational duties;

(iv) use and operational condition of navigational aids such as radar or electronic position-indicating devices and any other equipment affecting the safe navigation of the vessel;

(v) whether the vessel is fitted with automatic steering;

(vi) any unusual demands on the navigational watch that may arise as a result of special operational circumstances.

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4.2 Fitness for duty

4.2.1 The watch system should be such that the efficiency of watchkeeping personnel is not impaired by fatigue. Duties should be so organised that the first watch at the commencement of a voyage and the subsequent relieving watches are sufficiently rested and otherwise fit for duty.

4.3 Navigation

4.3.1 The intended voyage should, as far as practicable, be planned in advance taking into consideration all pertinent information and any course laid down should be checked before the voyage commences.

4.3.2 During the watch the course steered, position and speed should be checked at sufficiently frequent intervals, using any available navigational aids necessary, to ensure that the vessel follows the planned course.

4.3.3 The officer in charge of the watch should have full knowledge of the location and operation of all safety and navigational equipment on board the vessel and should be aware and take account of the operating limitations of such equipment.

4.3.4 The officer in charge of a navigational watch should not be assigned or undertake any duties which would interfere with the safe navigation of the vessel.

4.4 Navigational equipment

4.4.1 The officer in charge of the watch should make the most effective use of all navigational equipment at his disposal.

4.4.2 When using radar the officer in charge of the watch should bear in mind the necessity to comply at all times with the provisions on the use of radar contained in the applicable regulations for preventing collisions at sea.

4.4.3 In cases of need the officer of the watch should not hesitate to use the helm, engines and sound signalling apparatus.

4.5 Navigational duties and responsibilities

4.5.1 The officer in charge of the watch should:

(i) keep his watch in the wheelhouse;

(ii) which he should in no circumstances leave until properly

Appendix 8.6

relieved;

(iii) continue to be responsible for the safe navigation of the vessel

(iv) despite the presence of the skipper in the wheelhouse until the skipper informs him specifically that he has assumed that responsibility and this is mutually understood;

(iv) notify the skipper when in any doubt as to what action to take in the interest of safety;

(v) not hand over the watch to a relieving officer if he has reason to believe that the latter is obviously not capable of carrying out his duties effectively, in which case he should notify the skipper accordingly.

4.5.2 On taking over the watch the relieving officer should satisfy himself as to the vessel's estimated or true position and confirm its intended track, course and speed and should note any dangers to navigation expected to be encountered during his watch.

4.5.3 Whenever practicable a proper record should be kept of the movements and activities during the watch relating to the navigation of the vessel.

4.6 Look-out

4.6.1 A proper look-out shall be maintained in compliance with Rule 5 of the International Regulations for Preventing Collisions at Sea, 1972. It shall serve the purpose of:

(i) maintaining a continuous state of vigilance by sight and hearing as well as by all other available means, with regard to any significant changes in the operating environment;

(ii) fully appraising the situation and the risk of collision, stranding and other dangers to navigation, and;

(iii) detecting ships or aircraft in distress, shipwrecked persons, wrecks and debris;

The look-out must be able to give full attention to the keeping of a proper look-out and no other duties shall be undertaken or assigned which could interfere with that task.

4.6.2 In determining that the composition of the navigational watch is adequate to ensure that a proper look-out can continuously be maintained, the skipper shall take into account all relevant factors, including those described under paragraph 4.1, as well as the following factors:

Appendix 8.6

(i) visibility, state of weather and sea;

(ii) traffic density and other activities occurring in the area in which the vessel is operating;

(iii) the attention necessary when navigating in or near traffic separation schemes and other routing measures;

(iv) the additional workload caused by the nature of the vessel's functions, immediate operating requirements and anticipated manoeuvres;

(v) rudder and propeller control and vessel manoeuvring characteristics;

(vi) the fitness for duty of any crewmembers on call who may be assigned as members of the watch;

(vii) knowledge of and confidence in the professional competence of the vessel's officers and crew;

(viii) the experience of the officer of the navigational watch and the familiarity of that officer with the vessel's equipment, procedures and manoeuvring capability;

(ix) activities taking place on board the vessel at any particular time and the availability of assistance to be summoned immediately to the wheelhouse when necessary;

(x) the operational status of instrumentation in the wheelhouse and controls, including alarm systems;

(xi) the size of the vessel and the field of vision available from the conning position;

(xii) the configuration of the wheelhouse, to the extent such configuration might inhibit a member of the watch from detecting by sight or hearing any external developments.

4.7 Protection of the marine environment

4.7.1 The skipper and the officer in charge of the watch should be aware of the serious effects of operational or accidental pollution of the marine environment and should take all possible precautions to prevent such pollution particularly within the framework of relevant international and port regulations.

4.8 Weather conditions

4.8.1 The officer in charge of the watch should take relevant measures and notify the skipper when adverse changes in weather could affect the

Appendix 8.6

4.8.2 Safety of the vessel, including conditions leading to ice accretion.

5.1 Navigation with pilot embarked

5.1.1 The presence of a Pilot on board does not relieve the skipper or officer in charge of the watch from their duties and obligations for the safety of the vessel. The skipper and the pilot should exchange information regarding navigation procedures, local conditions and the vessel's characteristics. The skipper and the officer of the watch should co-operate closely with the pilot and maintain an accurate check of the vessel's position and movement.

6.1 Vessels engaged in fishing or searching for fish

6.1.1 In addition to the principles enumerated in paragraph 4, the following factors should be considered and properly acted upon by the officer in charge of the watch:

(i) other vessels engaged in fishing and their gear, own vessel's manoeuvring characteristics, particularly in stopping distance and the diameter of turning circle at sailing speed and with the fishing gear overboard;

(ii) safety of the crew on deck;

(iii) adverse effects on the safety of the vessel and its crew through reduction of stability and freeboard caused by exceptional forces resulting from fishing operations, catch handling and stowage, and unusual sea and weather conditions;

(iv) the proximity of offshore structures, with special regard to the safety zones; and

(v) wrecks and other underwater obstacles which could be hazardous for fishing gear.

6.2 When stowing the catch, attention should be given to the essential requirements for adequate freeboard and adequate stability and watertight integrity at all times during the voyage to the landing port taking into consideration consumption of fuel and stores, risk of adverse weather conditions and, especially in winter, risk of ice accretion on or above exposed decks in areas where ice accretion is likely to occur.

7.1 Anchor watch

7.1.1 The skipper should ensure, with a view to the safety of the vessel and crew, that a proper watch is maintained at all times from the wheelhouse or deck on fishing vessels at anchor.

Appendix 8.6

8.1 Radio watchkeeping

8.1.1 The skipper should ensure that an adequate radio watch is maintained while the vessel is at sea, on appropriate frequencies, taking into account the requirements of the Radio Regulations.

Appendix 8.7

Irish Coast Guard
GARDA CÓSTA na hÉIREANN

11th Nov. 2004.

Re **"IFV St. Oliver" Fishing vessel lost 17th Sept. 2004.**

Dear Sir,

Please note correct date on which this incident commenced, 17th Sept 04.

In response to your yours received here 4th Oct 04:

1. The alarm was raised with the Irish Coast Guard at 2103 local time. It should be noted that this initial alarm was raised when the St Oliver's EPIRB (Emergency Position Indication Radio Beacon) was activated. The signal from this beacon was picked up by satellite and automatically forwarded to RCC (Rescue Co-ordination Centre) Kinloss in Scotland. This is the normal route for alerts of this nature. The initial alert signal did not contain a position for the distress. This alarm was forwarded to MRCC (Marine Rescue Co-Ordination Centre) Dublin where it was received at 2103 local time. Following assessment of the alert message, MRCC Dublin forwarded it to MRSC (Marine Rescue Sub-Centre) Valentia at 2106 local time. MRSC Valentia commenced a communications search and made marine radio broadcasts to shipping seeking information as to the whereabouts of the IFV St. Oliver.

2. The Irish Coast Guard SAR (search and Rescue) helicopter based at Shannon Airport, "Rescue115", was tasked at 2125 local and commenced its search on scene at 2215 local time.

3. The Aran Islands Lifeboat was notified at 2138 local time.

4. Costello Bay Coast Guard Unit was notified at 2231 local time.

5. The Irish Naval Vessel "LE Ciara" proceeded at 2300 local time.

Department of Communications, Marine and Natural Resources, Leeson Lane, Dublin 2, Ireland.
An Roinn Cumarsáide, Mara agus Acmhainní Nádúrtha, Lána Chill Mochargán, Baile Átha Cliath 2, Éire.
Tel: +353 1 678 2324, Fax: +353 1 678 2269, Email: admin@irishcoastguard.ie

Appendix 8.7

6. Cleggan Coast Guard Unit and Clifden RNLI were alerted and tasked to carry out shore searches only at 0010 on the 18th. It should be noted that weather conditions were outside limitations for Clifden Lifeboat, and other inshore boats at the time. Clifden is 28 nautical miles away by sea. Weather and sea conditions were south-westerly gale force 8 to strong gale force 9 with 5 metre seas.

Yours faithfully,

Eamon Torpey
SAR Operations Manager
IRCG HQ

9. LIST OF CORRESPONDENCE RECEIVED

9. CORRESPONDENCE RECEIVED

Lifeboats

RNLI Ireland
Registered charity number CHY 2670
Supported by voluntary contributions
Chief Executive: Andrew Fleetwood
Chairman: Admiral Sir Jock Slater GCB LVO DSC
Chairman's Irish Council Members: Terence Johnson
National Fundraising and
Communications Manager (ROI): Mary Newman
From:
Divisional Base Ireland

Unit 1, Feltrim Business Park,
Swords, Co. Dublin, Ireland

Telephone: (01) 8900460
Fax: (01) 8900458
email: dbwireland@rnli.org.uk
www.rnli.org.uk

Mr Dick Heron
Secretary
Marine Casually Investigation Board
Leeson Lane
Dublin2

23 June 2005

COPY NOT

Dear Mr Heron,

Re: Reports MCIB 83 and MCIB 98

Thank you for forwarding draft reports MCIB 83 & 98 for our examination and comment.

We apologise for the delay in responding upon report MCIB 83

The RNLI has no further comments to add to either of these unfortunate incidents.

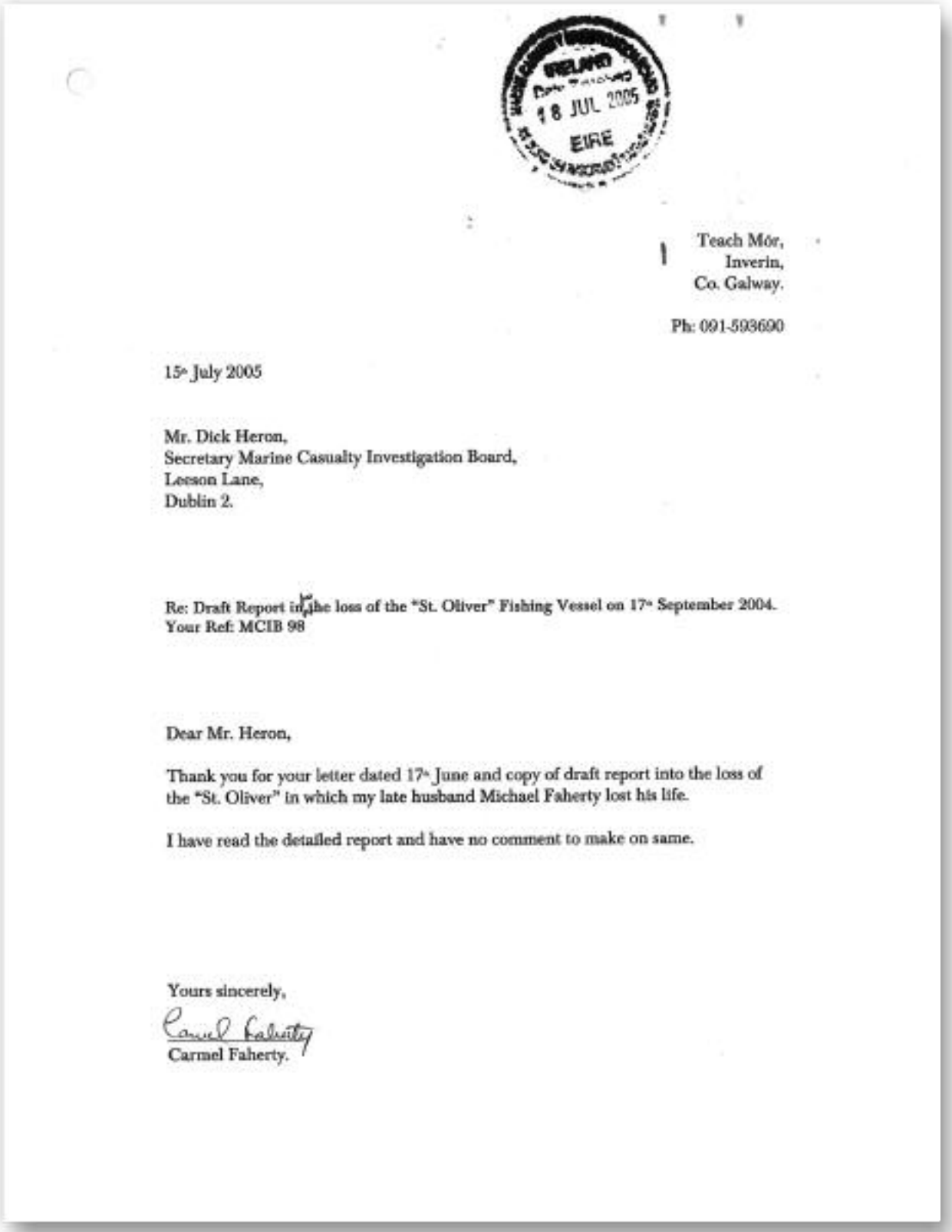
Yours sincerely

Colin Williams
Inspector of Lifeboats (Ireland)

28 JUN 2005
EIRE

MCIB RESPONSE
The MCIB notes the contents of this letter.

9. CORRESPONDENCE RECEIVED



IRELAND
18 JUL 2005
EIRE

Teach Mór,
Inverin,
Co. Galway.

Ph: 091-593690

15th July 2005

Mr. Dick Heron,
Secretary Marine Casualty Investigation Board,
Lesson Lane,
Dublin 2.

Re: Draft Report into the loss of the "St. Oliver" Fishing Vessel on 17th September 2004.
Your Ref: MCIB 98

Dear Mr. Heron,

Thank you for your letter dated 17th June and copy of draft report into the loss of the "St. Oliver" in which my late husband Michael Faherty lost his life.

I have read the detailed report and have no comment to make on same.

Yours sincerely,

Carmel Faherty

Carmel Faherty.

MCIB RESPONSEto letter dated 15th July 2005 from Mrs. Faherty.
The MCIB notes the contents of this letter. The MCIB would again like to extend its deepest sympathies to Mrs. Faherty and her family on their sad loss.

9. CORRESPONDENCE RECEIVED

Una Dirrane.
Cor Na Ron,
Inverin,
Co. Galway.

16th July 2005.

Mr. Dick Heron,
Secretary,
Marine Casualty Investigation Board,
Leeson Lane,
Dublin 2.

Re: Report into the Loss of the Fishing Vessel "St. Oliver" on the 17th September, 2004. Your Ref: MCIB98

Dear Sir,

Thank you for your letter dated the 17th of June enclosing draft report into the loss of my late husbands boat. I would like to thank the MCIB for their efforts in trying to establish what happened on the night of the 17th of September 2004.

In relation to the report itself I would like it noted that the Radio License fees were always paid up to date and were not due for renewal until August of this year, please see enclosed receipt.

I would like to acknowledge with sincere gratitude all who assisted in the Search & Rescue Operations after this tragic accident their assistance and diligence on that night and the week thereafter will never be forgotten.

Finally on behalf of the Dirrane family I would again like to extend our sincere sympathies to the Connolly family, the Mullin family and the Faherty family.

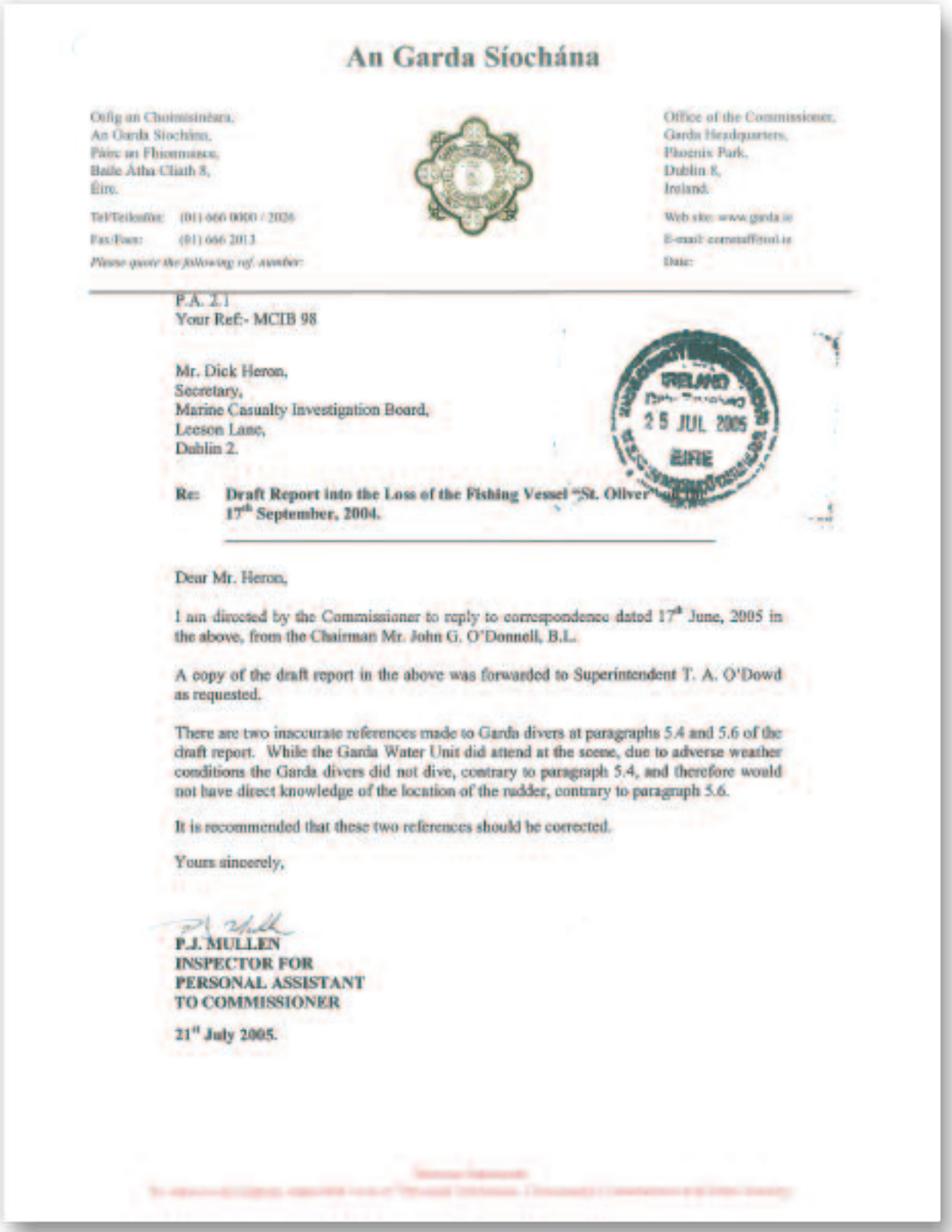
Yours faithfully,

Una Dirrane

Una Dirrane.

MCIB RESPONSE to letter dated 16th July 2005 from Mrs. Dirrane.
The MCIB notes the contents of this letter and has amended the report accordingly. The MCIB would again like to extend its deepest sympathies to Mrs. Dirrane and her family on their sad loss.

9. CORRESPONDENCE RECEIVED



An Garda Síochána

Oifig an Choimisinéara,
An Garda Síochána,
Páirc an Fhionnuisce,
Baile Átha Cliath 8,
Éire.

Tel/Teileafón: (01) 666 0000 / 2026
Fax/Faois: (01) 666 2013
Please quote the following ref. number:

Office of the Commissioner,
Garda Headquarters,
Phoenix Park,
Dublin 8,
Ireland.

Web site: www.garda.ie
E-mail: corestaff@iol.ie
Date:

P.A. 2.1
Your Ref:- MCIB 98

Mr. Dick Heron,
Secretary,
Marine Casualty Investigation Board,
Leeson Lane,
Dublin 2.

IRELAND
25 JUL 2005
EIRE

Re: Draft Report into the Loss of the Fishing Vessel "St. Oliver" on 17th September, 2004.

Dear Mr. Heron,

I am directed by the Commissioner to reply to correspondence dated 17th June, 2005 in the above, from the Chairman Mr. John G. O'Donnell, B.L.

A copy of the draft report in the above was forwarded to Superintendent T. A. O'Dowd as requested.

There are two inaccurate references made to Garda divers at paragraphs 5.4 and 5.6 of the draft report. While the Garda Water Unit did attend at the scene, due to adverse weather conditions the Garda divers did not dive, contrary to paragraph 5.4, and therefore would not have direct knowledge of the location of the rudder, contrary to paragraph 5.6.

It is recommended that these two references should be corrected.

Yours sincerely,

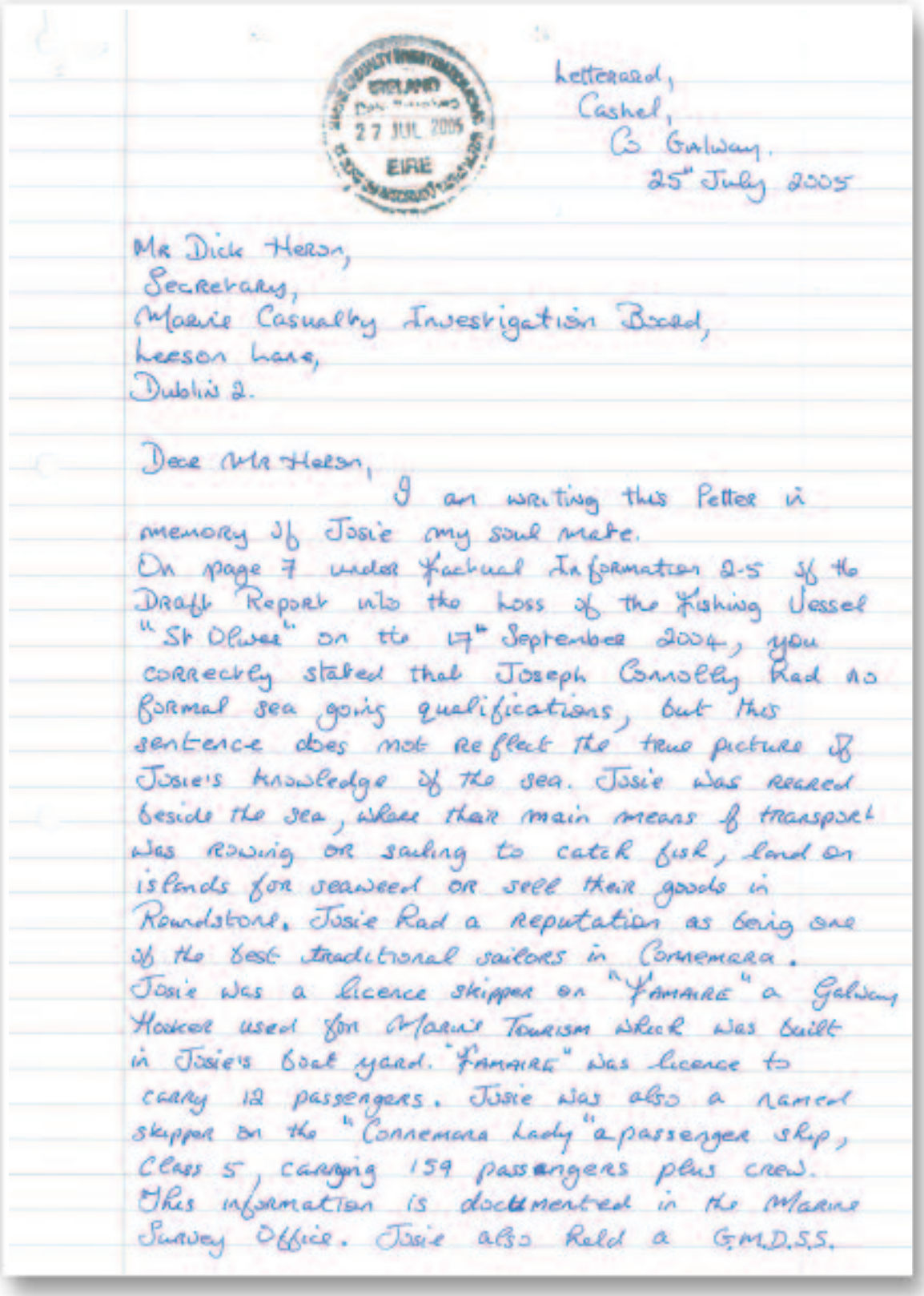
P.J. MULLEN
INSPECTOR FOR
PERSONAL ASSISTANT
TO COMMISSIONER

21st July 2005.

MCIB RESPONSE

The MCIB notes the contents of this letter and has amended the report accordingly.

9. CORRESPONDENCE RECEIVED



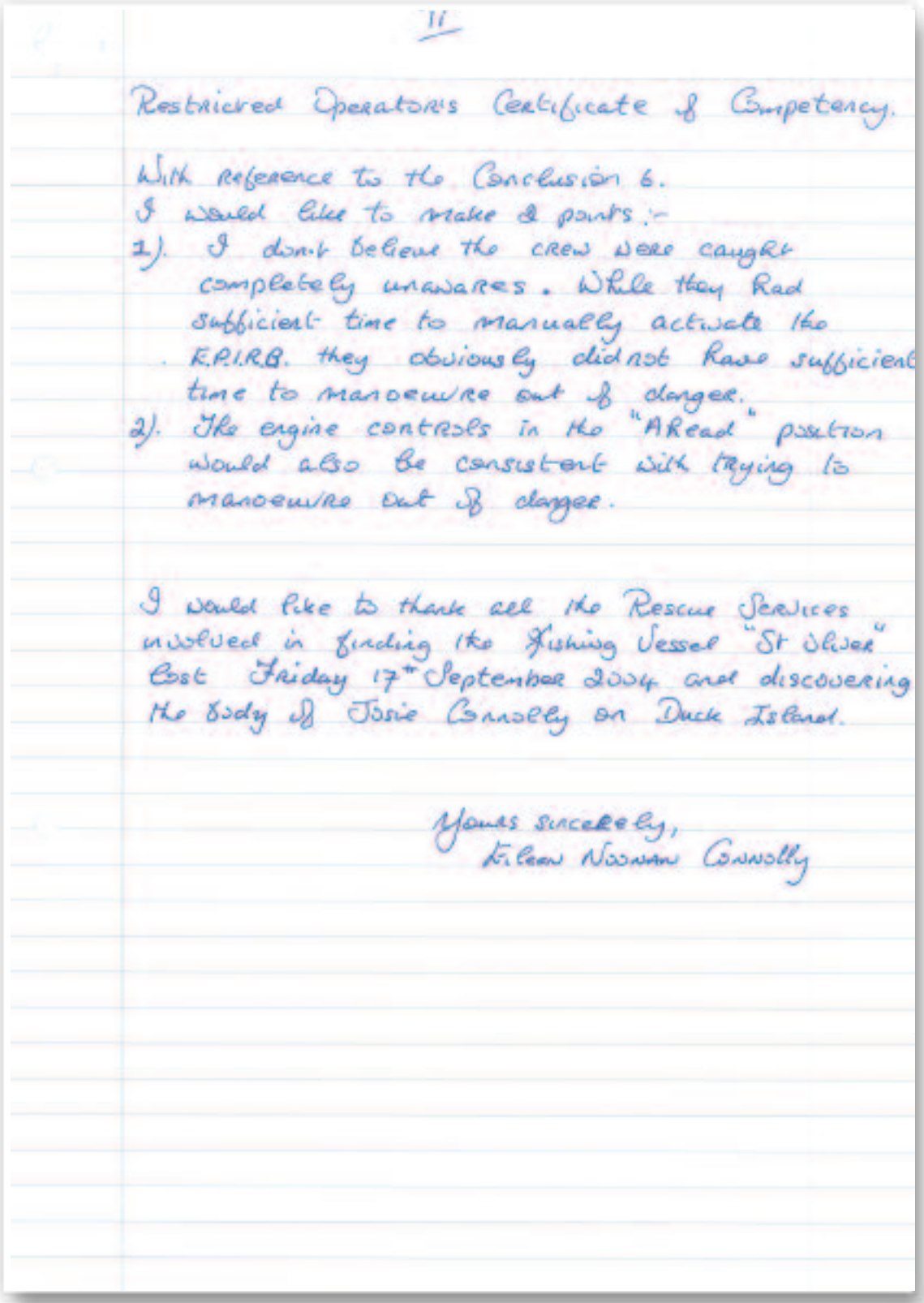
Letterard,
Cashel,
Co Galway.
25th July 2005

Mr Dick Heron,
Secretary,
Marine Casualty Investigation Board,
Leeson Lane,
Dublin 2.

Dear Mr Heron,

I am writing this letter in memory of Josie my soul mate.
On page 7 under Factual Information 2.5 of the Draft Report into the loss of the Fishing Vessel "St Oliver" on the 17th September 2004, you correctly stated that Joseph Connolly had no formal sea going qualifications, but this sentence does not reflect the true picture of Josie's knowledge of the sea. Josie was reared beside the sea, where their main means of transport was rowing or sailing to catch fish, land on islands for seaweed or sell their goods in Roundstone. Josie had a reputation as being one of the best traditional sailors in Connemara. Josie was a licence skipper on "Famaire" a Galway Hooker used for Marine Tourism which was built in Josie's boat yard. "Famaire" was licence to carry 12 passengers. Josie was also a named skipper on the "Connemara Lady" a passenger ship, Class 5, carrying 159 passengers plus crew. This information is documented in the Marine Survey Office. Josie also held a G.M.D.S.S.

9. CORRESPONDENCE RECEIVED



11

Restricted Operators Certificate of Competency.

With reference to the Conclusion 6.
I would like to make 2 points :-
1). I don't believe the crew were caught completely unawares. While they had sufficient time to manually activate the E.P.I.R.B. they obviously did not have sufficient time to manoeuvre out of danger.
2). The engine controls in the "Ahead" position would also be consistent with trying to manoeuvre out of danger.

I would like to thank all the Rescue Services involved in finding the Fishing Vessel "St Olivar" Lost Friday 17th September 2004 and discovering the body of Josie Connolly on Duck Island.

Yours sincerely,
Eileen Noonan Connolly

MCIB RESPONSE to letter dated 25th July 2005 from Mrs. Noonan Connolly.
The MCIB notes the contents of this letter and has amended the report accordingly. The MCIB would again like to extend its deepest sympathies to Mrs. Noonan Connolly and her family on their sad loss.

NOTES

NOTES