
# INVESTIGATION INTO THE LOSS OF THE "PISCES" AT FETHARD-ON-SEA, CO. WEXFORD ON 28th JULY, 2002.

The Marine Casualty Investigation Board was established on the 5th, June 2002 under The Merchant Shipping (Investigation of Marine Casualties) Act 2000

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## 1. PREAMBLE.

1. The following is the final draft report on the investigation carried out by the Marine Casualty Investigation Board into the foundering of the vessel "PISCES" with the loss of five lives on 28 July, 2002 near Fethard-on-Sea, Co. Wexford.

2. The investigation was carried out in accordance with Section 26 of the Merchant Shipping (Investigation of Marine Casualties) Act, 2000.

3. The purpose of this investigation is to establish the cause, or causes, of this incident and to make recommendations for the avoidance of similar marine casualties in the future.

4. The Marine Casualty Investigation Board is precluded by law from attributing blame or fault.

5. The Marine Casualty Investigation Board would like to express its appreciation and gratitude to all who assisted in this investigation, and in particular:

Commissioners of Irish Lights
Port of Waterford Company;
Irish Naval Service;
Receiver of Wreck, Customs and Excise, Waterford; and
Garda Underwater Unit.
All persons involved in the search, rescue and recovery operation.

## 2. SYNOPSIS

A small fishing vessel, known locally as the "PISCES", sailed from Fethard Pier, Co. Wexford, at about 10.30 a.m. on 28th July, 2002 carrying a skipper and a party of nine passengers.

Shortly after 11.45 a.m. the vessel rolled over to one side and sank very quickly. The skipper had managed to send a brief distress message which was picked up by other vessels in the area.

Another vessel in the area, the "St. Coran", proceeded to the last known location of the "Pisces" and discovered a number of people floating in the water. Nine people were recovered from the water of which four were pronounced dead on return to Fethard pier. The body of the remaining person was recovered from the seabed, in the vicinity of the wreck, the following day.

## 3. FACTUAL INFORMATION

Description of the "PISCES"

The "Pisces" is of typical "half-decker" construction with a raised fo'c'sle and a small wheelhouse built into the fo'c'sle. The area aft of the wheelhouse was decked. The principal particulars of the vessel are as follows:-

| | |
|---|---|
| Built: | Late 1970's at Kinvara, Co. Galway. |
| Construction: | Wood (carvel build). |
| Length Overall: | 8 metres (26 ft.). |
| Registered Length: | 7.77 metres (25.5). |
| Registered Breadth: | 2.59 metres (8.5ft). |
| Registered Depth: | 0.76 metres (2.5ft). |
| Gross Tonnage: | 2.44. |
| Port of Registry: | Dublin. |
| Fishing Number: | D 397. |
| Current owner: | Mr. Patrick Barden, Ralph, Fethard on Sea, Co.Wexford. |

**MACHINERY and MECHANICAL EQUIPMENT.**

The vessel was fitted with a FORD FSD, 4 cylinder diesel engine with a power output of about 38 Kws (Kilowatts){50.93 horsepower}. This replaced the original engine, a Kelvin model P4, with a power output of 15 Kw. The engine was connected to a single propeller via a conventional tailshaft and sterntube arrangement.

Fuel for the engine was stored in a tank of about 30 litres capacity located in the forward part of the vessel under the fo'c'sle deck. A second fuel tank was located aft but this was not in use. The engine speed and propeller direction could be remotely controlled from the wheelhouse.

An hydraulically powered net/pot hauler was located on the starboard forward part of the deck area.

Two electric bilge pumps were fitted in the compartment under the main deck. One of these pumps was started automatically by a float switch. The vessel was not fitted with a bilge level alarm. The purpose of a bilge level alarm is to alert a skipper of the build-up of water in the bilges of his vessel.

The vessel had originally been fitted with a manually operated bilge pump located on the port forward area of the working deck, but this had been removed from the vessel prior to the incident.

**STEERING ARRANGEMENT.**

The rudder was operated by a manual hydraulic arrangement whereby the operation of the helm produced a corresponding displacement of fluid in a hydraulic ram located in the after-decked compartment. This ram was attached to the rudder tiller (a lever which passed through the transom) which, in turn, was attached to the top of the rudderstock (bar on which the rudder is mounted). This arrangement ensured that any movement of the helm (steering wheel) in the wheelhouse caused a corresponding movement of the rudder (see Appendix 1).

**LIFESAVING APPLIANCES.**

Mr. Barden (the Skipper) maintains that the following lifesaving appliances were carried on the vessel prior to the incident: -

- 2 plain lifebuoys, stowed in the forward space under the fo'c'sle deck.
- 2 smoke and 2 hand flares, stowed in the forward compartment.
- 1 hand flare, stowed in the wheelhouse.
- 1 lifejacket, stowed in the wheelhouse.

**NAVIGATIONAL / RADIO EQUIPMENT.**

The vessel was equipped with:-

- 1 magnetic compass.
- 1 echo-sounder (colour).
- 1 VHF radio (ICOM-56) with associated antenna.
- Navigation lights on the port and starboard sides of the wheelhouse.

The skipper carried a mobile telephone.

**TANKS WITHIN THE VESSEL.**

- A fuel storage tank located aft (not in use).
- A tank for the hydraulic oil used in the net/pot hauler system was located on the starboard side of the wheelhouse.
- A 30 litre tank, located under the fo'c'sle deck, which supplied the fuel for the engine. (The skipper had filled this tank prior to departing Fethard on the morning of the incident).

## 4. DETAILED DESCRIPTION OF THE "PISCES".

The following is a more detailed description of the arrangement of the vessel.

The "Pisces" is an 8 metre (26ft) long wooden fishing vessel of typical "half-decker" design. The vessel is of carvel construction (i.e. the hull is formed from flush wooden planking). It is understood that the vessel was built in Kinvara, Co. Galway, in the late 1970's but a precise date cannot be established.

The hull is formed from longitudinal planks of timber (probably larch) laid onto transverse oak frames spaced at distances of about 330mm (13 inches) - 380mm (15 inches) apart. In order to protect the side of the hull from damage during net or pot hauling, a double layer of planking was fitted on the outside of the hull on the starboard side in way of the net/pot hauler. The vessel was not fitted with any transverse bulkheads or divisions and accordingly, had no watertight compartments within the hull.

The vessel was fitted with a raised deck (fo'c'sle deck) in the forward part which extended for 2.43 metres (8 ft) aft from the bow and then "stepped down" to open deck level. The wheelhouse was incorporated into this fo'c'sle deck and forward compartment and extended slightly aft into the area of the working deck. The forward side of the wheelhouse was located 1.65 metres (5.5 ft) from the bow. An access door was located in the aft side of the wheelhouse which opened outwards on to the deck. An open, working deck, then extended aft 4.7 metres (15.5ft) to a small decked compartment at the extreme aft part of the vessel. This compartment extended 0.76 metres (2.5ft) forward from the transom (the aft end of the vessel) and housed the rudder operating mechanism. A transverse bulkhead extended from the deck of this after compartment down to the open deck level. The open deck was fitted with a transverse wooden planking "pound-board" type of division located 3.6 metres (11.75 ft) aft of the wheelhouse, which effectively divided the open deck into two working areas (see Appendix 2). This transverse division had openings cut at deck level on both the port and starboard sides to facilitate fore and aft drainage.

An access opening was cut in the main deck immediately over the engine. This opening was 1020mm (40 inches) long and 900mm (35 inches) wide and was fitted with a raised coaming 270mm (10.5 inches) high. A hatch cover was positioned on top of this coaming but had been lost in the sinking or recovery of the vessel as it was unsecured.

An opening 720mm (28 inches) long and 495mm (19 inches) wide was cut in the open deck area just forward of the engine access hatch to provide access to the forward bilge pump.

An opening 330mm (13 inches) long and 480mm (19 inches) wide was cut in the open deck area aft of the engine access hatch to provide access to the sealing gland of the sterntube. A small raised wooden "lip", 25mm (1 inch) high, was

formed around the edges of this opening. A steel cover, fitted with rubber gasketing, was intended to be secured on top of this "lip", by a bolt and strongback arrangement, in order to seal the opening.

A small opening was cut in the transverse bulkhead of the aft (steering) compartment with its lower edge 90mm (3.5 inches) above the deck. This opening was 345mm (13.5 inches) high and 450mm (18 inches) wide. Mr. Barden (the Skipper) stated that this opening had been fitted with a cover.

Two small openings, one of irregular shape 80mm (3 inches) long and 40mm (1.5 inches) wide and the other of circular shape 50mm (2 inches) diameter, were cut in the main deck immediately under the net/pot hauler through which its hydraulic hoses passed down to the engine area.

A total of 6 freeing ports (small drainage openings in the hull at deck level) were cut in the sides of the hull in the area of the main deck extending from the forward side of the engine hatch to the transverse "pound board" or deck dividing structure (see Appendix 2). These were 190mm (7.5 inches) long and 40mm (1.5 inches) high with three located on each side of the vessel. The port aft freeing port was fitted with a vertically sliding wooden block which could be used to seal the opening. None of the other freeing ports was fitted with any such sealing device.

A safety rail, about 300mm (12 inches) high, was fitted on top of the gunwhale on the port and starboard sides of the vessel except in the area of the net/pot hauler and 1.75metres (5.75 ft) aft of it.

## 5. MODIFICATIONS TO THE "PISCES".

The "Pisces" had originally been built as an open boat in the area aft of the wheelhouse and the sides of the vessel would have been intact from the gunwhale to the waterline. This arrangement ensured that the vessel had more than adequate "freeboard", (i.e. the distance measured from the top of the gunwhale to the waterline) which provided good protection from water entering the vessel as it rolled in a sea way or rough weather conditions. However, the vessel was later modified by the addition of a new working deck in the area aft of the wheelhouse. It is understood that this modification was carried out between 1991 and 1993.

When this new deck was fitted, six freeing ports (drainage openings) were cut in the sides of the vessel at the level of this new deck to facilitate the run-off of any water on the deck. However, this modification changed the effective freeboard from the original distance of bulwark to waterline of 550mm (about 22 inches) to a new distance of deck edge to waterline of 76mm (about 3 inches) (see Appendix 3). It should be noted that this arrangement would also permit water to flow on to the deck through these openings as no arrangements were fitted to prevent this backflow.

The vessel was originally fitted, at the time of its condition survey in April, 1999 (see Appendix 4), with a model Kelvin P4. This engine was replaced during the time of Mr. Robert Chapman's ownership with the Ford unit, (the engine on board on the day of the incident) described on page 5 above. It appears that the total weight of the replacement gearbox and engine was 311 Kg., compared to a total weight of 304 Kg. for the original engine. This small difference was not considered relevant to the sinking of the vessel.

## 6. OWNERSHIP OF THE "PISCES".

The "Pisces" was purchased by Mr. Barden from a Mr. Robert Chapman, Co.Wexford on 31st May, 2002. However, Mr. Chapman remains the registered owner of the vessel according to the Sea Fishing Boat Register of the Department of Communications, Marine and Natural Resources. Mr. Chapman had applied to the Department for a licence to engage in commercial sea fishing and a licence was issued in his name on June 2nd 1999. Mr. Chapman was required to submit a condition survey report in respect of the vessel. He submitted such a report to the Department of the Marine and Natural Resources (as it then was) dated the 19th April, 1999, which stated that the vessel was "in a safe and seaworthy condition and suitable for engaging in commercial sea fishing". (see Appendix 4).

The original licence which was issued to the "Pisces" was valid until 30th June, 2001. This licence was subsequently renewed in Mr.Chapman's name from July 1st 2001 until June 30th 2004. Such licenses are not transferable on the sale of a vessel and accordingly, Mr. Barden was not entitled to use the vessel for commercial sea fishing. The Department of Communications, Marine and Natural Resources was not notified of the change of ownership of this vessel as is required by legislation.

When Mr. Barden purchased the "Pisces" he re-painted the hull and wheelhouse. He maintains that he checked the condition of the hull with a knife and was generally satisfied with it's condition. He was aware that one area on the port side had been patched previously and would need permanent repair at some time in the future. However, he did not regard this matter as being urgent as there was no water leakage through this area.

Mr. Barden maintains that he intended to use the vessel for pleasure and for bringing out groups of people, with whom he was familiar, for sea angling trips.

He also maintains that during one voyage on July 23rd 2002 (five days prior to the incident), the engine temperature gauge indicated an overheating problem. The cause of this problem was traced to a cooling water pipe becoming detached from the gearbox oil cooler, which resulted in the cooling water being pumped directly into the boat. The bilge pumps were used to clear this water overboard and the pipe was repaired on return to port.

The rise in engine temperature in this incident acted in place of a "bilge (or flooding) alarm" in that it alerted Mr. Barden who looked down under the deck and detected the ingress of water from the detached pipe.

The previous owner, Mr. Chapman, states that a flooding incident occurred during his period of ownership of the vessel. Mr. Chapman became aware of the "queer / heavy" feel of the boat and upon investigation saw that water was entering the vessel from a crack in the pipe from the seacock to the engine cooling pump. The water was up around the propeller shaft. The water was pumped overboard by the two electric pumps and the leak was repaired with tape.

On the day of the casualty when Mr. Barden noticed the vessel roll to starboard and then not recover to the upright position the "flooding alarm" came too late for any effective remedial action to be taken.

In all of these flooding incidents the presence of a correctly located and installed bilge alarm would have alerted the skipper to the flooding at a much earlier stage allowing appropriate corrective action to be taken.

## 7. REQUIREMENTS FOR REGISTRATION AS A FISHING VESSEL.

The "Pisces" was registered as a fishing vessel at the time of the incident and as such should have complied with the safety equipment, fire-fighting equipment and radio requirements for fishing vessels. Details of these requirements are set out in Appendix 5. The "Pisces" did not comply with all of the legal requirements as set out in this Appendix.

## 8. PASSENGER BOAT LICENSING REQUIREMENTS.

A boat, which carries less than twelve passengers for hire or reward, is regarded as a passenger boat under the Merchant Shipping Act, 1992. Such boats are required to hold a passenger boat licence issued by the Department of Communications, Marine & Natural Resources. A passenger boat is defined in section 2 of the Merchant Shipping Act, 1992. Section 14(1) prohibits the use of a vessel as a passenger boat unless a passenger boat licence is in force in relation to it (see Appendix 6).

In order to obtain such a licence the boat must be surveyed by a Surveyor from the Department of Communications, Marine & Natural Resources. The requirements cover the design, construction, stability, life-saving appliances, fire-fighting appliances as well as radio equipment. Full details of the safety equipment required at the time of the incident are given in Appendix 7. The Pisces was carrying nine passengers for reward on the 28th of July 2002, the day of the incident. However, eight of these passengers intended to engage in sea-angling and under the terms of the Licensing of Passenger Boats (Exemption)(Number 2) Regulations, 2001, the vessel would have been exempt from the requirements to hold a passenger boat licence provided the passengers were engaged in sea-angling and the boat remained within three miles of land. However, the ninth passenger James Cooney, was not engaged in sea angling and had made it known that he had no intention of doing so prior to departing Fethard. Accordingly, the presence of Mr. Cooney on board the Pisces meant that a passenger boat licence was required and the boat should have complied with the requirements for a passenger boat licence outlined above.

In addition the vessel should have complied with the Load-Line requirements as set out in SI 424 2001 Merchant Shipping (Load- Line) Rules, as the vessel was being used as a passenger boat in addition to being a fishing vessel. These Rules require that the vessel meet stability and construction standards.

## 9. EVENTS LEADING TO THE INCIDENT.

The "Pisces" sailed from Fethard pier at about 10.30 a.m. on the morning of July 28th 2002.

The weather report from Met Eireann for the area near Baginbun Head, between 8 a.m. and 12 noon on July 28th 2002, was as follows (see also Appendix 8):

**Winds:** South Westerly, Force 5.

**Weather:** Mostly cloudy with some drizzle and mist.

**Visibility:** Poor.

Locally observed conditions at the time were of fog with visibility down to 50 yards. The sea conditions were observed to be slight with a swell running in the Bay.

The "Pisces" was skippered by Mr. Patrick Barden and was carrying nine passengers, as follows:

Mr. Shane O'Neill,

Mr. Derek O'Connor,

Mr. Patrick Doyle, (Son of Mr. Seamus Doyle and brother of Mr. Mark Doyle).

Mr. Mark Doyle, (Son of Mr. Seamus Doyle and brother of Mr. Patrick Doyle).

Mr. Seamus Doyle, (Father of Mr. Patrick Doyle and Mr. Mark Doyle and Son in Law of Mr. James Cooney).

Mr. Paul Cullen, (Son of Mr. John Cullen)

Mr. James Cooney, (Grandfather of Mark and Patrick Doyle and Father in Law of Mr. Seamus Doyle).

Mr. John Cullen, (Father of Mr. Paul Cullen).

Mr. Martin Roche

Originally, ten persons had declared an interest in boarding the "Pisces". However, the skipper indicated that it would only be possible or practical for eight persons to engage in angling at any time. Mr. James Cooney, declared that he was not interested in angling and that he would "come along for the spin". The remaining person decided not to board the vessel. Accordingly, the complement of the "Pisces" consisted of the skipper, eight passengers intending to engage in sea angling and Mr. Cooney who had not intended to engage in sea angling.

It was understood that a fee of €150 would be paid by the passengers to Mr. Barden on the vessel's return to Fethard after the day's fishing. Mr. Barden knew some of the passengers, as he had carried them on previous occasions, and he was satisfied with this arrangement.

Prior to departure, Mr. Barden distributed the passengers in order to maintain the boat as upright as possible. He did not provide any form of safety briefing or instruction to the passengers on procedures to be adopted by them in the event of an emergency.

## 10. THE INCIDENT AND SUBSEQUENT EVENTS.

The "Pisces" proceeded initially to a location off Baginbun Head and then in an easterly direction to another location. Mr. Barden then decided to move to a third location in a northeasterly direction. A number of survivors recall that, as the vessel rolled, water was observed coming in through the freeing ports and on to the deck. They also observed that water flowed back out again through the freeing ports but some water would have flowed down through the deck (see Appendix 9). When the vessel had stopped to fish, on the first two occasions, the skipper used the aft bilge pump to clear accumulated water from the bilges (underdeck space). There is no evidence that the forward (automatic) bilge pump had started up to this point.

When the vessel stopped for the third time, it rolled more. Water was flowing on to the deck and had accumulated to ankle depth. After about 10 minutes at this new location, some 1.5 miles to the East of Ingard Point, the "Pisces" rolled to starboard and did not immediately recover to an upright position. Mr. Barden immediately started the manually activated electric bilge pump and noted that the automatic bilge pump had also started. One of the passengers observed water issuing from the discharge pipe from the after bilge pump. This flow was then reduced to a trickle and then stopped altogether.

Mr. Barden then instructed one of the passengers to move from the starboard side to the port side of the vessel in an attempt to correct the list. The vessel then developed a list to port. Mr. Barden was very concerned at this situation and decided to return to Fethard having instructed all passengers to move to the centre of the vessel. During the manoeuvre of turning the "Pisces" around to the desired direction the vessel again listed heavily to starboard and a large amount of water was taken on to the deck over the gunwhale towards the aft end of the vessel and she began to sink.

Mr. Barden called Mr. Tommy Roche (skipper of the "St.Coran") on the vessel's VHF radio which was set on Marine Channel 6 (usually used for ship to ship communications). However, it appears that Mr. Roche did not receive the message as he could not hear it over the noise of his engine and requested Mr. Barden to repeat the message. Mr. Barden was leaving the wheelhouse when he heard Mr. Roche's request to repeat the message. He went back into the wheelhouse to respond to the request and managed to repeat the distress message before the vessel sank.

The vessel began to sink very quickly with the passengers being washed from the deck as it did so. The skipper was trapped within the wheelhouse and was brought down with the vessel. He managed to escape when the vessel struck the bottom (depth 13 metres approx.) and swam to the surface.

## 11. EVENTS FOLLOWING THE FOUNDERING.

A number of vessels in the area heard the distress message on VHF Channel 6. One of these vessels, the "Uisce Beatha", advised the Irish Coast Guard of the situation at 11.52 a.m. and they immediately initiated a search and rescue operation. The skipper of another vessel, the "St Coran", had not heard the initial message from the "Pisces" because of his engine noise but did receive the message from the "Uisce Beatha". The skipper of the "St.Coran" was aware of the location of the "Pisces" as he had been talking to her skipper on the VHF radio at an earlier stage and he had seen the vessel when the fog had lifted slightly. He also noted the position of the "Pisces" on radar when she was about 0.75 miles off the Point of Bannow. However, he now noticed that the "Pisces" radar echo had disappeared from his radar screen and he decided to proceed towards its last known position as quickly as possible.

The "St.Coran" arrived at the scene after about 20 minutes and discovered a number of people in the water. The Skipper of the "St.Coran", assisted by those on board his vessel, managed to recover the skipper and eight of the passengers of the "Pisces". The skipper of the "St.Coran" does not recall seeing any lifesaving appliances floating in the water at this stage. At about 12.23 p.m., when other vessels arrived in the area to continue the search for the tenth person, the "St.Coran" left the scene to return to Fethard with the nine that had been recovered. On arrival in Fethard, a local doctor pronounced dead four of those recovered. The survivors were then transferred to Wexford General Hospital. The four passengers pronounced dead were identified as:

Mr. James Cooney,

Mr. Seamus Doyle,

Mr. John Cullen,

Mr. Martin Roche.

The five survivors, having been in the water for some time, were treated for the effects of hypothermia.

The Irish Coast Guard maintained a full search and rescue operation and concentrated on locating the missing person, Mark Doyle. The search continued for the remainder of the day on the 28th and resumed at first light on the morning of the 29th. At about 2 p.m. on the 29th of July, 2002, Mark Doyle's body was located by divers in the vicinity of the wreck of the "Pisces" on the seabed. This brought the total number of fatalities to five.

## 12. SALVAGE OF THE "PISCES".

To further the investigation it was decided to salvage the "Pisces". The Marine Casualty Investigation Board (MCIB) chartered the "Granuaile" to lift the vessel. The associated underwater operations were carried out by divers from the Irish Naval Service assisted by divers from the Garda Underwater Unit. At about 9.50 p.m. on July 29th the "Pisces" was lifted from the seabed. In the course of this procedure the wheelhouse was caught between two airlifting bags and demolished. The timber was found to be rotten. The naval divers have confirmed that there was no damage to the hull while the vessel was on the seabed, or during the lifting and recovery process. It was then placed on board the deck of the "Granuaile" where an initial examination of the wreck was carried out before being transported to Waterford Port. Upon arrival in Waterford, the following morning, July 30th, further inspections and tests were carried out while the vessel was on the deck of the "Granuaile". The "Pisces" was placed back in the water for a brief period to confirm the suspicion that the hull was not watertight and was then landed ashore and placed in secure storage within Waterford Port, to facilitate further investigations and examination (see Appendix 10 for Diver's Report and Report from "Granuaile").

## 13. EXAMINATION OF THE "PISCES" AFTER THE INCIDENT.

**HULL.**
The planking, in some areas of the hull, was in a poor condition with some sections rotten. Repairs had been undertaken, utilising metal patches, in a number of underwater locations. On the port side of the bottom planking, about 1 metre forward of the propeller (see photographs in Appendix 11), the condition of the timber and the caulking (sealing between planks) was such that it was suspected that the hull would not be watertight in this area. This suspicion was subsequently confirmed when the vessel was placed back in the water in Dunmore East.

The caulking was found to be in poor condition in a number of areas and missing altogether in the area of the starboard side just under the forward freeing port, leaving an open gap between planks (see photographs in Appendix 11). It was calculated that, with the vessel loaded with weights equivalent to the number of persons on board on the day of the incident, the water ingress through this gap would have been about 490 litres per hour.

These defects were of a long-standing nature and had become progressively worse over time.

The following is a summary of the defects noted in the hull of the "Pisces":-

**STARBOARD SIDE.**
- 1 metre aft of stem, No.1 plank from keel, abrasion noted on surface of timber.
- 1.1 metres aft of stem, steel patch about 150mm x 75mm applied to timber.
- Amidships, approximately under the forward end of the engine, abrasion to planks Nos. 5 & 6 up from keel.
- Amidships, 0.18 metres below deck edge at forward freeing port, caulking missing between planks with consequent through-opening, about 30mm long and 4mm deep.
- Forward of propeller, No. 2 plank from keel, steel patch about 200mm x 120mm applied to planking. The timber in way of this patch was in very poor condition.

**PORT SIDE.**
- 3 metres aft of stem, Nos. 1 & 2 planks from keel, very little caulking remaining.
- Under forward freeing port, about 2 planks down from the deck edge, copper patch about 600mm x 120mm. The fastenings for securing the patch were loose in the timber and the timber was rotten in the area of the patch.
- 1 metre forward of propeller, No. 1 plank from keel, timber and caulking rotten.

## DECK.

The open fishing deck had been constructed from sheets of plywood, which had simply been butted together without any sealing arrangements for the joints. Accordingly, the deck, as constructed, was not weathertight. A large crack was noted in the deck on the port side just aft of the wheelhouse. When water was applied to the deck it was noted to be leaking down through the butt joints in numerous locations.

The opening, forward of the engine hatch, was meant to have planking loosely fitted which could be removed to provide access to the bilge pump below. This planking was missing and could have been lost when the vessel sank. However, even if fitted, the arrangement could not have ensured a weathertight closure of this opening.

The coaming around the engine hatch was of sound construction but the hatch cover was missing and was probably lost when the vessel sank. However, no means was evident to secure the hatch cover in position.

The opening aft of the engine hatch was provided with a steel cover fitted with rubber gasketing. It was intended that this cover would be secured in position by a bolt which passed downwards from the cover and passed through a strongback (bar) underneath the opening which would then be tightened into position by a nut screwed upwards along the bolt and bearing on the strongback. When examined, it was noted that, whilst the cover was lying in the area of the opening, the thread of the bolt and its nut were so corroded and seized that they could not have been utilised to secure the cover in its correct position. It would also appear that this had been the situation for some time previously. It was also noted that it would have been very difficult, if not impossible, for anyone to reach the nut from underneath in order to tighten it properly.

The cover for the opening in the bulkhead for the steering compartment was missing.

The port aft freeing port was the only one fitted with a means of sealing. When the vessel was salvaged, this cover was observed to be open. However, the divers, involved in the salvage of the vessel, reported that it had been closed. They opened it in order to rig the lifting strops. None of the other five freeing ports were fitted with any means of sealing and there was no evidence that any means of closure had been fitted before the incident.

The wheelhouse was demolished during the salvage operation.

Loose iron/steel ballast had been placed on top of the frames in the underdeck areas on each side of the engine and in the area aft of the engine. It is possible that this ballast moved during the sinking and subsequent salvage operations.

**ENGINE.**

The engine was cooled by seawater drawn through a skin fitting on the hull located on the starboard side of the vessel just under the deck dividing structure. Water then passed through a valve and strainer arrangement via flexible piping to the engine driven "Jabsco" type pump. Seawater first passes from this pump to the gearbox oil cooler and then to the combined engine oil and freshwater cooler. From here, the water passes to the "wet-exhaust" system via a water-seal arrangement located in the steering gear compartment. The water then passes overboard, together with the exhaust gases, through a fitting in the transom which was located about 640mm below the deck level. All of the piping, and systems associated with this cooling system, were pressure tested and found to be intact without any significant leakage.

**BILGE PUMPS.**

The two bilge pumps ("RULE" – Model 10, each of about 2.000 U.S. gallons/hour capacity) were electrically operated from the vessel's 12volt battery. They were of a submersible design (i.e. they sat on the bottom of the boat and could be immersed in water) and sucked water directly from the area in which they were lying. Each pump was fitted with a flexible plastic discharge hose which passed upwards through the deck and discharged just below the gunwhale on the port side of the vessel.

The forward pump was located in the fourth frame space aft from the forward end of the main deck and was secured to the bottom of the boat by screws. It was equipped with a float switch (also secured to the bottom) which would automatically start the pump when sufficient water was present to activate the float. Electrical power was supplied to this unit through a "rocker" type switch located in the wheelhouse. This switch had three positions, "Auto", "Off" and "Manual On" and was normally left in the "Auto" position so that it would operate automatically especially when the vessel was unattended in port or at moorings. An indicator light was provided in the wheelhouse which would illuminate when the pump was operating. The electrical wiring connections to this pump and the float switch were of a poor standard and the wiring was not led directly upwards and out of the "wet" area. During the inspection, slight movement of this wiring led to one connection parting. This particular connection was located in the "wet" area and merely consisted of wires twisted together and wrapped in insulating tape.

The aft pump was located in the frame space immediately aft of the engine hatch and was not secured in position but appeared to rely on the rigidity of the discharge hose to keep it in position. It was controlled by a manual "on/off" switch located in the wheelhouse.

When inspected, a piece of steel ballast was found lying across the discharge hose causing partial flattening of the hose with resultant reduction in cross sectional area.

The wiring and connections associated with this pump were of a superior condition to that of the forward pump. In this case the wiring was routed upward in such a way that the first electrical connection was out of the "wet" area and would normally be kept dry.

Many of the electrical connections used consisted of simply twisting the wires together and wrapping them in insulating tape. Some connections were supported by the use of plastic cable ties.

Submersible pumps of this type require the first electrical connection, on the wiring leading from the pump, to be located outside any "wet" area, i.e. outside any area where water might accumulate. If water can gain access to these connections, it can be drawn along the wiring by capillary action and into the motor itself leading to its failure.

Unlike the forward pump, the aft pump did not have an "auto start" switch. The significance of this is that as water entered through the hull and down through the deck, it flowed aft, because the vessel was trimmed by the stern and the aft pump could not operate to clear this water, because it did not have the "auto start" switch. It was not until the skipper realised the seriousness of the situation (after the vessel had rolled to starboard and did not recover to the upright position) that the aft pump was started manually and the forward pump was started by its auto start switch. At this stage a fish box had started floating on the deck beside one of the passengers who noted that the water on deck was ankle deep. By this time the progressive flooding had already led to a dangerous build up of water on deck and in the bilge, and the vessel had lost positive stability and become liable to capsize.

On August 8th 2002, an attempt was made to operate these pumps using a 12-volt battery as a power source. Initially, neither pump would operate and examination indicated short circuit conditions in the motor circuits. It was also discovered that the float switch, associated with the forward pump, was indicating closed in any position. The pumps, and the associated wiring, were allowed to "dry-out" for about six days. They were then tested again and both pumps operated satisfactorily. Observations indicated that the seals on the pumps, which separate the motor from the water being pumped, were effective. Consequently, it is reasonable to assume that the water ingress at the connections had contributed to the failure of the pumps to operate after the vessel was salvaged. Furthermore, witness statements confirm that water was issuing from both overboard discharges prior to the loss of the vessel.

**STEERING ARRANGEMENT.**

The steering arrangement was found to be operational and would have been effective before the incident. It was noted that excessive "free-play" existed in the tiller arrangement allowing about 40mm of movement. However, this would not have resulted in an inability to steer the vessel.

**STABILITY ANALYSIS.**

The description, by survivors, of events on board the "Pisces" on the day of the incident, indicated that it would be necessary to establish the stability characteristics of the vessel. In order to do this it was necessary to produce accurate drawings of the external shape of the hull of the vessel since no construction or other drawings could be located. A specialist was engaged to undertake this process and the necessary drawings, showing the shape of the hull, were produced. This enabled certain physical data for the hull to be developed which would be necessary in the stability analysis. However, this data only enabled a theoretical analysis to be produced and it was necessary to obtain other physical information to verify or confirm this theoretical data.

In order to obtain this physical data, it was decided that the vessel would be placed back in the water. It was necessary to ensure that it was placed in water of density similar to that in the area where the incident occurred. It was confirmed that these conditions existed in the port of Dunmore East and accordingly, the "Pisces" was transported by road to Dunmore East on September 1st 2002, and placed back in the water by crane. The weather conditions in Dunmore East were ideal on that day for carrying out the various tests and measurements.

However, before the vessel was placed in the water, it was decided to seal the area on the starboard side where a gap was known to exist in the caulking. This was necessary to prevent any water ingress when the vessel was placed back in the water as the presence of such water, within the hull, could have an adverse effect on the accuracy and validity of the experiments and measurements taken with the vessel afloat. However, when the vessel was placed back in the water, leakage was observed in the area of the rotten area of planking on the bottom port aft side of the vessel (previously observed during the detailed inspection in Waterford). It was necessary to provide temporary sealing of this area to enable the inclining experiment to be carried out successfully.

In order to re-create, as accurately as possible, the condition of the "Pisces" on the day of the incident, it was necessary to roughly re-construct the wheelhouse in order that its weight would be in the same location. This re-construction was carried out.

When the vessel was afloat, it was possible to determine a number of essential physical measurements, as follows:

- The manner in which the vessel floated, e.g. depth forward and aft, whether it floated upright, etc.
- The waterline of the vessel.
- The distance (freeboard) from the deck edge to the waterline.
- The distance from the bulwark to the waterline.

This information enabled essential data to be determined in relation to the weight (displacement) of the vessel itself. However, in order to determine the stability characteristics of the vessel, when afloat in this condition, it was necessary to carry out a test called an "inclining experiment". In this test, known weights are moved from side to side within the vessel and the corresponding angles of heel (see Appendix 9) are measured. This, together with the physical data already established, enabled the stability characteristics of the vessel to be determined.

It was now decided to place a number of persons on board the vessel to simulate, as accurately as possible, the loaded condition of the "Pisces" on the day of the incident. From statements taken from survivors it was possible to determine the approximate weights and locations of those on board. Volunteers of similar weights were now placed on board in those approximate locations. This was important since it was not just a matter of placing equivalent weights on board but trying to re-create the heights of such weights as well. A pendulum was again used to measure the angles of heel as these people were moved about within the boat. The following was the result of this test:

With all persons in their original positions, the vessel was almost upright.

One person was then moved from port to starboard which caused an angle of heel of about 7 degrees to starboard.

A second person was now moved from the port side to the centre of the vessel and it was noted that freeing ports on the starboard side had been submerged and water began to flow onto the deck.

These two people were then returned to their original positions.

It was now decided to move one person from the starboard side to the port side and the resulting angle of heel was just under 7 degrees to port.

A second person was then moved from starboard to port. The angle of heel exceeded 7 degrees and the freeing ports on the port side were just level with the waterline.

These two people then returned to their original positions and the test was concluded.

The slight difference in the behaviour of the vessel when moving from port to starboard and from starboard to port can be explained by the additional weight of the pot hauler being located on the starboard side.

The information gleaned from the physical measurements taken and the inclining experiments were now evaluated using the normal criteria for determining stability of vessels. This information was then used to develop a number of different models of the stability characteristics of the "Pisces" on the day of the incident with the number, weight and distribution of

those on board on that day. The examples taken for which models were developed covered the following conditions: -

- Vessel proceeding to sea with bilges dry (no water within hull).
- Vessel proceeding to sea with 100 kg of water in the bilges.
- Vessel proceeding to sea with 500 kg of water in the bilges.
- Vessel proceeding to sea with 1,000 kg of water in the bilges.
- Vessel proceeding to sea with 100 kg of water in the bilges and water on deck.
- Vessel proceeding to sea with 100 kg of water in the bilges, water on deck and subject to wave action.

The outcome of this analysis indicated that the "Pisces" failed to meet any of the internationally accepted standards for the stability of such a vessel in any of these conditions.

It shows that, even with small amounts of water in the bilges, the vessel has a poor range of stability, i.e. angles through which it can roll before it becomes unstable. However, it also shows that a very small amount of water on the deck of the vessel can create an unstable situation very quickly.

It is worth noting that in the stability test required for licensing of a passenger boat, all passengers are placed on one side of the vessel and in this condition the vessel is not permitted to heel more than 7 degrees.

## 14. RESULTS or FINDINGS OF THE VARIOUS INVESTIGATIONS, INSPECTIONS and TESTS.

The examination of the "Pisces" has shown that the vessel was in an un-seaworthy condition. The hull of the vessel was in poor condition with numerous areas of leakage allowing water to gain access to the hull. The deck was in very poor condition with numerous areas where water could flow downwards into the spaces below deck. This included some very large openings which were not fitted with proper means of closure or sealing.

The cutting of the freeing ports in the sides of the vessel, associated with the fitting of the working deck, had drastically reduced the freeboard which is intended to prevent water getting into the vessel. In addition, these freeing ports were not fitted with any means of preventing water from flowing back on to the deck.

The electrical wiring, associated with the bilge pumping system, was of a poor standard with unsuitable connections used to join wires together and wiring being routed incorrectly to protect these connections from becoming wet.

The manner in which the steel ballast was unsecured within the hull meant that it could shift very easily and contribute to a list, damage electrical and mechanical components or interfere with the integrity of flexible piping within the hull.

The vessel was basically unstable when carrying the ten people on board on the day of the incident. Even the movement of one or two people from side to side caused large angles of heel.

The vessel did not comply with the applicable legislation (please see Sections 7 & 8 of this Report). The vessel would not have qualified for the issue of a passenger boat licence on grounds of poor hull and deck construction and condition, subdivision and stability criteria, and the lack of life-saving appliances and fire-fighting equipment on board.

The vessel did not carry sufficient lifesaving appliances for the number of people on board. An inflatable liferaft capable of accommodating all passengers and a lifejacket for every passenger should have been on board.

Only one lifebuoy was located after the incident. This was located in the forward compartment, and was stowed in such a manner that it did not float free when the vessel sank. Mr. Barden maintains that a second lifebuoy was on board. This second lifebuoy was not observed floating in the area of the sinking nor has it been recovered since. The divers, involved in the salvage operation, stated that they had noticed a lifejacket in the wheelhouse but this was not on board the vessel when salvaged. However, it is possible that it might have floated free when the wheelhouse collapsed. Two hand flares and two smoke flares were recovered but were noted to have passed their expiry date of December, 2001.

The weight and position of the replacement engine and gearbox is substantially the same as the one replaced and had no bearing on this tragedy.

## 15. CONCLUSIONS

The "Pisces" was lost because the vessel was unseaworthy, overloaded and unstable. The vessel foundered as a result of a rapid and serious loss of stability. This loss of stability was caused by an accumulation of water in the space under the working deck and an accumulation of water on the working deck itself.

The very poor condition of the hull and deck allowed water to gain access to the hull which in turn caused the vessel to sink deeper in the water (initially by the stern), which in turn permitted more water to gain access to the deck area and because this deck was in such a non-weathertight condition with numerous large openings, more water flowed downwards into the space below.

The modifications to the structure of the vessel, when the working deck was fitted, resulted in a large reduction in the freeboard of the vessel.

The vessel did not carry sufficient lifesaving appliances for everyone on board. The provision of a suitable inflatable liferaft would have ensured that all on board might have survived. In addition, a lifejacket should have been provided for everyone on board in order that they would stay afloat until they could board the liferaft or be rescued.

The stated cause of death was drowning. However, it is also probable that the time spent in the water could have meant that hypothermia was a factor in these deaths.

The distress message should have been transmitted on VHF Channel 16, which is continuously monitored by the Irish Coast Guard and would have enabled an immediate and co-ordinated response to be activated. However, in this case, the distress was heard by other vessels in the area and they responded very quickly.

The quick response and actions by the skipper of the "St.Coran" ensured that survivors were rescued and it is possible that the death toll could have been higher without this quick response, as those rescued were already suffering from the effects of hypothermia.

The "Pisces" did not hold a passenger boat licence which was required for the carriage of passengers. Furthermore, this vessel would not have qualified for the issue of such a licence because of her configuration, poor condition and lack of safety equipment.

The bilge pump located in the aft part of the vessel, where the water would have accumulated initially, was not fitted with an automatic float switch and would only operate when switched on manually.

## 16. RECOMMENDATIONS

1. Unlicensed vessels should not be used for the carriage of passengers. The operators of unlicensed vessels should be investigated and if found to be operating illegally, prosecuted. Greater vigilance should be exercised by the appropriate authorities in ensuring improved inspection and enforcement of the law in this area.

2. The Merchant Shipping Act, 1992 should be better enforced to ensure that passengers, being carried for reward on passenger vessels, are being carried in safety.

3. All vessels, which proceed to sea carrying passengers, as defined by Section 2 of the Merchant Shipping Act, 1992, should be required to carry an approved inflatable liferaft capable of accommodating all persons on board. It should also be ensured that skippers and all members of crew are properly trained in their use.

4. All vessels that proceed to sea carrying passengers, as defined by Section 2 of the Merchant Shipping Act, 1992, are required to carry an approved lifejacket for every person on board.

5. All other vessels, (i.e. which are not otherwise licensed or certificated), should have on board an approved lifejacket or personal flotation device (PFD) for every person on board which should be worn at all times by every person when on the open deck of such vessels. It is the responsibility of the skipper or person-in-charge, to ensure compliance with this.

6. The Department of Communications, Marine and Natural Resources should ensure that a Marine Notice is issued warning of the dangers associated with modifying vessels without proper evaluation of the consequences of such modifications.

7. Bilge alarms or automatic pumps, having external running indication, should be fitted to detect water accumulation in any underdeck spaces of all passenger boats where such accumulation could have an adverse effect on the stability of the vessel.

8. The Department of the Communications, Marine and Natural Resources should initiate a publicity campaign aimed at increasing public awareness of the requirement that any vessels, which carry passengers for reward, must be properly certificated or licensed.

9. The Merchant Shipping Act, 1992 should be amended to require a more efficient and user- friendly method of indicating to members of the public that a particular passenger boat is licensed to carry passengers. The current requirements, under the Act, do not provide for any indication of when a licence expires and accordingly, members of the public cannot readily determine whether a particular passenger boat has a current or valid licence.

10. The Merchant Shipping Act, 1992 should be amended to ensure that an obligation is placed on the owner, operator or skipper of all passenger boats to produce the relevant passenger boat licence for inspection, if requested by a passenger. The passenger boat licence should be carried on board at all times when passengers are carried.

11. The Department of Communications, Marine and Natural Resources should ensure that the Garda Siochana are made more aware of the requirements in relation to the carriage of passengers in order to ensure better enforcement of the Merchant Shipping Act, 1992. In addition, the Department should explore other means of ensuring better enforcement of the Merchant Shipping Act, 1992, at local level.

12. The Department of Communications, Marine and Natural Resources should ensure that an up to date Register of licensed vessels is readily available on the Department's website.

13. The Department of Communications, Marine and Natural Resources should ensure that all skippers and/or persons in charge of the operation of passenger boats have undertaken the appropriate training – boat handling, use of safety equipment, lifesaving and fire-fighting equipment. This should be dealt with by way of the introduction of a testing and licensing procedure.

14. Owners of all vessels should ensure that where a change of ownership occurs the appropriate authorities are notified in writing immediately.

15. The Department of Communications, Marine and Natural Resources should establish procedures for ensuring that all vessels can be uniquely identified.

16. The Department of Communications, Marine and Natural Resources should examine whether insurance provisions, similar to those which already apply to vessels certificated to carry more than 12 passengers, should apply to vessels licensed to carry 12 or less passengers to ensure that such vessels have adequate insurance cover.

17. The skippers and operators of all passenger carrying vessels should ensure that appropriate safety announcements are made, prior to leaving port, to ensure that passengers are made aware of the locations of safety equipment and advised on the appropriate procedures in the event of an emergency.

18. A Marine Notice should be issued immediately advising owners / operators of small craft of the correct marine radio communication procedures to be followed when a vessel is at sea. This Notice should emphasise the importance of maintaining an aural radio watch on the International Distress and Safety VHF Channel 16 and the importance of transmitting aural Distress, Urgency and Safety Calls on VHF Channel 16.

19. All small vessels carrying up to 12 people for reward should be required to install and maintain VHF radio equipment appropriate to the area of operation of each vessel, as outlined in the Merchant Shipping (Passenger Boat) Regulations, 2002, S.I. No. 273 of 2002.

20. A survey program should be put in place to ensure that registered fishing vessels of up to 12 metres are compliant with the Fishing Vessel (Radio Installations) Regulations, 1998, S.I. No. 544 of 1998.

## 15. LIST OF APPENDICES

| | |
|---|---|
| Appendix 1 | General arrangement of "PISCES". |
| Appendix 2 | General arrangement of MFV "PISCES" on 28/7/'02. |
| Appendix 3 | Freeboard before deck fitted and after deck fitted. |
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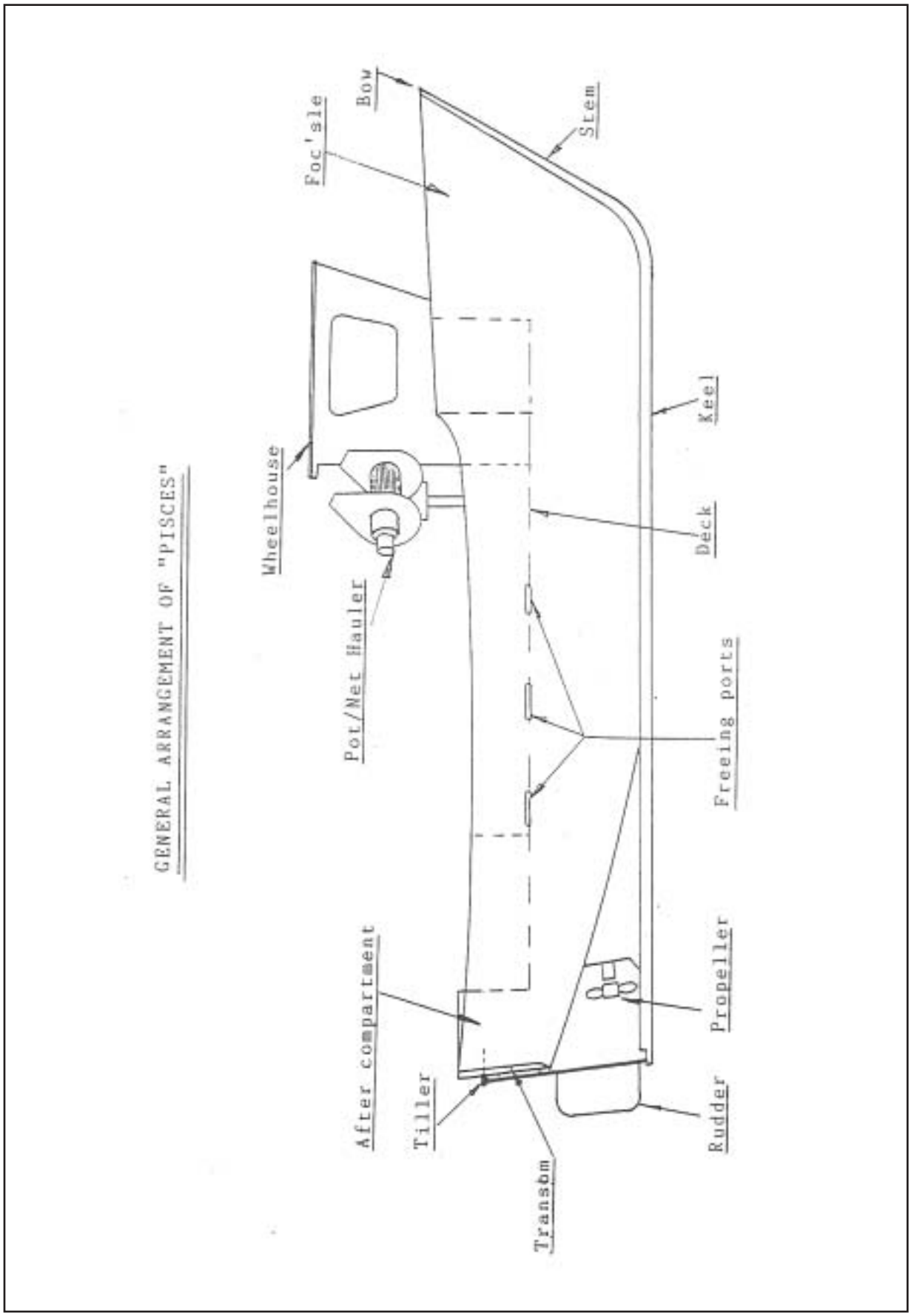
| Appendix 9 | Diagrams showing water ingress and angle of heel. |
| Appendix 10 | Divers Report and Report from "Granuaile". |
| Appendix 11 | Photographs of "Pisces" after recovery. |

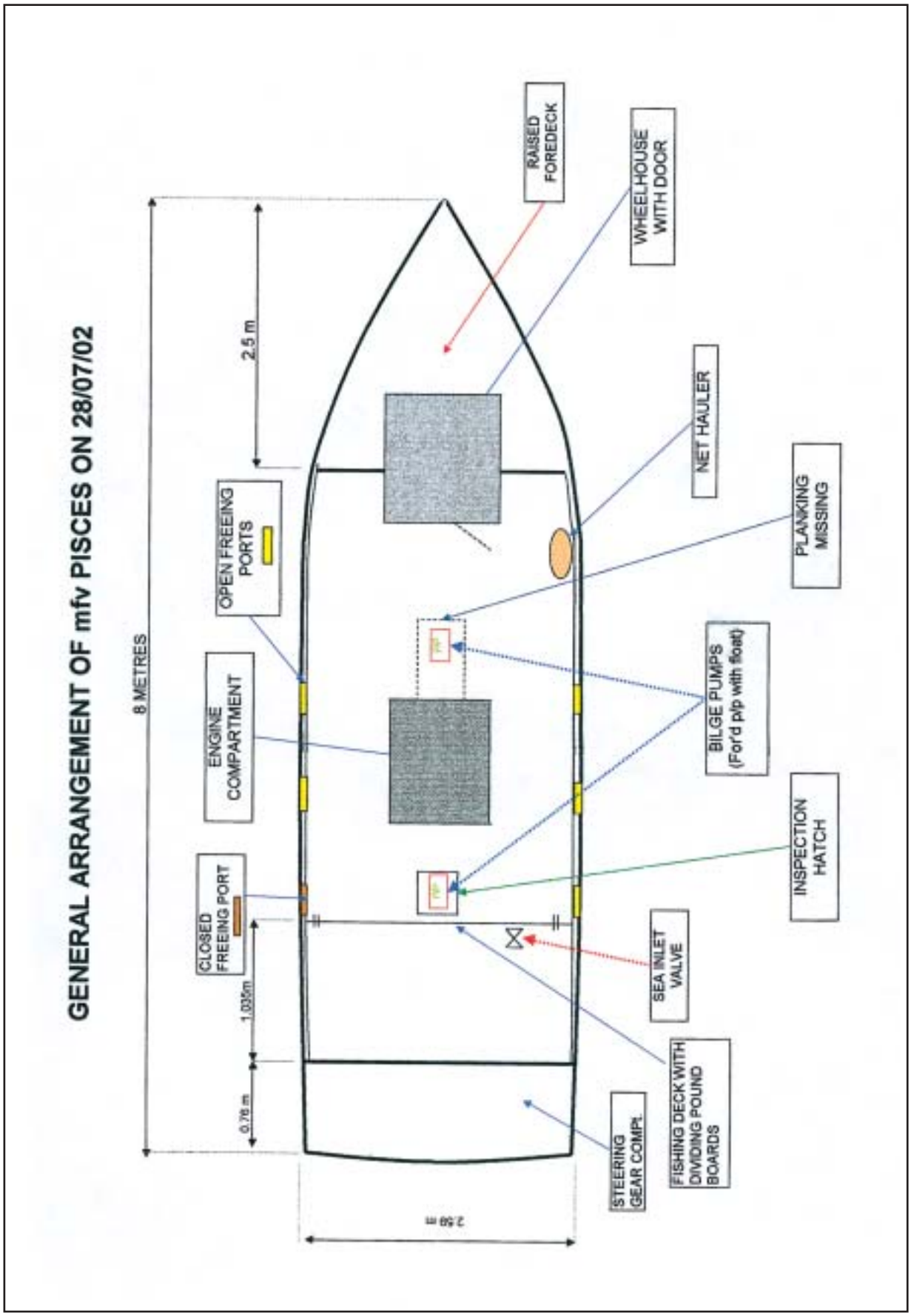
"PISCES" after lift from seabed

# APPENDIX 1

Appendix 1: General arrangement of "PISCES".

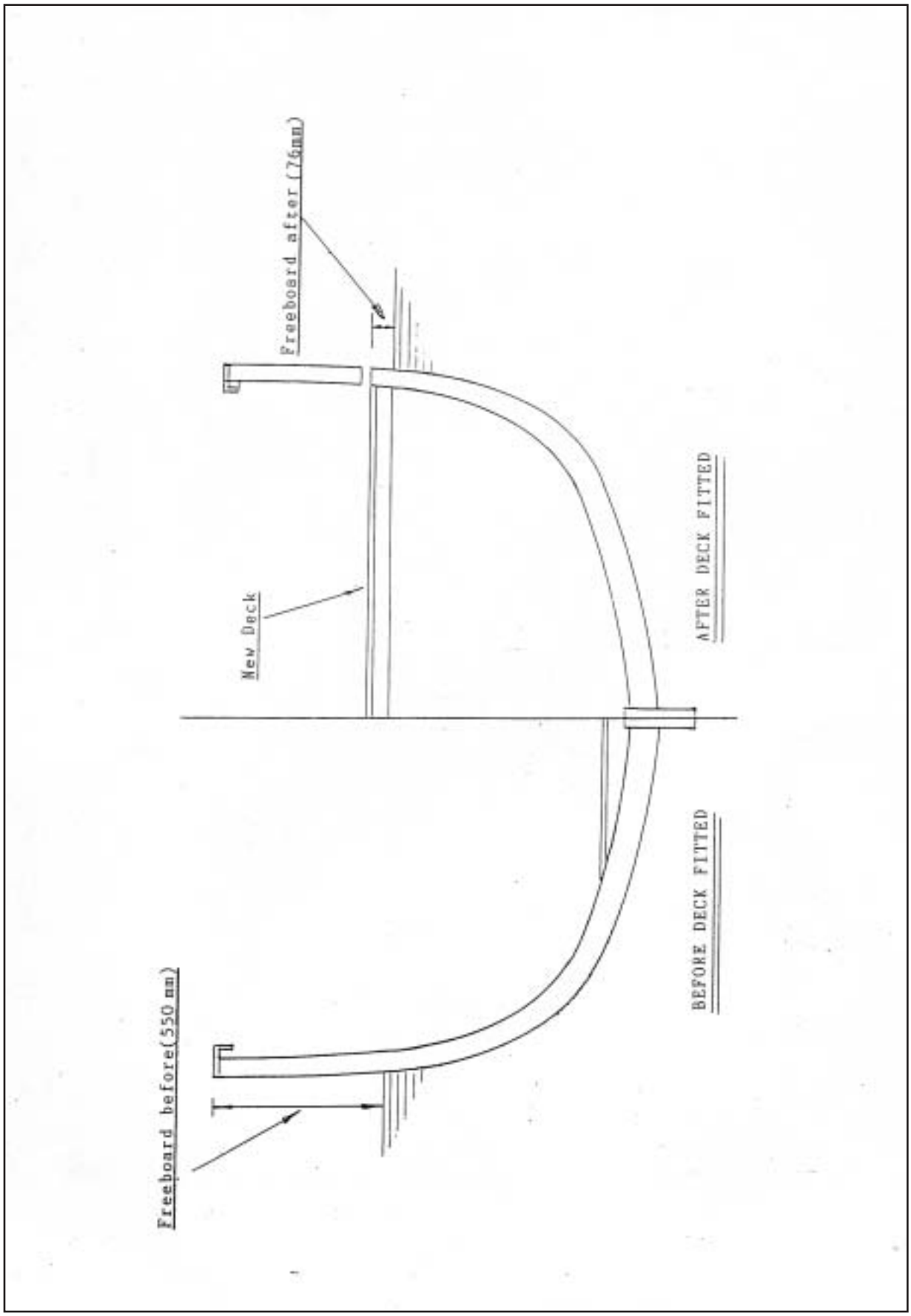


Appendix 2: General arrangement of MFV "PISCES" on 28/7/'02.



# APPENDIX 3

Appendix 3: Freeboard before deck fitted and after deck fitted.



Appendix 4: Survey Report for Fishing Licence application MFV "Pisces" – Ref: 231/98.

**Haven Maritime (Kilmore) Ltd.**

Kilmore Quay
Co. Wexford

Phone (053) 29794
Fax (053) 29754

19 April 1999

Mr Robert Chapman
Tullycanna
Ballymitty
Co. Wexford

Dear Mr. Chapman

**SURVEY REPORT FOR FISHING LICENCE APPLICATION MFV PISCES - REF. 231/98**

Please find enclosed copy of report following inspection as requested.

If you have any queries regarding above, please contact my office.

Yours faithfully

James Moore
I. Eng. A. I. Mar. E.

ANNEX A: SURVEY REPORT CHECK LIST

FISHING VESSEL M/V Pisces

SURVEYOR OF FISHING VESSEL

NAME ... James Moore ...
ADDRESS ... Haven Maritime (Kilmore) Ltd ...
... Kilmore Quay ...
... Co. Wexford ...
CONTACT TELEPHONE NUMBER ... 053 29965 ...
PROFESSIONAL QUALIFICATIONS ... I. Eng ...
... A. I. Mar. E ...

OWNER OF FISHING VESSEL

NAME Mr. Robert Chapman
ADDRESS ... Tullycanna ...
... Ballymitty ...
... Co. Wexford ...
CONTACT TELEPHONE NUMBER ... 087 2035449 ...

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PART 1 : PHYSICAL DETAILS OF VESSEL

Please state :

(a) composition of hull (e.g. steel, wood, composite or other);

LARVEL RANKING ON FRAMES & BEAMS / RAISED FOREDECK

(b) engine make, type, power, No. of cylinders, directly coupled or with gearbox, method of starting and whether emergency back up starter is fitted and type of same ;

KELVIN MOPER P 4 COUPLED THROUGH MARINE GEARBOX 16 KW. 4 SINGLE SHAFT TO 3 BLADED PROPELLER DEVELOPING 16 KW. ELECTRIC START / HYDRAULIC PUMP BELT DRIVEN FOR HAULER AN STBD SIDE / STOP & START FROM WHEELHOUSE DIESEL FUEL TANK LOCATED FORWARD WITH SHUT OFF VALVE SEA WATER INLET VALVE NEWLY FITTED

(c) proposed fishing method e.g. beaming, trawling etc. ;

POTS / NETS / LINE FISHING HYDRAULIC HAULER FITTED STBD SIDE @ BREAK OF FOREDECK

(d) type of steering fitted e.g. manual, hydraulic, chain etc. ;

HYDRAULIC STEERING FITTED WITH EMGY TILLER OPERATION AVAILABLE

(e) type of electrical systems fitted ; whether separate or engine driven, type number, output ;

ONE 12 VOLT SYSTEM MAINTAINED BY 12 VOLT LUCAS ALTERNATOR FROM ENGINE / MAIN ISOLATING SWITCH FITTED @ BATTERY SOURCE

(f) number, type, total capacity, location and services provided by batteries ;

ONE 12 VOLT 660 A. BATTERY IN FORWARD COMPARTMENT. FISHING ELECTRONICS / V.H.F. (2 OFF) / SOUNDER / GPS / NAVIGATION LIGHTS / BILGE PUMPS - 1 AUTO / 1 MANUAL

(g) type and suitability of anchor fitted and whether it is functioning satisfactorily ;

ONE FIXED FLUKE GROUND ANCHOR WITH CHAIN / ROPE

ONE FIXED FLUKE NET ANCHOR

-5-

Declaration of Safety and Seaworthiness of Vessel
[ Delete (a) or (b) and sign as appropriate ]

I hereby certify that I have examined the MFV " Pisces " and, having taken due cognisance (where applicable) of the considerations listed above, am satisfied that :

(a) the vessel is in a safe and seaworthy condition and is suitable for engaging in commercial sea fishing ;

(b) ~~the vessel can be made safe and seaworthy condition and suitable for engaging in commercial sea fishing subject to the work set out in the attached schedule being carried out in full ;~~

Signed

James F Moore

Marine Surveyor

Date : 19/04/1994

* The Schedule provided should give a detailed and comprehensive description of the work which is required to make the vessel safe and seaworthy and suitable for engaging in commercial sea fishing.

NOTE: 1.

Appendix 5: Legal requirements for status as a Fishing Vessel

## Legal Status as a Fishing Vessel

The following is the applicable legislation, which applied to the "Pisces" as a registered fishing vessel, Class X and Class IV of the Radio Regulations.

## Life Saving Appliances

SI No. 100 of 1967 Merchant Shipping (Life-Saving Appliances) Rules, 1967. Amended by SI (1978) 216. SI No. 368 of 1999 Merchant Shipping (Life-Saving Appliances) (Amendment) Rules, 1999

- Lifebuoys for the total number of persons on board. But in no case less than two lifebuoys one of which shall have a buoyant line attached to it of at least 10 fathoms in length.
- Six red star distress signals
- An approved lifejacket for all persons on-board.

SI No. 586 of 2001 Fishing Vessel (Personal Flotation Devices) regulations 2001.

- All persons on deck to be wearing a personal flotation device.

## Fire Appliances

S.I. No. 101of 1967 Merchant Shipping (Fire Appliances) Rules, 1967 Amended by SI (1983) 304 and SI (1985) 277

- A hand pump with a permanent sea connection outside the machinery space. Fitted with a hose and nozzle capable of producing a jet of water having a throw of not less than 20 feet.
- A spray nozzle suitable for use with the hose.
- The engine room is to be fitted with a water-spraying system supplied from outside the machinery space. The hand-pump referred to above may be used for this purpose.
- At least two 2-gallon foam fire extinguishers for use in the machinery space.
- At least two 2-gallon fire extinguishers or 2 fire buckets for use outside the machinery spaces.

## Radio Regulations

Registered fishing vessels of less than 12metres in length are required to comply with the Fishing Vessel (Radio Installations) Regulations, 1998, S.I. No. 544 of 1998 (Extract attached for inclusion as an Annex to the Report) applicable to Class IV fishing vessels. In brief these vessels are required to be fitted with a VHF radio installation and a satellite emergency position-indicating radio beacon (EPIRB) when operating in an area up to approximately 30 NM from shore, with more onerous requirements for vessels operating beyond that range.

Appendix 6 Extracts from the Merchant Shipping Act, 1992.

**Merchant Shipping Act, 1992**

**Section 2:**

**"Passenger Boat"** means –

"(a) a vessel carrying not more than 12 passengers for reward or having on board for the purposes of carriage for reward not more than 12 passengers, or

(b) a vessel that is carrying not more than 12 passengers, or has on board for the purposes of carriage not more than 12 passengers, and is on hire pursuant to a contract or other arrangement under which a crew or part of a crew is provided for the vessel by its owner,

and includes a vessel carrying not more than 12 persons to or from their place of work, or having on board not more than 12 persons for the purposes of such carriage, and owned by or on hire to their employer and a vessel registered outside the State and carrying not more than 12 passengers between places in the State, and carrying not more than 12 passengers between places in the State, or having on board not more than 12 passengers for the purposes of such carriage, but does not include such a vessel carrying passengers to or from the State or having on board passengers for the purposes of such carriage, a fishing vessel, or a vessel in respect of which a certificate is in force",

**Section 14:**

(1) A vessel shall not be used as a passenger boat unless a licence is in force in relation to it.

(2) If in respect of a vessel there is a contravention of *subsection (1)*, the owner and the master of the vessel shall each be guilty of an offence and shall each be liable –

(a) on summary conviction, to a fine not exceeding £1,000 or to imprisonment for a term not exceeding 6 months or to both, or

(b) on conviction on indictment, to a fine not exceeding £5,000 or to imprisonment for a term not exceeding 2 years or to both.

**Section 15:**

(1) On application to the Minister in that behalf by the owner of a vessel, the Minister shall, subject to *subsection (5)*, grant a licence to the owner in relation to the vessel (which shall be known as a passenger boat licence and is referred to in this Act as "a licence") if, but only if, an authorised person has inspected the vessel not more than 2 months before the date of the application and has stated in a report of the inspection to the Minister in writing that, in his opinion –

(a) the vessel is suitable, subject to such conditions and restrictions (if any) as he may specify, for use as a passenger boat, and

(b) if regulations under *section 18* are in force, that it complies with the regulations.

(2) A licence shall contain requirements as –

(a) the limits (if any) beyond which the vessel shall not ply, and

(b) the maximum number of persons that the vessel concerned is fit to carry.

(3) A licence shall be subject to such conditions and restrictions (if any) as the Minister may impose, at the time of the grant of the licence, or subsequently, and any such conditions or restrictions shall be specified in the licence or in any other document given or sent to the holder of the licence by the Minister.

(4) Subject to the provisions of this section, a licence shall be in such form as the Minister may determine.

(5) A licence shall, unless previously revoked or suspended, remain in force for such period not exceeding 2 years as the Minister may determine and specify in the licence.

(6) Notwithstanding anything contained in a report for the purposes of *subsection (1)*, if the owner of the vessel concerned has been convicted of –

(a) an offence under *subsection 7(c)*, or

(b) any other offence that, in the opinion of the Minister, is of such a nature
that, in the interests of safety, the person should not be the holder of a licence in relation to the vessel,

the Minister may refuse to grant a licence in relation to the vessel to the person.

(7) If in respect of a vessel there is a failure or refusal to comply with a condition, restriction or requirement specified in the licence relating to it, the owner (or, if the vessel is on hire, the person to whom it is on hire) and the master shall each be guilty of an offence and shall be liable –

(a) on summary conviction, to a fine not exceeding £1,000 or to imprisonment for a term not exceeding 6 months or to both, or

(b) on conviction on indictment of an offence consisting of a failure or refusal to comply with a condition or restriction specified in the licence, to a fine not exceeding £5,000 or to imprisonment for a term not exceeding 2 years or to both, or

(c) on conviction on indictment of an offence consisting of a failure or refusal to comply with a requirement specified in the licence, to a fine not exceeding £50,000 or to imprisonment for a term not exceeding 2 years or to both.

Appendix 7 Requirements for Issue of a Passenger Boat Licence.

# GUIDANCE RULES FOR - BOATS ENGAGED COMMERCIALLY IN THE CARRIAGE OF PASSENGERS

## REQUIREMENTS FOR ISSUE OF A PASSENGER BOAT LICENCES.

*To owners, operators and builders of boats engaged commercially in the carriage of passengers for reward or hire.*

1. Any passenger boat which is used to carry passengers for any purpose.Must comply with the requirements of the Merchant Shipping Acts. Comply with appropriate safety equipment requirements and may also be subject to control by a Local Authority.

2. The purpose of the Rules is to set out in some detail the minimum constructional standards required of small passenger boats together with information on the types of machinery and equipment to be carried.

3. **Application for a Passenger Licence**
Any owner wishing to obtain a Passenger Licence is requested, after noting the contents of these Rules, to make application to :-

*Department of the Marine & Natural Resources*
*Marine Surveyors Office,*
*26/27 Eden Quay,*
*Dublin 1.*

*Telephone Numbers :-*
*01-8744900, 8743325 & 8788463*
*Fax : 01 - 8724491*

*Department of the Marine & Natural Resources*
*Marine Surveyors Office*
*Government Buildings,*
*Sullivans Quay,*
*Cork.*

*Telephone Numbers.*
*021-968992.*
*Fax : -021-968617.*

The owner will then be advised of the plans and details of the passenger boat which will need to be submitted, informed when it can be surveyed and advised of the fees involved. It should be noted that in addition to the Passenger Boat Licence requirements the passenger boat and the person in charge may also be subject to the requirements of local authority bye - laws and to control by the local licensing authority.

4. The merchant shipping act 1992 requires,inter alia,that all boats carrying passengers will be required to have a passenger boat licence and it is intended to issue same based on the rough draft of the rules attached.

**DEFINITIONS.**

**Categorisation of operational areas.** As set out in Schedule 4 to these rules.

**Department.** Means the Department of the Marine.

**E.P.I.R.B.** Means Emergency Position Indicating Radio Beacon.

**Efficient.** In relation to a fitting,piece of equipment or material means that all reasonable and practicable measures have been taken to ensure that it is suitable for the purpose for which it is intended to be used.

**Freeboard.** Means the distance measured vertically downwards from the lowest point of the upper edge of the weather deck,of a fully decked or well decked boat,to the maximum allowed waterline as calculated in accordance with section 1.8

**Length.(L)** is the overall length measured in metres from the foreside of the foremost fixed permanent structure to the aftside of the aftermost fixed permanent structure of the boat.

**Irish Loadline Assigning Authority.** Means the Department of the Marine or any of the Classification Societies authorised to act on behalf of the Department.The Classification societies authorised to act on behalf of the Department are: Lloyd's Register of Shipping,Bureau Veritas,American Bureau of Shipping,Det Norske Veritas,Germanischer Lloyd,Nippon Kaikyo Kaiyu.

**Open Cockpit Boat** means a boat having a weathertight foredeck, which extends at least 30% of the length (L)the passenger boat, situated wholly above the waterline, a transverse watertight bulkhead positioned at the aft end of the foredeck to form a weathertight compartment and an open cockpit. The cockpit shall be fitted with a weathertight sole(ie.deck or floor), which may lie below the level of the waterline.

**Open Boat** means any boat which is not fully decked,well decked or open cockpit boat.

**Partially Smooth Waters.** Means the waters set out in column (3) of schedule 1

**Smooth Waters.** Means the waters set out in column (2) of schedule 1.

**To Sea.** Means beyond partially smooth waters or smooth waters if there are no partially smooth waters or in the absence of either to sea as is.

**Watertight.** Means capable of preventing the passage of water in either direction.

**Weather Deck.** Means the main deck which is exposed to the elements

**Welldecked boat.** Means a boat having a stepped weathertight deck situated wholly above the waterline. The fore-deck shall extend at least 30% of the length (L) of the boat.

**The Passenger boat, it's construction, machinery, and equipment.**

The following information is given to indicate the various requirements which need to be met before a Passenger boat Licence can be issued, enabling a passenger boat to operate on a commercial basis.

These requirements are as follows :-

1. **The Passenger boat**

1.1 **Type of Passenger boat.**

The passenger boat shall be at least 6.0 m in length (L) (see para 1.2)and boats carrying the maximum numbers of passengers permitted i.e 12, shall be at least 8 metres in length. Seats shall be provided for all passengers. The seating capacity shall be assessed on the basis of 458mm seat width(18 inches) per person.

The structural configuration shall normally be in accordance with one of the following designs :-

(a) FULLY DECKED ie a passenger boat having a complete weathertight deck situated above waterline, or

(b) WELL DECKED ie a passenger boat having a stepped weathertight deck situated wholly above the waterline. The fore-deck shall extend at least 30% of the length (L) of the passenger boat, or

(c) OPEN COCKPIT ie a passenger boat having a weathertight foredeck, which extends at least 30% of the length (L)of the passenger boat, situated wholly above the waterline, a transverse watertight bulkhead positioned at the aft end of the foredeck to form a weathertight compartment and an open cockpit. The cockpit shall be fitted with a weathertight sole (ie deck or floor), which may lie below the level of the waterline.

(d) Open boats are not considered suitable for commercial use in the areas of operation covered by these rules unless they have sufficient built in buoyancy to provide a safety standard equivalent to that of a "decked boat", a"well decked boat"or an"open-cockpit boat".

1.1.1 In addition to the foregoing and in order to improve the safety of any passenger boat against the dangers of flooding it is necessary that :

(a) the passenger boat is subdivided into at least two watertight compartments by the fitting of a transverse watertight bulkhead.

(b) the passenger boat is designed to have **a number of small internal watertight or buoyant spaces.**

(c) if a well - decked and open cockpit passenger boat, it is **designed with side benches which form watertight or buoyant compartments.**

(d) passenger boats fitted with buoyant compartments shall,where it is practicable and reasonable to do so,have the buoyant compartments filled with non hygroscopic foam of a type approved for marine use.

1.2 **The Principal dimensions of any Passenger boat.**

For the purpose of these Rules the principal dimensions, of any passenger boat which shall be measured in metres, shall be taken as :

(a) Length (L) the overall length.
(b) Breadth (B) the extreme breadth is to the outside of the outer planking, plating, skin or laminate (mouldings or rubbing strakes are not to be included);
(c) Depth (D) the vertical distance at mid length (L) measured from the top of the keel to :

(i) in full decked or well decked Passenger boats, the top of the weather deck or well-deck as appropriate;
(ii) in open cockpit passenger boats the top of the gunwale or capping.

1.2.1 Where practicable,and,in order to prevent any confusion,drawings of any passenger boat requiring a certificate shall be submitted to the Marine Survey Office when applying for a survey.

1.3 **Construction, Strength and Initial Survey**

1.3.1 Passenger boats may be constructed of wood, aluminium alloy, steel or glass reinforced plastic (GRP) or combinations of such materials. The use of any other material would need special consideration.
Where a passenger boat is to be constructed of GRP, it shall be constructed to a recognised standard acceptable to the Department of the Marine. When completed the exposed internal surfaces of the entire hull of the passenger boat shall be coated with a fire resisting paint suitable for use on GRP, or the final layer of the hull lay - up maybe of woven rovings (in lieu of the use of fire retardant resin plus an intumescent interior paint coating).

1.3.2 The scantlings and quality of materials used in the hull construction should be equivalent to those required by a Load Line Assigning Authority approved by the Dept of the Marine, e.g Lloyd's Register of Shipping (Rules & Regulations for the Classification of Yachts & Small Craft) or other competent authority.

1.3.3. The Department will normally accept the hull of any new passenger boat constructed of GRP or laminated timber which has been surveyed and certified by an Irish Load line Assigning Authority, e.g. Classification Society, subject to the presentation of a certificate of construction and a satisfactory general inspection by one of the Department's surveyors.

1.3.4 All passenger boats shall normally be surveyed during construction by one of the Department's Surveyors. Consequently whenever a new passenger boat is to be constructed the owner or builder shall contact the nearest Marine Surveyors Office to make the necessary arrangements to have it surveyed.
When it is not possible to survey the passenger boat during construction, e.g. in the case of an **existing passenger boat** (i.e. one built prior to the issue of these Rules), it will be necessary for the owner to make suitable arrangements for the passenger boat to be fully surveyed ashore.

1.4 **Maintenance of Weathertight Integrity**

1.4.1 All openings which could allow water to enter the hull of the passenger boat and result in a loss of buoyancy shall be fitted with means whereby they can be effectively closed if necessary.

1.4.2 Openings likely to be submerged during normal service (e.g. we inlets and discharges, wash basin discharges, circulating water inlets and discharges, exhaust pipes etc;) shall be fitted with suitable valves or plug cocks, efficiently connected to the shell or skin of the passenger boat. Where the valves are not of the automatic non-return type e.g. on circulating water or exhaust pipes,their controls shall be positioned so as to be readily accessible at all times under normal service conditions. The piping used for inlet or discharge systems shall normally be of steel or an equivalent material.

1.4.3 **Hatchways** and similar type accesses shall be fitted with substantial covers that can be effectively secured in a watertight manner. Where coamings of low height, i.e. below 300 mm, are to be fitted,the covers shall be provided with gaskets and efficient means of securement. The number of securing devices fitted on each cover shall be sufficient to ensure weathertight integrity of the hatch when subjected to hose testing. In general each hatch cover shall be provided with at least one securing device per side.

1.4.4 **Doors** giving access to spaces below deck shall be stoutly constructed, capable of being properly secured in a weathertight manner, and provided with a coaming and/or a portable stormboard at least 380 mm in height. All such doors shall open outwards.

1.4.5 **Ventilators** leading to spaces below deck shall be of stout construction and provided with weathertight means of closure.

1.4.6 **Windows, sidelights and skylights** shall normally be fitted with toughened safety glass, other equivalents may be accepted dependent on the area of operation of the passenger boat.

**Protective covers,** for use in an emergency, shall be provided for windows, skylights, and sidelights which do not have deadlights.

All protective covers shall have proper means of securement and be stowed in a readily accessible position.

1.5 **Freeing Ports.**

The weather restrictions on the use of the passenger boat given in paragraph 8 are intended to prevent the likelihood of any passenger boat shipping water on deck. Nevertheless, freeing ports shall still be provided in ;

(a) the well of well - decked passenger boats. There shall be two ports, each 300 mm x 75 mm in size, fitted with loosely hinged non - return flaps, and suitably positioned to get rid of accumulated water in the well.

(b) the bulwarks of fully decked passenger boats. These ports shall be at least 300 mm x 75 mm in size and spaced not more than 2 metres apart along each side of the passenger boat.

(c) In the case of an open cockpit boat where the deck is below the deepest operating waterline, drainage to the bilges or a means of pumping out the water shall be provided.

1.6 **Bilge Pumping Arrangements**

1.6.1. All passenger boats shall be provided with at least two bilge pumps suitably arranged to ;

(a) enable the clearance of water from any weathertight compartment situated within the main hull,and

(b) prevent the occurrence of any back flooding.

1.6.2 The **bilge pumps** for passenger boats which are ;

(a) 12 metres in length and over shall have a total pumping capacity of not less than 275 litres per minute and at least one of the pumps shall be a power pump having a capacity of at least 140 litres per minute. Where two power pumps are provided each shall be independently driven.

(b) less than 12 metres in length shall have a capacity of at least 90 litres per minute.

1.6.3. A **bilge level alarm** shall be provided for all passenger boats which have their propelling machinery in a closed compartment.

1.6.4 An efficient bilge pumping system shall be fitted and so arranged that any water which may enter any compartment can be pumped overboard. The arrangement shall be such as to prevent water from passing into any other compartment.

1.7 **Bulwark,Guard Rails & Decks.**

.1 All passenger boats shall be provided with guard rails and / or bulwarks at the sides and ends of the working deck areas. These rails and / or bulwarks shall extend to a height of one metre above the top of the deck or sole and be provided with intermediate rails as necessary.

.2 In the case of a well decked boat or an open cockpit boat the top of the bulwark should be at least 915mm above the deck or sole of the cockpit.

.3 All passenger boats shall be provided with an arrangement such that embarkation & disembarkation can take place without danger,eg through an opening in the rail for a gangway.

.4 Open decks,spaces where persons can be expected to walk or stay shall be provided with non slip surfaces in order to get a safe foothold.

1.8 **Operational Freeboard or Clear Height of Side.**

.1 When in still water and loaded with fuel, stores and weights representing the total number of passengers and crew to be carried (taken as 75 kg per person ) a passenger boat shall be upright and ;

(a) in the case of a fully decked passenger boat, have a freeboard of not less than

$$\frac{\text{Breadth(B)}}{8}$$

measured down from the lowest point of the weather deck,

(b) in the case of a well decked passenger boat, have a freeboard of not less than

$$\frac{\text{Breadth (B)}}{12}$$

measured down from the lowest point of the well deck. (See also Para 9.2).

(c) in the case of an open cockpit passenger boat, have a clear height of side (ie the distance between the waterline and the lowest point of the gunwale *) of not less than 380 mm for passenger boats 6.0 m in length and 760 mm for passenger boats 18.0 m in length and over. For passenger boats of intermediate length this height shall be determined by linear interpolation.

*( The clear height of the side is to be measured to the top of the gunwale or capping or to the top of the wash strake if one is fitted above the capping).

1.9 **Stability Requirements.**

1.9.1 All passenger boats shall be tested in the fully loaded condition to ascertain the "angle of heel" and "the position of the waterline" that results when all the passengers to be carried are assembled along one side of the passenger boat (the crew shall be assumed to be at their normal working positions).

1.9.2 A passenger boat will be judged to have an adequate standard of stability if, as a result of this test it does not;

(a) heel more than 7 degrees nor

(b) in the case of a fully decked or a well decked passenger boat, take up a position whereby the waterline is above deck level.

2. **Machinery (propelling machinery and steering gear).**
All passenger boats shall be fitted with a main propelling engine and an efficient means of steering. These items, their associated equipment and installation, shall comply with the following;

2.1 The propelling machinery shall be capable of developing sufficient ahead and astern power so that the passenger boat may be safely navigated within the intended area of operation under all conditions of loading.

2.2 Only propelling machinery of the compression ignition type shall be used.

2.3 Efficient starting arrangements shall be provided and if the propelling machinery cannot be started by hand then other means shall be provided for at least 6 starts without recourse to replenishment or re-charging.

2.4 Any electrical installation shall be properly fitted with charging and supply circuits protected by appropriate fuses. Suitable arrangements shall be made for ventilating electrical batteries during charging.

2.5 The compartment for the propelling machinery shall be as small as is consistent with its operation and maintenance. Unless the boundaries of the machinery compartment are of steel the interior shall be lined with fire resistant material and faced with sheet metal. Any ventilation openings in the machinery compartment shall be capable of being closed in the event of fire.

2.6 **Oil fuel tanks and oil fuel supply pipes** shall be constructed of steel or other suitable material.A shut-off valve shall be fitted to the tank,which shall be capable of being closed from a readily accessible position outside the space in which it is situated.

2.7 The compartments containing either the propelling machinery or the oil fuel tank shall be so arranged that spillages of fuel or lubricating oil may be readily removed and will be prevented from spreading into other compartments or areas of the compartment concerned.

2.8 Any connections below the waterline for cooling water or other services shall be fitted with positive means of closure as close to the hull as possible.

2.9 An efficient means shall be provided for steering the passenger boat and if a remote means of controlling the rudder be fitted then provision shall be made for emergency steering in the event of failure of the remote system. Such an emergency system of steering shall be capable of being quickly put in place and operated satisfactorily.

2.10 A tool kit with sufficient tools to enable emergency repairs to be undertaken is to be carried at all times.

2.11 The propelling machinery, its auxiliaries and the steering gear shall be maintained in an efficient working condition.

**3. SAFETY EQUIPMENT**

**3.1 Radio Equipment**

All passenger boats, **except those operating in Category "A"** areas are required to carry a radio broadcast receiver, capable of receiving local weather forecasts.

3.1.1 In addition when the passenger boat is to be operated in the open sea,in an area beyond the limits of **Smooth water**, it will be required to carry an approved type VHF transmitter/receiver capable to being used on Channel 16.

**3.2 Life Saving Appliances**

All passenger boats are required to carry the following life saving equipment:-

3.2.1 Passenger Boats operating in **Category D & E areas** at least one **inflatable liferaft** of a type approved by the Department, with sufficient aggregate capacity to accommodate the total number of persons on board.
Passenger boats operating in **Category B & C areas** may, depending on their plying limits be required to carry the inflatable liferaft mentioned above or in lieu thereof **buoyant apparatus** capable of supporting all the persons on board.

3.2.2 Any liferaft carried,which is secured and not float free,shall be fitted with a **Hydrostatic Release Unit of a type approved by the Department.**

3.2.3 At least 2 **lifebuoys** of a type accepted by the Department, fitted with a buoyant line of at least 18 metres in length. In vessels of 15.2 metres in length and over at least one lifebuoy shall be fitted with a **smoke lifebuoy marker** of a type accepted by the Department which shall be replaced on the expiry of their effective working life.i.e 3 years

3.2.4 One suitable **lifejacket** of a type accepted by the Department for every person on board. **Not applicable to passenger boats operating in Category "A" areas provided there is on board one lifebuoy for every two persons on board.**

3.2.5 At least 4 red parachute distress rockets, 4 red hand flares, and 2 orange smoke signals, of a type approved by the Department. These distress signals to be replaced upon the expiry of their effective working life, normally 3 years. **(Not applicable to Passenger boats operating in Category "A" areas).**

3.2.6 One [satellite] **epirb** capable of being taken into a liferaft.(If operating beyond the limits of smooth or partially smooth waters). **Applicable only to Passenger boats operating in Category "E" areas.**

**3.3 Fire Fighting Arrangements**

All passenger boats are required to carry the following fire fighting appliances:-

3.3.1 Every passenger boat shall be provided with,at least one **hand-pump** with a permanent sea (external) connection,fitted outside of the engine compartment.
At least one hose with a 10 mm spray/jet nozzle capable of producing a jet of water having a throw of not less than 6 metres which can be directed onto or into any part of the passenger boat, all of which must be kept in a position outside the machinery compartment.

3.3.2 At least two suitable portable **fire extinguishers**, except that on passenger boats of less than 9 metres in length 2 fire buckets may be provided. Where portable fire extinguishers are provided the extinguishing medium shall be suitable for the fire risk involved and if fire buckets are provided they shall be fitted with a lanyard.

3.3.3 In addition to the requirements of 3.3.2 at least 2 portable fire extinguishers suitable for extinguishing oil fires shall be provided adjacent to the machinery compartment.

3.3.4 The portable fire extinguishers referred to in 3.3.2 and 3.3.3 shall be of a type approved by the Department with minimum capacities of 9 litres for extinguishers discharging fluids, 3 kilogrammes for carbon dioxide extinguishers, 4.5 kilogrammes for dry powder extinguishers and the equivalent of a 9 litre fluid fire extinguisher for other types.

3.3.5 Every passenger boat of 9 metres in length and over and mainly or wholly constructed of wood or glass reinforced plastic and decked in way of the machinery compartment shall be provided with: **a water spraying system** within the machinery space,supplied from a hand pump (located outside the space) having a permanent sea (external) connection. This may be the hand pump and sea connection referred to in 3.3.1 above. Such a pump shall be connected, by fixed piping, to a sufficient number of water spraying nozzles, strategically sited in the machinery compartment, of a type that are suitable for extinguishing oil fires.

3.3.5.2 Other types of fixed fire extinguishing systems may be used subject to the approval of the Minister.

3.3.5.3 Where it is intended to use bottled hydrocarbon gases for **cooking and other domestic appliances**, the installation of such appliances shall conform to the provisions of Marine Notice No. 19 of 1983.

3.3.5.4 **Toilet Facilities.**

Every passenger boat of 9 metres or more in length shall as far is practicable and reasonable be fitted with a W.C.

4. **MISCELLANEOUS EQUIPMENT**

All passenger boats shall, unless the Department agrees otherwise, carry the following miscellaneous items of equipment:-

(a) an suitable anchor shackled to 4 metres of chain with at least 20 metres of rope attached to the other end of the chain. This rope to be available for towing purposes if required:

(b) a suitable compass:**(Applicable only to Category "E" Areas)**

(c) adequately corrected Admiralty charts to cover the vessel's area of operation. **(Applicable to Category "D" & "E" areas)**

(d) a suitable boat hook;

(e) a buoyant heaving line at least 18 metres in length fitted with a rescue quoit of an approved type;

(f) a first aid kit;

(g) a sea anchor and warp; **(Applicable only to Category "E"Areas)**

(h) echo sounder; **(Applicable only to Category "E" areas.)**

(i) a waterproof electric torch suitable for morse-signalling;

(j) an approved type Rescue Signal table;

(k) a set of navigation lights complying with the requirements of collision Regulations (Ships & Water Craft on the water) Order 1984, if the passenger boat is to be used during the hours of darkness;

(n) sound signalling equipment and shapes as set out in the aforementioned Collision Regulations.

(o) A orange coloured flag or piece of bunting.

3.3.4 The portable fire extinguishers referred to in 3.3.2 and 3.3.3 shall be of a type approved by the Department with minimum capacities of 9 litres for extinguishers discharging fluids, 3 kilogrammes for carbon dioxide extinguishers, 4.5 kilogrammes for dry powder extinguishers and the equivalent of a 9 litre fluid fire extinguisher for other types.

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(c) adequately corrected Admiralty charts to cover the vessel's area of operation. **(Applicable to Category "D" & "E" areas)**

(d) a suitable boat hook;

(e) a buoyant heaving line at least 18 metres in length fitted with a rescue quoit of an approved type;

(f) a first aid kit;

(g) a sea anchor and warp; **(Applicable only to Category "E"Areas)**

(h) echo sounder; **(Applicable only to Category "E" areas.)**

(i) a waterproof electric torch suitable for morse-signalling;

(j) an approved type Rescue Signal table;

(k) a set of navigation lights complying with the requirements of collision Regulations (Ships & Water Craft on the water) Order 1984, if the passenger boat is to be used during the hours of darkness;

(n) sound signalling equipment and shapes as set out in the aforementioned Collision Regulations.

(o) A orange coloured flag or piece of bunting.

5. **MARKING THE PASSENGER BOAT.**

.1 All passenger boats shall be marked at mid length on each side of the hull, with a solid black line 300 mm long x 25 mm deep on light coloured hulls or white line in dark hulls. This line indicates the minimum "freeboard" or "clear height of side", as determined by paragraphs 1.8 or 1.9, of this Rules and it shall never be submerged.

.2 All passenger boats shall be clearly marked in accordance with section 17(2) of the 1992 act.(see schedule 3 of the rules).

.3 Every passenger boat shall have painted in a highly visible orange or red colour,its deck,or cabin top boor bow deck area or other area agreed with surveyor to facilitate in an emergency the identification of the passenger boat from the air.**(Not applicable to Passenger boats operating in Category "A" areas)**

6. **Boatman's Licence.**

.1 The owner of any passenger boat which is engaged on the carriage of passengers on a commercial basis and which is subject to compliance with these **Rules** must ensure that the person in charge of the passenger boat is competent to operate the boat,its engine,and,its safety appliances in a proper manner.

.2 On passenger boats of 12 metres or more in length the skipper/master/person in command,shall hold a boatmans licence or other equivalent qualification.
Details pertaining to the issue of Boatmans Licences are contained in schedule 1 to these rules.

.3 A Licence issued by a Local Authority, under whose direction local boatmen may be examined in the safe operation of pleasure passenger boats to be let for hire, may be recognised as an acceptable alternative.

7 **Issue of a Passenger boat Licence**

.1 Passenger boats which, after survey by a surveyor of the Department, are found to comply with the requirements of these Rules and are in good condition both structurally and mechanically, will be eligible for a **Passenger Boat Licence.** The period of validity of this **Licence** and the conditions attached to its issue are as follows:-

7 **Period of Validity of Licence.**

.1 **The period of validity of a Paisenger boat licence shall normally be for twenty four months.**

.2 **Interim Licences may be issued for shorter periods than twenty four months at the discretion of the surveyor carrying out the survey.**

.3 **Current Licences may be extended for a period of up to one month in exceptional circumstances.**

8. **Conditions of issue of Licence.**

8.1 **Periodical Inspections**

Any passenger boat issued with a Passenger Licence be maintained in good condition both structurally and mechanically and be presented biennially for survey by a surveyor of the Department of the Marine.

8.2 **Number of Passengers to be Carried**

The Licence issued will state the maximum number of passengers which may be carried. This number will be determined by a surveyor of the Department and be dependent upon size, stability and freeboard of the passenger boat and the life saving appliances which are carried. In no case will more than 12 passengers be permitted to be carried.

8.3 Every passenger boat holding a licence shall have the licence on board at all times. The licence shall be displayed in so far as is reasonable and practicable to do so, in a clear and prominent position on board,for any member of the general public to examine if he/she should so wish.

9 **Weather Restrictions**

.1 Passenger boats will be permitted to operate only when the weather conditions and official weather forecasts for the period of the voyage are favourable. The term "favourable weather" shall be interpreted as :-
"Weather, when the visibility is good and when the combined effects of wind, sea or swell upon the passenger boat under consideration are never greater than those which would cause moderate rolling or pitching or result in the shipping of green seas on to the weather deck or, in the case of open passenger boats over the gunwale.

9 .2 The interpretation given in the preceding paragraph could vary appreciably according to the size, type and sea handling capabilities of the passenger boat and also upon force, direction, fetch and duration of the wind in the intended area of operation. Consequently a sound working knowledge of the passenger boat and its behaviour under varying weather conditions is all important. Furthermore, it is essential to be familiar with the area of operation and the weather conditions which have been officially forecast for the intended period of operation.

10 **Permitted Area of Operation.**

.1 Passenger boats will normally be permitted to operate as follows:-

(a) Fully Decked or Well Decked Passenger boats;
within **a radius of 15 miles** from their place of departure(Exclusive of Smooth Water areas)

(b) Open Cockpit Passenger boats;
within a **radius of 10 miles** from their place of departure.

(c) In no case should any point on the course be more than 3 miles from land.

.2 Additionally any fully decked or well - decked passenger boat having a freeboard of not less than $\frac{\text{breadth (B)}}{8}$ and
a high standard of subdivision or a high degree of internal buoyancy, may be permitted to operate within a greater radius than the 15 miles quoted above subject to the requirements of para 10.1. in no case will a passenger boat be permitted to operate **more than 20 miles** from its place of departure.

.3 In all cases the area of operation will need to be agreed with the Surveyor carrying out the survey. In deciding upon these areas it may be necessary, due to local conditions eg. limited or difficult access to a harbour entrance, busy shipping lanes etc, to restrict voyages to the hours of day light and to certain periods of the year.

Additionally the surveyor may, due to these local conditions, restrict the number of passengers which may be carried at night during the summer and at any time during winter. The summer will be taken as the period 1 April to 31 October inclusive, and daytime as between the hours of sunrise and sunset. Where a passenger boat is fitted with an approved set of navigation lights, daytime can be extended to mean one hour before sunrise to one hour after sunset.

11 **Notification of Sailing and Arrival.**

.1 Prior to sailing,the person in charge of the passenger boat, for the forthcoming voyage,excursion or trip, shall inform a responsible person on shore of:-

(a) The number of persons they have on board.
(b) Estimated time of departure.
(c) Estimated time of return.
(d) Area of intended operation.

.2 In passenger boats fitted with an operable Radio the data outlined in para 11.1 may be sent to the nearest Coast Radio Station.

.3 On the return of the passenger boat to shore,the person in charge shall duly inform the responsible person on shore or if option 11.2 was exercised the Coast Radio Station of their safe return.

.4 The responsible person on shore or the Coast Radio station ,if they are not informed of the passenger boats return shall alert the Rescue services and provide them with the data in para 11.1

12 **FORM OF LICENCE.**

The Licence granted to passenger boats covered by these rules shall contain the following information:-

.1 Name of vessel.
.2 Name and address of the Owner.
.3 Name of Licenced Boatman in charge.
.4 Period of validity of Licence.
.5 Plying limits.
.6 Operational restrictions,i.e.,daylight only/summer only/fine weather/etc
.7 Number of passengers up to a maximum of twelve.
.8 List of life Saving Appliances.
.9 A statement that the boat complies with the provision of these rules.
.10 The Crew number required.

13 **Exemptions.**

**The minister may at any time exempt any boat or classes of boats from all or partial compliance with these rules or from any specific portions of the rules and may subject to any exemptions granted impose alternatively, additional compensatory requirements.**

14. **Other Relevant Legislation**

The following Statutory Instruments are relevant to the contents of the Rules :

The Merchant Shipping (Load Line) Rules 1968, SI No. 234 of 1968.

The Merchant Shipping (Load Line) (Exemption) Order 1968, SI No 237 of 1968.

The Merchant Shipping (Life Saving Appliances) Rules 1983, SI No. 302 of 1983.

The Merchant Shipping (Fire Protection) Rules 1985, SI No. 279 of 1985 and

The Collision Regulations (Ships and Water Craft on the Water) Order 1984.

The Collision Regulations (Ship & Water Craft on the Water) (Amendment) Order 1990.

**SCHEDULE 2.**

**CATEGORIZATION OF AREAS FOR PASSENGER BOAT OPERATIONS.**
**Open Sea, Loughs, and Bays.**

| (1) PLACE | (2) CATEGORY | (3) CATEGORY |
|---|---|---|
| Carlingford Lough | Within a line from Greencastle Point to Greenore. (C) | Within 3 miles of Greencastle Point (E) |
| Dundalk | Westward of Longitude 6 21'W within Castletown Estuary. (C) | In Summer. In fine Weather only within a line joining Cooley Pt. and Dunany Pt. (E) |
| Drogheda | Within a line from Crook Point to Burrow Point. (B) | |
| Skerries | | To St. Patricks Isl. in fine weather and daylight only. (E) |
| Malahide Inlet | Within a line from Malahide Point to Grand Hotel (C) | |
| Howth Sound | | Within a line from North end of Eastern Breakwater to Thulla and South of a line Westwood from Steer Rock (D) |
| Dublin | Inside the Pier Heads (C) | **In Summer,** Within a line from Dalkey Isl. to Balley Pt.(E) |
| Wicklow | Inside the Pier Heads (C) | Summer only. In fine weather only. Within 2 Nautical miles of the pier heads. (E) |
| Arklow | Inside the Pier Heads (C) | Summer only.In fine weather only. Within 2 nautical miles of the pier heads.(E) |
| Wexford | Inside Wexford Bridge (C) | Within a line from Raven Point to Rosslare Point.(D) |

| | | |
|---|---|---|
| Waterford | Within a line from from Passage to Ballyhack (C) | In Summer, Within a line from Dunmore to Hook Point. In Winter from Within a line from Geneva Barrack to Dunzannon Light.(D) |
| Youghal | Within a line from Ferry Point to Green Park. (C) | In fine weather and daylight only within 3 miles of Blackball Head. (D) |
| Cork | Within a line from Rams Hd.to Doganose Quay.(C) | Within a radius of 3 miles from Roche's Point in fine weather.(E) |
| Kinsale Harbour | Within a line from Blockhouse Pt. and Summer Cove 090 (C) | Within a line from Moneypoint and Carrigmarose. (D)Within 3 miles of Preghane Point in fine weather and daylight only. (E) |
| Baltimore | Baltimore Harbour inside Sherkin Island (C) | Baltimore to Cape Clear Isl. and Schull in fine weather and in daylight only (E) |
| Dunbeacon Harbour<br>Dunmanus Bay | Within a line joining Rossmore Pt.and Dunbeacon Pt. In fine weather and in daylight only. (C) | |
| Bantry Bay | From Bantry or Glengariff, Within a line joining Four Heads Pt East and inside Whiddy Island.(C)<br>From Castletownbere; Inside Bere Island.(C) | Castletownbere to within a line from Lonehort Point to White Horse Point, in fine weather and in daylight only.(E) |
| Ardgroom Harbour | Within a line joining Dogs point and Illaunnearagh. In fine weather and daylight only. (C) | |
| Kilmakilloge Harbour | Within a line joining Collorus Pt. and Battle Pt. In fine Weather and daylight only. (C) | |
| Sneem Harbour | Within a line from Garinish Sound to Eastend Sherky Isl to Bullig Rock (C) | |
| Valentia | Between lines joining Knightstown and Reenard Pt. and Portmagee Swing Bridge (C)<br>Summer only and in fine weather.<br>Ringcaheragh Pt and Scughaphort Reef.(C) | Fort Pt. to Beginish Isl. Inside Doulus Bar. (E) |

# APPENDIX 7

**CONTD.**

| | | |
|---|---|---|
| Ventry Harbour | Within a line joining Parkmore Pt. and Paddock Pt. In summer only and in fine weather (C). | |
| Dingle Harbour | Within a line joining Flaherty Pt. and Black Pt.(C) | |
| Blasket Islands Dunquin | | Within an area confined to 3 miles from Dunmore Head (E) |
| Brandon Bay Scraggane Bay | | Within a line from Brandon Point to Magharee Sound in fine weather and daylight only (E) |
| Fenit/Tralee Bay | | Within a line due South from Fenit Harbour B/Water (D)<br><br>Within a line from Rough Point to The Rose Rock in fine weather and daylight only. (E) |
| The Shannon | East of Rinalan Point. (C) | Within a line from Scattery Lighthouse to Carrig Island (D)<br>**Summer only.Eastward** of a line joining Kilcredaun Head and Leak Point in fine weather & daylight only. |
| Roundstone and Berthaghboy Bays | Within a line westward from Treh Pt. (Inishtreh) | |
| Cliffen Bay | Within a line due North from Fishing Pt. In fine weather and daylight only. (C) | |
| Cleggan/Inishbofin | Within a line from Cleggan Pt. to Roeillaun (C) | Within the area bounded by lines from (1) Cleggan Pt to Lyon Head.(2) Roeillaun to Shark Head; and not beyond Bofin Harbour (E) |
| Ballynakill Harbour | Inside Ross Pt.(C) | Inside Freaghillaun Island.In summer only In fine weather and day only. (D) |
| Killary Harbour | Inside Inishbarna Isl. (C) | Within a line from Tonakeera Pt. to Culfin Pt. in fine weather and daylight only (E) |

| | | |
|---|---|---|
| Blacksod Bay | Within a line from Blacksod Pt. to Kanfinalta Pt. in fine weather and daylight only (D) Inside Doonsiver Pt. (C). | Within a distance of 3 miles from Duvillaun More, In fine weather and daylight only (E) |
| Broadhaven Bay | Within a line from Shanaghy Pt to Fox Pt. (C) | Gubacashel to Brandy Pt. in fine weather and daylight only (D) |
| Westport | Within a line from Murrisk Pier to Inishgort Light. (C) | |
| Clew Bay/ Clare Island | | Within a line from Roonah Head to Clare Island East Harbour and Achillbeg Isl. to Clare Island (E) |
| Kilala Bay | Inside Rinnaun Pt. (C) | Within a distance of 3 miles from Ross Pt in fine weather and daylight only (E) |
| Sligo Harbour | Inside Metal Man Rock. (C) | Within a line from Raghly Pt. to Black Rock Point (E). |
| Ballyshannon | Inside the Bar (C) | Within a line from Doorin Point to Kildoss Point in fine weather and daylight only (E). |
| Donegal | Inside the Bar (C) | Within a line from Doorin Pt to Killdoney Pt in fine weather and daylight only (E) |
| Killybegs | Within a line Westward from Carntullagh Hd (C) | Within a line from St. Johns Pt to Drumanoo in fine weather and daylight only (E) |
| Teelin | | Within a distance of 3 miles from Dundaweona Pt in fine weather and daylight only (E) |
| Burtonport | | Within an area bounded by lines (1) Ranagh Pt to Wyon Pt (2) Rinnagoy to Rough Island (D) |

CONTD.

| | | |
|---|---|---|
| Sheephaven Bay | | Within a line from Horn Head to Rinnafaghla Pt in fine weather and daylight only (E) |
| Mulroy Bay | Within a line from Dundooan Pt. and Inverbeg Bay. (C) | Within a line from Melmore Hd. and Ballyhoorisky Pt. In fine weather and daylight only. (E) |
| Lough Swilly | Within a line from Buncrana to Muckamish Point. (C) | Within a line from Fanad Head to Dunaff Hd. in fine weather only (E). |

## SCHEDULE 3.

### SECTION 17(2) OF MERCHANT SHIPPING ACT 1992.

17. (2) A vessel shall not be used as a passenger boat unless there is painted on the outside of each side of the vessel above the waterline, in colour contrasting with that on the outside of the vessel and in letters and figures that are not less then 3 centimetres in height and are formed by lines that are not less than one-half centimetre in width -

(a) the first name and surname of the owner of the vessel, the serial number of the licence in relation to the vessel, and

(b) an indication, in the form "licensed to carry passengers" or in the form "ceadunaithe chun paisinéiri a iompar", that the vessel is the subject of a licence and of the maximum number of passengers whose carriage in the vessel is authorised by the licence.

(3) (a) A person guilty of an offence under subsection (1) (a) shall be liable, on summary conviction, to a fine not exceeding £200.

(b) If in relation to a vessel there is a contravention of subsection (2), the owner and the master of the vessel shall each be guilty of an offence and shall each be on summary conviction to a fine not exceeding £500.

**Category (B)** All inland Lakes and Loughs to include,inter alia :-

(1) Lough Corrib
(2) Lough Mask
(3) Lough Derg
(4) Lakes of Killarney
(5) Lough Erne
(6) Lough Ree
(7) Lough Gill

Boatmans Licence (Passenger) One to apply.

**Category (C)** Sea Areas within present Areas of Smooth Waters.

This Category will include all Estuaries, Harbours, Sea Loughs and Bays that are presently within the Areas of Smooth Waters.

**See Schedule One.**

Boatmans Licence (Passenger) One to apply.

**Category (D)** Sea Areas within present Areas of Partially Smooth Waters.

This Category will include all Estuaries, Harbours, Sea Loughs and Bays that are outside the Smooth Water Areas and within the Areas of Partially Smooth Waters. **See Schedules one and two.**

Boatmans Licence (Passenger) Two to apply.

**Category (E)** All areas outside Category D up to a limit of 3 miles from the coast.
**See Schedule two.**
Boatmans Licence (Passenger) Two to apply.

## SCHEDULE 4

### PASSENGER BOAT LICENCES.

**Categorization of Areas for the operation of Passenger Boats as defined in Part III of the Merchant Shipping Act 1992.**

**Definition of Passenger Boat.**

"passenger boat" means -

(a) a vessel carrying not more than 12 passengers for reward or having on board for the purposes of carriage for reward not more than 12 passengers, or

(b) a vessel that is carrying not more than 12 passengers, or has on board for the purposes of carriage not more than 12 passengers, and is on hire pursuant to a contract or other arrangement under which a crew or part of a crew is provided for the vessel by its owner,

and includes a vessel carrying not more than 12 persons to or from their place of work, or having on board not more than 12 persons for the purposes of such carriage, and owned by or on hire to their employer and a vessel registered outside the State and carrying not more than 12 passengers between places in the State, or having on board not more than 12 passengers for the purpose of such carriage, but does not include such a vessel carrying passengers to or from the State or having on board passengers for the purposes of such carriage, a fishing vessel, a ferry boat working in chains or a vessel in respect of which a certificate is in force .

The plying limits are categorized into five areas as required under Section 15 (2) (a).

The five area categories are defined as below :-

(a) Enclosed rivers and canals. Rivers are non-estuarine
(b) Inland Lakes and Loughs
(c) Sea Loughs and harbours within the present Areas of Smooth Waters.
(d) Sea areas within the present Areas of Partially Smooth Waters.
(e) Outside area (d) up to a limit of 3 miles from the coast.

Personnel in charge of Passenger Boats who do not possess a Certificate of Competency in the Merchant Marine or Fishing Industry or other equivalent qualifications, will be required to hold a licence to operate the particular boat or class of boat for which the licence will be issued, in the specific area defined in the licence.

It is proposed to issue two grades of licence :-

(1)Bostman's Licence Passenger)one to cover operators of boats in Areas A & B & C,BL(P)1.

(2) Boatmans Licence (Passenger) Two to cover operators of boats in areas D&E BL(P)2

Categories will be listed in the schedule attached. A Boatmans Licence (Passenger) will be assigned to the area most likely to which it will apply.

**Category (A)** Canals and Rivers - Non Estuarine to include :-

6 Canals - Grand Canal
- Royal Canal
Rivers - All inland Rivers within the State to include the Shannon above Thomond Bridge and Barrow above New Ross road Bridge.

Boatmans Licence (Passengers) One to apply.

## SCHEDULE 6

### INTERNATIONAL COLLISION REGULATIONS.

### ANNEX IV - DISTRESS SIGNALS.

1. The following signals, used or exhibited either together or separately, indicate distress and need of assistance :

(a) a gun or other explosive signal fired at intervals of about a minute;
(b) a continuous sounding with any fog-signalling apparatus;
(c) rockets or shells, throwing red stars fired one at a time at short intervals;
(d) a signal made by radiotelegraphy or by any other signalling method consisting of the group...—...(SOS) in the Morse Code;
(e) a signal sent by radiotelephony consisting of the spoken word "MAYDAY";
(f) the International Code Signal of distress indicated by N.C.;
(g) a signal consisting of a square flag having above or below it a ball or anything resembling a ball;
(h) flames on the vessel (as from a burning tar barrel, oil barrel,etc.);
(i) a rocket parachute flare or a hand flare showing a red light;
(j) a smoke signal giving off orange-coloured smoke;
(k) slowly and repeatedly raising and lowering arm outstretched to each side;
(l) the radiotelegraph alarm signal;
(m) the radiotelephone alarm signal;
(n) signals transmitted by emergency position-indicating radio beacons.

2. The use or exhibition of any of the foregoing signals except for the purpose of indicating distress and need of assistance and the use of other signals which may be confused with any of the above signals is prohibited.

3. Attention is drawn to the relevant sections of the International Code of Signals, the Merchant Ship Search and Rescue Manual and the following signals;

(a) a piece of orange-coloured canvas with either a black square and circle or other appropriate symbol (for identification from the air);
(b) a dye marker.

Appendix 8 Met Eireann weather report.

MET ÉIREANN
*The Irish Meteorological Service*

Glasnevin Hill,
Dublin 9, Ireland.

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

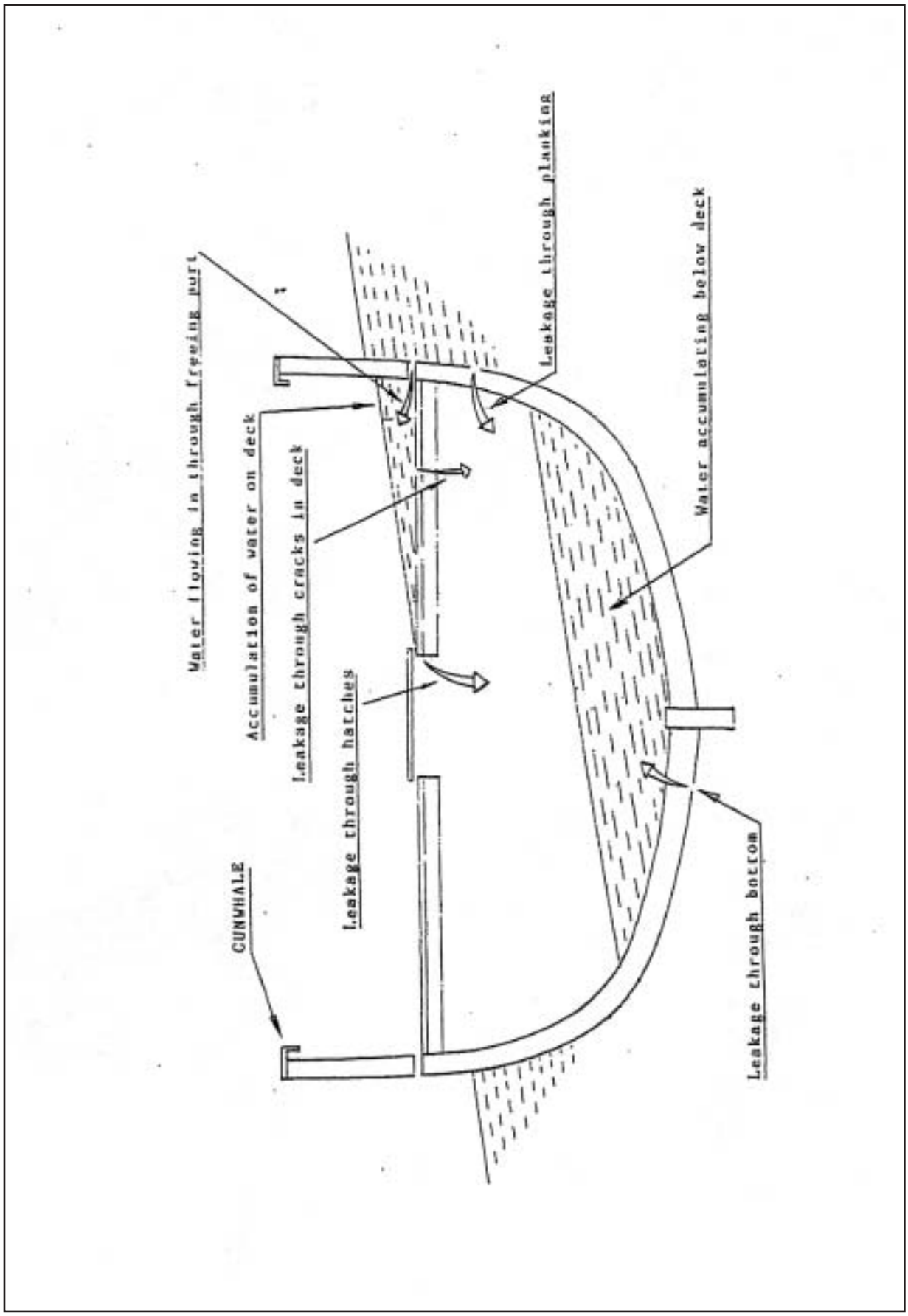
Tel: +353-1-806 4200
Fax: +353-1-806 4247
E-mail: met.eireann@met.ie

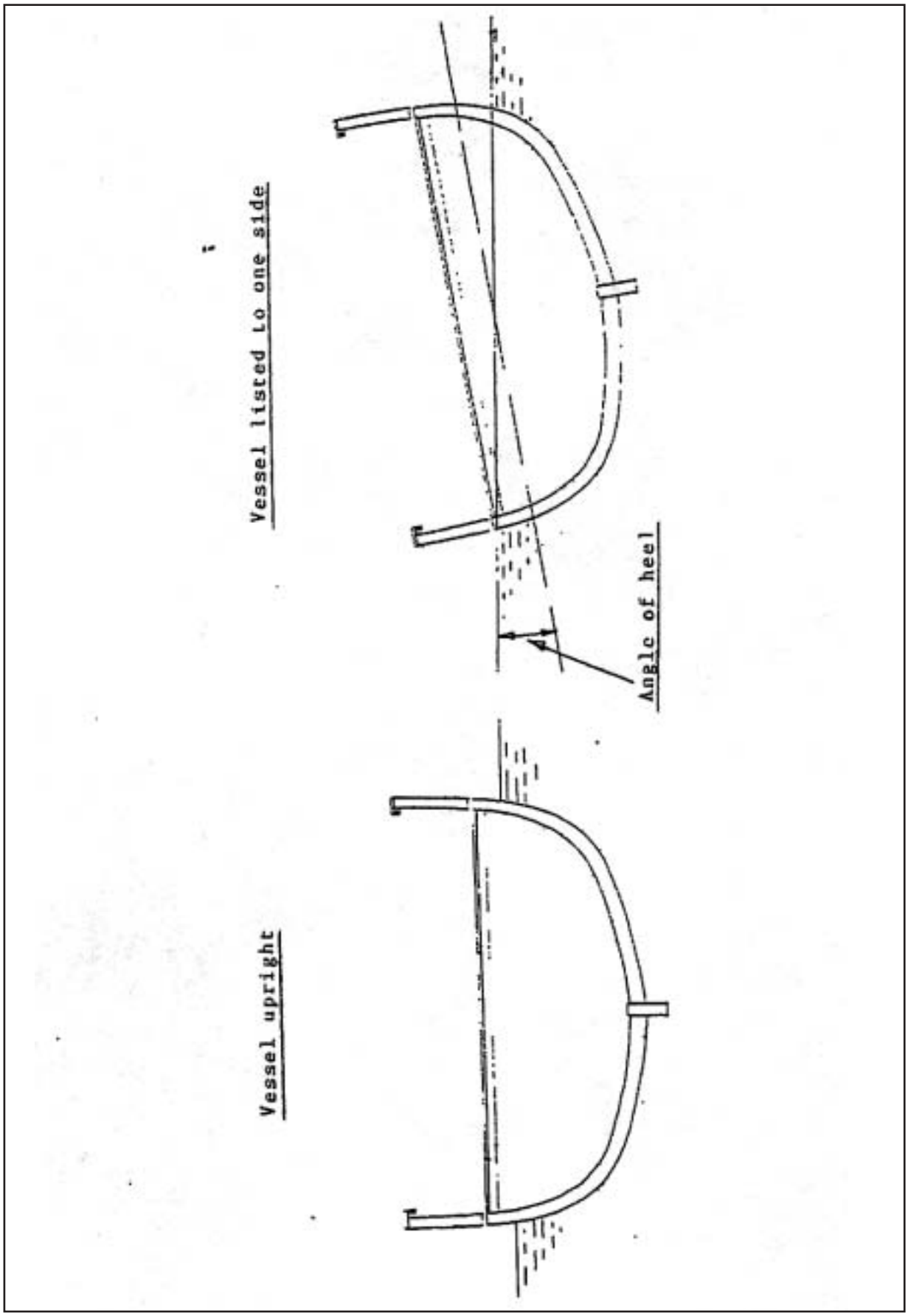
**Weather Report for the sea area near Baginbun Head on the 28th July 2002 between 8 and 12 hours.**

Winds: South-west Force 5
Weather: mostly cloudy with some mist and drizzle
Visibility: poor

# APPENDIX 9

Appendix 9 Diagrams showing water ingress and angle of heel.




Vessel listed to one side
Angle of heel
Vessel upright

Appendix 10 Divers Report and Report from "Granuaile".

Commissioners of Irish Lights.
16, Lower Pembroke Street.
Dublin 2.

31st. January 2003.

**Re – Report of Recovery MFV Pisces.**

On Monday 29th July 2002 at 2332 hrs. MFV Pisces was brought alongside ILV Granuaile. She had been floated to the surface using airbags by divers. She was towed alongside by Naval and Garda RIBs. At that time she was submerged to her gunnels with only the wheelhouse above the sea surface. It was observed at that time that the wheelhouse had sustained some damage.

When alongside ILV Granuaile webbing lifting strops of sufficient length for a safe lift were positioned to the MFV Pisces in such a way to allow for an upright and even keel lift out of the water and on to the deck of ILV Granuaile.

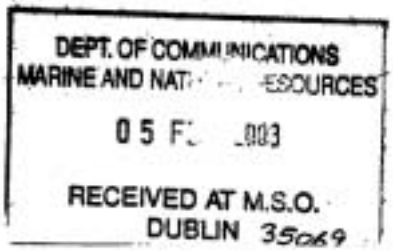
On Tuesday 30th. July 2002 at 0012 hrs ILV Granuaile commenced lifting MFV Pisces from the water. Initially she was lifted so that the water was approximately one foot below her gunnels. A salvage pump from ILV Granuaile was employed to discharge water from within the hull of MFV Pisces. Pumping and slow lifting was continued until the majority of seawater was pumped out of the hull. On completion of pumping the MFV Pisces was lifted clear of the water and was secured on the deck of ILV Granuaile at 0130hrs.

During the lift it was observed that water was not leaking out through the hull and the hull appeared intact. MFV Pisces was secured upright on deck and shored up with timber to prevent any movement.

Between 0821 and 1045 hrs MFV Pisces was surveyed by Mr. S.Mc.Loughlin and Mr.J.Snelgrove in the Port of Waterford. During that time MFV Pisces was lowered to the water and floated alongside ILV Granuaile. On completion of "in water" examination she was lifted clear of the water and on to a low loader lorry. This occurred at 1103 hrs. Upon observations during lifting operations there was no apparent hull damage.

In conclusion the only apparent damage was to the wheelhouse of MFV Pisces which was evident when she was brought alongside ILV Granuaile by Naval and Garda RIBs.

Yours sincerely,
D.Gray. Master ILV Granuaile.



Diving Section
Shore Operations
Naval Base
Haulbowline
Co. Cork

07/08/02

**Marine Accident Investigation Board**

**REPORT ON RECOVERY OF FV PISCES FROM SEABED**

1. I am 0.9959 Lieutenant Darragh Kirwan, Clearance Diving Officer, Naval Service (NS). On Monday 29 July 2002, I proceeded to Fethard-on-Sea, in my capacity as Officer in Charge of the NS Diving Section (NSDS), with a team of six divers at the request of the Irish Coast Guard to assist in the search for the missing boy from the FV "Pisces". I was also briefed that we may be required to recover the boat from the seabed for investigation purposes.

2. On arrival in Fethard pm Monday, the body of the missing boy had been recovered from the sea. On consultation with the Marine Casualties Investigator, Mr. Jim Snelgrove, it was decided that the boat was to be raised onto the deck of Granuaile, who was being retained on scene for this purpose. After a further meeting onboard Granuaile with the Investigator, Captain of Granuaile and with members of the Garda Water Unit (GWU) in attendance, a plan was devised to lift and recover the boat onto the deck of the ship. This was to be done in the following steps;

a. Survey of boat with view to lifting points
b. Rigging of strops around boat & connection of lifting bags
c. Inflation of lifting bags - boat on surface
d. Trimming of boat & tow to alongside Granuaile
e. Securing of lifting strops around hull with sufficient spacers
f. Lift by Granuaile incorporating pumping out of boat and securing on deck

3. Members of the GWU were to assist the NSDS were appropriate, as they had no previous experience in this area. NSDS provided all equipment for the initial lift and tow to alongside the ship, with heavy lifting strops from onboard being then used for the final lift on deck.

4. Initial survey of the vessel noted the following points;

a. Vessel lying on sand, shale, bedrock bottom in 13 metres of water on starboard side at angle of approx 20 degrees off vertical.
b. Fishing rods were seen lying onboard and on the seabed nearby.
c. Wheelhouse door open, roof cracked, small anchor secured to roof.
d. No lifebuoy onboard or trapped under boat. Likewise no liferaft spotted around boat.
e. Hatch cover to engine space was missing.
f. No apparent damage to FV hull
g. One scupper blocked by nailed piece of wood(aft scupper on portside), remaining scuppers were all free from obstruction.

5. The boat was lifted to the surface by rigging short lifting straps through the scuppers along the gunnel of the boat on both sides. The blocked scupper outlined in 4(g) above was freed for this purpose. Lifting bags were inflated remotely from the surface and the boat broke the surface at approx. 2150 hrs on 29 Jul 02. The all ready damaged wheelhouse was crushed between two lifting bags during the lift. Once all lifting bags were inflated, the boat was trimmed and taken in tow to Granuaile at anchor 400 yds away. Tow commenced at 2230 hrs. approx. And boat was alongside the ship at 2345 hrs. Rigging of lifting strops was completed by 0100 hrs on 30 Aug 02 and the boat was lifted, pumped out and secured on deck at 0200 hrs approx.

6. On completion of operation NSDS returned ashore and later returned to the Naval Base.

**D KIRWAN**
**LT NS**
**OiC DIVING SECTION**

Diving Section
Shore Operations
Naval Base
Haulbowline
Co. Cork

30/01/03

Marine Accident Investigation Board

**REPORT ON RECOVERY OF FV PISCES FROM SEABED**

1. I am 0.9959 Lieutenant Darragh Kirwan, Clearance Diving Officer, Naval Service (NS). Between Monday 29 July and the morning of Tuesday 30 July 2002, the NS Diving Section (NSDS) recovered the Fishing Vessel "Pisces" from the seabed off Fethard-on-Sea, Co. Wexford. The vessel was then towed to ILV Granuaille and lifted from the water.

2. My original statement dated 07/08/2002 outlined the search, location and lift of the vessel. Included was any areas of notable damage or concern both before and after the lift. I wish to clarify that the Pisces' hull did not appear to have been damaged when lying on the seabed. This was deduced by visual inspection i.e. there was no evidence of holing or puncturing along the hull, as well as no planking out of place.

3. The only damage made to the Pisces was during the lift to the surface when the wheelhouse was caught between two air lifting bags and broken. There was no damage to the hull during this operation. Once towed alongside the ILV Granuaille, lifting slings were secured around the hull, to facilitate the lift from the water. During the fitting of the lifting slings the hull was visually inspected again prior to the lift. This lift was carried out by ILV Granuaille, pumping out the water trapped in the hull, as the vessel was raised on deck.

4. This concludes my statement.

D KIRWAN
LT NS
OiC DIVING SECTION

Appendix 11 Photographs of "Pisces".

# APPENDIX 11

CONTD.

## 19. INDEX OF CORRESPONDENCE RECEIVED ON THE DRAFT REPORT AS CIRCULATED, INCLUDING THE MCIB RESPONSE.

**COMMENTS / OBSERVATIONS RECEIVED**
(each item of correspondence is followed by the MCIB response where appropriate)

Note:All letters received are submissions which affected parties submitted in response to the first Draft Report of 19th day of November, 2002 and the second Draft Report of 9th day of April, 2003 and are entered in chronological order.

**N.B. Some correspondence received by the MCIB in response to the First Draft Report makes reference to page numbers as they appeared in that draft. The page numbers of this Final Report are different to those of the First Draft.**

**The new numbers are:-**

| First Draft | Final Report |
|---|---|
| 2 | 4 |
| 4 | 6 |
| 5 | 7 |
| 7 | 11 |
| 8 | 12 |
| 10 | 14,15 |
| 11 | 15 |
| 15 | 19,20 |
| 17 | 20,23 |
| 18 | 22 |
| 19 | 23 |
| 20 | 24 |
| 21 | 25 |
| 22 | 26 |

The Marine Casualty Investigation Board can accept no responsibility for the accuracy of the content of contributed letters or comments appearing in this Report and any views or opinions expressed are not necessarily those of the Marine Casualty Investigation Board, save where otherwise indicated. No responsibility for loss or distress occasioned to any person acting or refraining from acting as a result of the material in this publication can be accepted by the Marine Casualty Investigation Board.


Ralph,
Fethard-on-sea,
NEW ROSS,
Co Wexford.

Marine Casualty Investigation Board
Leeson Lane
Dublin 2

Re: Draft report into the incident involving the "Pisces"
on 28 July, 2002, at Fethard-on-Sea, Co. Wexford

Your ref: MCIB 35

Dear Sirs,

On the 20th February 1914, Paddy Cullen was a member of the Fethard Lifeboat 'Helen Blake' which was wrecked in an effort to save the crew of the vessel 'Mexico', which had grounded on the southwest point of the little Keeragh Island – just three miles east from Fethard. Nine of the lifeboat crew perished in that disaster. Paddy Cullen's family was orphaned; Nelly, Mickie, John, Jimmy, Cissie, Patsy, Dolly, Bridie and Cathy.
Dolly was my mother and all the others except Mickie, who drowned young, John, and Patsy, married locally and reared families. Accordingly I can recall throughout my lifetime, our extended families' empathy with all affected by sea related tragedies.
I sincerely offer my own and my family's sympathy to all the bereaved families as a result of the Pisces tragedy, and to acknowledge with gratitude, the skilful and prompt action by neighbour Tommy Roche ('Saint Coran') which prevented further loss of life.

Yours sincerely,

Patrick Barden
Owner/Skipper
MFV "Pisces"

All of the "faults", "deficiencies" identified by this report are entirely consistent with the sinking, salvage, transportation, handling of the casualty vessel. Eg-

1. Flooding/sinking/plunge and impact on rough seabed, 37ft (11.3m)
2. Rolling on the seabed for approx. 34 hours (10:50 Sun to 21:50 Mon)
3. Raising by floats attached to surface.
4. Lifting from surface to deck ILV Grainuaile.
5. Lifting from deck to Waterford harbour.
6. Lifting from harbour back over Granuaile to truck.
7. From store to trailer by road to Dunmore East. (September 2nd)
8. From trailer to Dunmore East harbour waters.
9. From Dunmore East harbour back onto trailer and transported by road back to Waterford harbour storage.

**Therefore these faults must be recognised as resulting from the vessel's recovery,** rather than as implied causes of the unfortunate incident.

I must take serious issue with the conclusions of this report; and further the leaking thereof resulting in highlighting in the national media with headlines "Boat should not have sailed", "tragic boat unseaworthy".
Quite obviously, these comments will have exacerbated and extended the anxieties and anguish of all those who were affected by the unfortunate tragedy. This uncalled for publication suggests that I acted grossly irresponsibly and must be regarded as seriously prejudicial in the event of potential litigation.
The investigation and report has obviously failed to positively identify the cause of the sinking. The conclusions are implausible, unreasonable and, at times, based on inaccurate and even frivolous observation and/or comment.

Page 8 Vessel "not entitled to use for commercial fishing"
"Should have held passenger boat license and a load line exemption cert – held neither".
At the time, the vessel was exempt from these requirements.

Page 10 The report misrepresents the weather situation
"Winds south westerly Force 5"
The on-scene weather was southwest 5 knots. [~Force 1-2]

Page 15 Hull examination: - paragraph 2.
"Caulking in poor condition".

Page 17 Calculated that "the vessel, fully loaded, would have water ingress of 490 litres per hour." This leakage would be insignificant, when compared, to 2 electric pumps with an output capacity of 18,000 LPH.

Page 17 "Capillary action could have caused pump failure".

Page 18 "piece of ballast causing partial flattening of discharge hose.
Both these highly speculative points.

Stability: On the basis of 75kg per person on board, the total weight carried was approximately 750kg = 118 stone = .675 ton.
The vessel, in her previous ownership, had frequently carried double this weight in fish.

## MCIB Response to Mr. Barden's Letter of 5 December, 2002.

**With regard to the specific contentions raised by Mr. Barden, the Marine Casualty Investigation Board's views, in the order raised, are as follows:**

**This has been checked out with the MCIB Investigator, Commissioner of Irish Lights (C.I.L.) and Naval Divers (who carried out this operation) all of whom have confirmed that there was no damage to the hull apart from light scuffing (see Appendix 10).**
**There is no evidence to support this contention.**
**There is no evidence of any damage to the hull being caused by the flotation devices, except to the wheelhouse as stated on page 15 of the Report.**
**There is no evidence to support these contentions.**
**(see Appendix 10).**

**The MCIB has no evidence to substantiate any leaking to the media of this draft Report. The draft Report was distributed to those people deemed by Section 36(1) of the Merchant Shipping (Investigation Casualties) Act, 2000 is likely to have been adversely affected by this incident. These people were advised verbally and in writing of the confidential nature of the draft Report. It may be that some person or persons gave information to the media about the draft Report, as reports appeared in the Irish Independent, Examiner, RTE Radio and South East Radio. The MCIB wrote to the editors of the national daily newspapers, RTE and South East Radio requesting that they respect the confidentiality of this draft Report.**

**The MCIB disagrees with the contentions raised in paragraph 3 of Mr. Barden's letter and wishes to comment further on the following specific contentions:**

*" Vessel 'not entitled to use for commercial fishing'*
*'Should have held passenger boat licence and a load line exemption cert – held neither'.*
*At the time, the vessel was exempt from these requirements".*

**The MCIB disagrees. The vessel was not exempt from these requirements, (see page 10 of Report and Appendices 6 & 7).**

*" The Report misrepresents the weather situation*
*'Winds south westerly Force 5'*
*The on-scene weather was southwest 5 knots. (Force 1 – 2)".*

**The Met Eireann Report is set out at Appendix 8. Locally observed conditions at the time of the incident were of fog with visibility down to 50 yards. Sea conditions were observed to be slight with a swell running in the bay (see Page 11 of Report).**

"Hull examination: paragraph 2.
'Caulking in poor condition'

Calculated that 'the vessel, fully loaded, would have water ingress of 490 litres per hour.' This leakage would be insignificant, when compared to, to 2 electric pumps with an output capacity of 18,000 LPH".

**The MCIB disagrees. The poor caulking was but one source of water ingress. It is not considered insignificant. The actual output capacity of each pump was approximately 2,000 U.S. gallons per hour, giving a total output of 4,000 gallons per hour.**

*"Capillary action could have caused pump failure".*

**This appears to be a reference to Page 19 of Report (1st paragraph) - "Submersible pumps of this type require that the first electrical connection, on the wiring leading from the pump, should be located outside any "wet" area, i.e. outside any area where water might accumulate. If water can gain access to these connections, then it can be drawn along the wiring by capillary action and into the motor itself leading to its failure". The MCIB is satisfied that capillary action could have caused pump failure.**

*"Piece of ballast causing partial flattening of discharge hose".*

**This appears to be a reference to Page 18 of Report (last paragraph) "When inspected, a piece of steel ballast was found to be lying across the discharge hose causing partial flattening of the hose with resultant reduction in cross-sectional area".**

*"Stability: On the basis of 75kg per person on board, the total weight carried was approximately 750kg = 118 stone = .675 ton. The vessel, in her previous ownership, had frequently carried double this weight in fish".*

**This matter is dealt with at Pages ,20, 21 & 22 of Report, which address this issue, and in particular the conclusion as set out in page 22:**

**"The outcome of this analysis indicated that the "Pisces" fails to meet any of the internationally accepted standards for the stability of such a vessel in any of these conditions. It shows that, even with small amounts of water in the bilges, the vessel has a very small range of stability, i.e. angles through which it can roll before it becomes unstable. However, it also shows that a very small amount of water on the deck of the vessel can create an unstable situation very quickly".**

**The total man weight of the passengers on board the "Pisces" was 0.8 of a Tonne. It is also noted that the wave height in the area at the time of the incident was 0.5 of a metre and the wave-length was 10.0 metres.**

Tullycanna,
Ballymitty,
Co Wexford.
051-561813
December 9 2002

Dear Sir,
Thank you for sending me the report concerning the unfortunate disaster at Fethard-on-sea involving the pleasure boat "Pisces" and your assessment of The cause of her sinking.I purchased the boat in November 1998 and Had it surveyed by James Moore in August 1999 who certified it in a Safe and seaworthy condition. I fished it for nearly four years without Incident. I sold the boat in May 2002 to a Mr Paddy Barden and Asked him at the time if he wanted to have the boat surveyed . I Gave him the names of three surveyors , but he said that be was happy To buy the boat as she was.There are a couple of points in your report of Which I do not agree.

Firstly,concerning the hull, it states that the hull and the deck was leaking Badly in places. I would like to point out that you made no allowance Whatsoever for what damage may have been caused to the boat when it Struck the sea – bed or what hardship it suffered during the salvage. It's very obvious that some structural damage was done during the process Of salvage and nobody knows what damage was done when she hit the Sea –bed.

I would like to refer to an unfortunate disaster which happened a few miles South of Hook Head in February 1996,when the 36 ft steel trawler the Jenalisa , sank with the loss of three lives. When the boat was salvaged it Was noticed that there was a considerable amount of damage done to

Her bow. The public report , when issued , stated that the damage was
Most likely done when the vessel hit the sea –bed, yet I would like to
Point out that there was no mention of any damage to the 'Pisces' caused
By the impact of her to the bottom. When the 'Pisces' was being raised
It was notiqed by an onlooker that there were no spreader on the straps
To stop the vessel being squeezed, it was also noticed that she was not
On an even keel, and that the wheelhouse was intact when the boat came
To the surface . I would assume that the straps played a major part
Demolishing the wheelhouse and also dislodging the copper patch ( seen in
Your photograph ) as she levelled out on the deck of the ship!
I have seen the 'Pisces' being lifted annually by an experienced crane driver
And I understand how easily it is to do damage if the boat is let down too
Fast on a hard surface, especially if she is not on an even keel,
I recall another incident ,in August 1991,when a small aluminium pleasure boat
In a few metres of water a short distance from Slade harbour with the
Loss of four lives . The vessel could be seen clearly from the surface,
Sitting upright on the sea-bed , yet when the attempt was made to raise this
Vessel in shallow water, to say the least, was a momentous disaster resulting
In the total loss of the vessel., she entirely went to pieces and washed up
On the shore. In the light of this and other incidents that has occurred over
The years I feel that it is very unfair to say that the 'Pisces' was
Unseaworthy prior to it's sinking when we don't know what damage or how
Much harm was done before it was first inspected after salvage.
The 'Pisces' was an old boat and very little hardship would have caused
The sealing in the deck and the caulking to loosen and fall out.I was not

Aware of the missing caulking, but wonder if this was missing when Paddy Barden cleaned and painted the boat after buying it from me.

I would like to stress that all through the years that I owned and fished The. 'Pisces'. I never had any reason to doubt her capabilities, sea wise or Other, as for her leaking during that time,the fact is, that boat was Regularly left unattended for up to three days at a time on a Permanent bay mooring and there was never enough water in her To activate the automatic pump. This can be clarified by any of the Fishermen or locals in the area. With reference to the three patches on The boat,the vessel was not, stress not leaking when I owned her. Each year I took up the boat in January to clean and antifoul the bottom Apart from January 2002 as I was buying a replacement boat. The Two small patches mentioned, were patches covering holes that were Drilled in the hull which was originally covered with timber patches, But I replaced them with stainless steel ones fixed with stainless steel Screws prior to the survey in 1998.In relation to the third patch (photo) I noticed in January 2001 a soft spot on the port side. I put a copper Patch over this area as it would eventually need attention.I specifically Drew Paddy Barden's attention to this patch at the time of sale in May 02 I had two other prospective buyers at the time and they were made aware Of this as well .Names and addresses available if wanted. The abrasions on the hull was Most likely again caused by the sea-bed.

The draft also states that the steel hatch cover aft of the engine cover, Was nearly impossible to lock down. When I had the vessel, the bar for Tightening down, was always greased and when someone was shown

It was very simple to lock down, I never went to sea with this Hatch open ,as it was nearly flush with the deck I specifically drew Paddy Barden's attention to this hatch and cautioned him about the danger of Leaving it open , and again ,later on after the sale . I also showed him how To lock it down on the day of purchase

The report also says that the ballast was loose and that some was lying Across the bilge pump,I never seen this ballast moving, and again it was Most likely due to the lifting of the vessel.

I bought my replacement boat in Kenmare Co Kerry 22-04-02 .I telephoned The Dept of the Marine about transferring the tonnage . They sent me out Forms but I didn't do anything about them as I was waiting to buy the Extra tonnage and kilowatts . This tonnage form was dated 15-03-02 .

I also received the offer of a fishing licence for my new boat 'La Fontaine' ,dated 08-07-2002 ,with one of the conditions which was to Transfer the tonnage and kilowatts from the 'Pisces' to my new boat. And upon trying to register my new boat I received a letter dated May 21 ' 2002, saying that they couldn't register the boat in my name until I could furnish my fishing licence for said boat !!!!

I took this to mean that Mr Barden couldn't register the 'Pisces ' in his Name as he had no intention of getting a fishing licence for her.

I enclose copies of letters received in connection with the above transaction And also a copy of this letter which I hope will hurry things up and Finalise my change of ownership. .I would be most grateful if you could pay some attention to some of The points that I have raised in this letter , and as I have already

Said there was no mention at all that some of the faults found in The 'Pisces' could have been caused by the sinking and the treatment Of the boat when being raised.

Yours Truly, Robert Chapman

Robert Chapman.

## MCIB RESPONSE TO THE LETTER OF 9TH DECEMBER, 2002 FROM ROBERT CHAPMAN.

Mr. Chapman's belief that damage was caused to the hull when the "Pisces" struck the seabed or during transit (2nd Paragraph of his letter)

The Naval Divers have confirmed that there was no damage to the hull while the vessel was on the seabed or during the lifting and recovery process, except for abrasions on the hull which had no bearing on the cause of this tragedy as noted in the Report.

Mr. Chapman's belief that structural damage was caused to the vessel during the salvage process.

A high level of care and diligence was maintained by all concerned in the salvage operation. The strops placed around the vessel during the lift onto the Granuaille were positioned correctly. Connecting horizontal strops prevented any lateral movement. The vessel was raised from the seabed very slowly whilst at all times pumping out the water in the hull with salvage pumps so as to minimise any stress to the hull. There was no damage caused to the vessel during this operation other than to the wheelhouse as described. (see Appendix 10)

Mr. Chapman's belief that the lifting of the vessel dislodged the copper patch.

This patch was in place at the time of the salvage. Due to the rotten nature of the planking in way of this patch, it was lifted off the hull by the inspector's fingers during the inspection. This was indicative of the poor state of the hull and poor maintenance.

Mr. Chapman's belief that it is unfair to say that the Pisces was unseaworthy prior to its sinking when we don't know what damage or how much harm was done before it was first inspected.

The abrasions of the hull whilst on the seabed, and the collapse of the wheelhouse during the salvage operation, are noted in the Report. The rotten timber planking, rotten and missing caulking, non-watertight deck and other defects noted in the Report were there before the vessel sank on 28/7/'02.

Mr. Chapman's comment – *"there was never enough water in her to activate the automatic pump"*.

The MCIB notes Mr. Chapman's comment, but on the day of the casualty, the condition of the hull had deteriorated to such a state that water was entering the loaded vessel. As stated in the Report, the forward bilge pump was fitted with an auto start mechanism, but the other pump was not so equipped.

The aft pump, which was located in the area where the ingress of water was shown to be collecting, was manual start only. On the day of the casualty the forward pump did not cut in until just before the vessel sank, so indicating it's limited effectiveness. As stated in the Report the aft pump should have been fitted with an auto start facility or alternatively a bilge level alarm should have been fitted in this area.

Reply to draft report into loss of "the Pisces" at Fethard-on-sea.

Coolafullaun.
Ballyhogue.
Enniscorthy.
Co Wexford.
12.December.2002.

Dear Mr Heron.
Thank you for the draft report into the loss of the "Pisces"and for making the "marine jargon"easily read & understandible.

My family & I appreciate the exhaustive investigations carried out by the marine casualty investigation board & we are grateful to all concerned

I hasten to add that the report made very grim reading.

We feel it is vital that whatever action is necessary,be taken to ensure that the recommendations are implemented in full,thus ensuring that any future marine tragedies are eliminated.

I noted that the commercial fishing licence issued to Mr Chapman from July 1 2001 was valid until June 30 2004,Would the M.C.I.B. feel that a thorough safety check would be necessary more frequently than this in view of the fact that the vessel was built over 20 years ago.

It would be of some mental relief for our family if the owner of the "Pisces"would dispose of it by public incineration for the obvious reasons.

To further comment,Since Mr Barden acquired the "Pisces" 31/07/2002 how many times had he taken passengers for commercial fishing? & how many did he carry each time? and had he noticed any instability or other problems?,other than the voyage on July/23/02

Did Mr Chapman use the "Pisces"for commercial sea fishing ?.& how much did he sell it for ?.
Would the licence have been issued without the survey being carried out ?.

Yours sincerely
Mary Ellen Roche.

Reply to final draft report into "Pisces"tragedy Fethard-On-Sea.


Coolafullaun.
Ballyhogue.
Enniscorthy.
Co Wexford.
22 April 2003.

Dear Mr Heron,
Thank you for the final draft report by the M.C.I.B. re-fishing boat tragedy on 28th July.2002.

Some further queries ?.

(1) Has it been established ?

(A) When the deck was raised & the six drainage openings were made ?
(B) Who was responsible for the conversion ?
(C)Was the conversion supervised by a qualified marine engineer ? .

(2). Has it been established what experience Mr Bardon had in handling a small boat ?.

(3) On the 19th April 1999,the marine surveyer described "the vessel is in a safe & seaworthy condition"
The M.C.I.B. report in section 15 states that it finds that "The Pisces" was unseaworthy & unstable.
In that time,when did it become unseaworthy & unstable ?.

(4) In section 6 Mr Bardon maintains that he checked the condition of the hull & was satisfied with the condition.
What experience or qualification did Mr Bardon have to satisfy him as to the safety of the boat & he did not feel it necessary to seek advice ?.

Yours Sincerely.
Mary Ellen Rocke.

## The MCIB response to Ms. Mary Ellen Roche's letter of 12 December, 2002.

Mr. Barden did not hold a commercial fishing licence for the Pisces. He was using the vessel to convey a party of sea anglers, which would not be considered "commercial fishing". Mr. Barden did not report any other problems, other than that which occurred on 23/7/'02 as indicated in the Report.

## The MCIB response to Ms. Mary Ellen Roche's letter of 22 April, 2003.

(1) See page 7 of Report. This work was carried out between 1991 and 1993. The identity of the person or persons who carried out or supervised these works is not relevant to this investigation.

(2) Mr. Barden appears to have had a number of years experience in operating small boats.

(3) This is not known. The important point being that this vessel was unseaworthy on the date of this tragedy.

(4) The MCIB is not in a position to answer this query.

13th December 2002

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

Mrs Frances Cooney,
4 Robert Street,
New Ross,
Co. Wexford.
051 421416

**Your Ref: MCIB 35**

Dear Mr. Heron,

Please find our recommendations on the above mentioned Report, a copy of which was faxed to your office on Friday the 13th December 2002. I trust that our recommendations will be considered by the MCIB and that our recommendations will be reproduced in the appendices of the final report.

Look forward to hearing from you.

Yours sincerely,

IRELAND
Date Received
16 DEC 2002
EIRE

Frances Cooney
Frances Cooney

## RECOMMENDATIONS

1. That Paddy Barden be Prosecuted by the appropriate authorities.

2. That under no circumstances should " The Pisces " be allowed back into the water.

3. That Paddy Barden never is allowed to hold a licence or be left in charge or own a boat again.

4. That all owners of fishing boats have to at least 3 times a year take their boat out of the water and have it tested ( e.g. like and NCT test for a car.) for seaworthiness and suitability.

5. That all of the recommendations that are listed in the draft Report be enforced.

6. All boats should have a Registration Number, clearly displayed ( e.g. number plate of car )

7. That all boats should by Law display their Registration Number at all times on the Boat ( e.g. like a car has to display their disks for tax and insurance.)

8. That all passengers on a boat should by Law be made wear life jackets.

9. That there should be a Law that when a person is buying a boat that a Survey should be carried out on this Boat by a Qualified Person before the new owner of the boat receives a Licence.

10. That the number of people allowed on a fishing boat at any one time including the skipper be determined according to weight carrying capacity of Boat.

11. That all inflatable life raft, life jackets, hand flares ( not out of date ), smoke flares and life buoys be made easily accessible to the passengers at all times.

12. All boats should display their maximum weight capacity and number of Licensed passengers.

13. That all Boats have a Radio dedicated to the Emergency Channel.

14. That all of these new Laws be passed quickly and not to be put on the back boiler and not brought into force for another year or two.

15. One person ( besides the Guards ) should be appointed as a supervising officer and prosecuting authority in each port to enforce the approved recommendations.

16. Any Boat owner/skipper should pass a test ( e.g. driving Test ) to assess their knowledge of the sea and their vessels.

13th December 2002

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

Mrs Rita Doyle,
Bushpark,
Clonroche,
Enniscorthy,
Co. Wexford.
051 428088

**Your Ref: MCIB 35**

Dear Mr. Heron,

Please find our recommendations on the above mentioned Report, a copy of which was faxed to your office on Friday the 13th December 2002. I trust that our recommendations will be considered by the MCIB and that our recommendations will be reproduced in the appendices of the final report.

Look forward to hearing from you.

Yours sincerely,

Rita Doyle

Rita Doyle

MARINE CASUALTY INVESTIGATION BOARD
IRELAND
Date Received
16 DEC 2002
EIRE
BORD UM FHIOSCRÚDÚ TAISME MUIRE

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## THE MCIB RESPONSE TO THE LETTERS BY MS. FRANCIS COONEY AND MS RITA DOYLE OF 13 DECEMBER, 2002.
## {BOTH THESE LADIES SUBMITTED IDENTICAL LETTERS}

1,2 & 3. It is inappropriate for the MCIB to comment on these recommendations.

4. Under current legislation a licence will not be issued to a passenger boat unless the boat has been taken out of the water and tested for seaworthiness and suitability. Such licences are normally valid for a maximum of 2 years. In some cases the period of validity is shorter (e.g. 6 months, 12 months). The "Pisces" was not licensed. The current system / policy of licensing passenger boats, which is administered by the Marine Survey Office, appears to be operating satisfactorily.

5. The Recommendations contained in the Report into this incident are made to the Minister for Communications, Marine & Natural Resources.

6,7 & 8. Please see the Recommendations contained in this Report, in particular numbers 5,10 and 15.

9. This recommendation is covered by the Merchant Shipping Act, 1992 (Section 15) which governs the licensing of passenger boats and the conditions pertaining to same.

10. It is already a requirement for the issuance of a Passenger Boat licence that the weight carrying capacity of the boat is established, which in effect determines the number of people which may be safely carried on board.

11. Please see Recommendations 4 and 5 of this Report.

12. Please see number 10 above, together with Recommendations 9 and 10 of this Report.

13. Please see Recommendations 18, 19 and 20 of this Report.

14. Noted.

15. Please see Recommendation 11 of this Report.

16. Please see Recommendation 13 of this Report.

2nd May 2003

Mr. Dick Heron
Secretary,
Marine Casualty Investigation Board,
29-31 Adelaide Road,
Dublin 2.

Mrs Frances Cooney,
4 Robert Street,
New Ross,
Co. Wexford.
051 421416


**Your Ref: MCIB 35**

Dear Mr. Heron,

Please find our recommendations on the above mentioned Report, a copy of which was faxed to your office on Friday the 2nd May 2003. I trust that our recommendations will be considered by the MCIB and that our recommendations will be reproduced in the appendices of the final report.

Look forward to hearing from you.

Yours sincerely,

Frances Cooney
Frances Cooney

## AMMENDMENTS TO RECOMMENDATIONS

We did not add nor amend the following recommendations:
No's: 1, 2, 4, 5, 6, 7, 8, 9, 10, 15, 16, 17, 18, and 19.

**We would like to see the following points added to the following recommendations:**
**No's 3, 11, 12, 13, 14 and 20**

1. (3) We would suggest that the following words " ( having responsibility for the operation of such life rafts )" be deleted from recommendation No;3

2. ( 11 ) We are of the view that there should be a dedicated member of The Department of Communications, Marine and Natural Resources together with the Garda Siochana for every Harbour and/or Port to ensure the implementation, and compliance with and enforcement of the provisions of the Merchant Shipping Act 1992 and all Regulations made thereunder.

3. ( 12 ) We would suggest that the words " and up to date " be inserted in recommendations No:12 after the word " that " and before the word " register ".

4. ( 13 ) Vis a Vis recommendation No. 13 rather than the vague phrase 2 " the appropriate training - boat handling use of safety equipment, life saving and fire fighting equipment" we would be of the view that all skippers and persons in charge of a boat should have a licence, the qualification for which would involve a high quality test on the running and workings of a boat to ensure that the skipper and/or persons in charge of a boat have the necessary qualifications to be in charge. This high quality test should have to be passed every year and would include boat handling, use of safety equipment, life saving, use of fire fighting equipment, use of radio and communications.

5. ( 14 ) Vis a Vis recommendation No:14 we would suggest that a statutory duty be placed upon owners toensure the registration of change of ownership.

6. ( 20 ) Vis a Vis recommendation No:20 we would suggest as follows:
" An annual survey programme be put in place to ensure that registered fishing vessels of up to 12 metres are compliant with the fishing vessel Radio Installations Regulations 1998, SI No. 544 of 1998 and that said annual survey ensures that all such vessels are sea worthy, said annual survey to be carried out when the vessel is out of water, that all faults found in this survey should be repaired and carried out to the vessel before it is allowed back afloat."

2nd May 2003

Mr. Dick Heron
Secretary,
Marine Casualty Investigation Board,
29-31 Adelaide Road,
Dublin 2.

Mrs Rita Doyle,
Bushpark,
Clonroche,
Enniscorthy,
Co. Wexford.
051 428088


**Your Ref: MCIB 35**

Dear Mr. Heron,

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Look forward to hearing from you.

Yours sincerely,

Rita Doyle

Rita Doyle

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## THE MCIB RESPONSE TO THE LETTERS BY MS. FRANCIS COONEY AND MS RITA DOYLE OF 2 MAY, 2003.
## {BOTH THESE LADIES SUBMITTED IDENTICAL LETTERS}

1. Recommendation No. 3 – Agreed.

2. Recommendation No. 11 – This is noted. The practicalities of this suggestion should be considered by the Minister for Communications, Marine and Natural Resources together with the Garda Siochana.

3. Recommendation No. 12 – Agreed.

4. Recommendation No. 13 – The MCIB does agree that there should be a testing and licensing system introduced however, it is considered too onerous to do so on an annual basis. Recommendation No. 13 has been amended accordingly.

5. Recommendation No. 14 – Agreed.

6. Recommendation No. 20 – This recommendation refers solely to radio installation requirements.

RAHEEN,
CLONROCHE,
ENNISCORTHY,
CO. WEXFORD.

13TH December 2002

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


By Fax 01 6782159

Your Ref; MCIB 35.

Re; Draft Report into the incident involving the "Pisces",
28th July 2002, at Fethard on Sea, Co. Wexford.

Dear Mr. Heron,

I am a survivor of the above incident and I received a copy of the Draft Report from Mr. O'Donnell per his letter of the 19th of November, 2002. I was invited to make comments or observations.

I have considered the draft Report and I set out below, my comments/observations.

On the finalisation of the Report I would be obliged if you would send me a copy and I would ask that you also furnish a copy to my Solicitor, John G. Flynn, at 16 South Street, New Ross, Co. Wexford.

I am a 21 year old man and a plasterer by occupation. I can swim. I have no expertise in boating or other maritime matters. I furnished a Statement to the Gardai in the immediate aftermath of the tragedy.

I am not related to any of the parties. On the Saturday prior to the tragedy I was working in the same place as the late Seamus Doyle and it was as a result of his social invitation that I joined the party on the occasion.

I had never been aboard the "Pisces" previously and I had no prior knowledge of the vessel or any acquaintance with the owner/skipper. I had previously been on a different boat operating from the same Port, again for angling purposes. I had limited interest in sea angling. In fact, I had to borrow fishing gear/tackle.

Comments/Observations.

1. At paragraph number 4 on page 2 (of the preamble) the MCIB expresses appreciation and gratitude to those who assisted in the investigation and lists 4 bodies, in particular.

   To the best of Mr. O'Neill's knowledge the following also rendered valuable assistance at the time of the incident and subsequently and these should, in my view, be formally recognised;-

   - The RNLI;
   - The Life Boats from Kilmore Quay and Dunmore East attended, as did the Fethard in Shore Boat.
   - Members of the Hook Sub Aqua Club were on the scene immediately and this, coupled with their particular knowledge and past experience in tragedies of this nature meant that they were able to render immediate and relevant expert voluntary assistance.
   - The Kilkenny Sub Aqua Club and the Wexford Sub Aqua Club also participated in the subsequent search and rescue operation.
   - The Irish Coast Guard Service.
   - The Commissioners of Irish Lights who provided the lifting and transport equipment for the recovery of the "Pisces".
   - The Fethard Cliff and Coast Rescue Voluntary Unit.
   - Many member of the Public and local community in the Fethard on Sea/Hook Peninsula Region.

   Whilst I am a lay person without particular knowledge and or expertise in these matters it occurs to me that the expertise of the voluntary services in the locality should be acknowledged on a statutory basis. I suggest that, for future

purposes, the voluntary bodies including, for example, the local RNLI Stations and the local Sub Aqua Clubs, should be furnished with draft Reports in matters of this nature. The observations, recommendations and suggestions of such voluntary bodies in terms of prevention of further occurrences of this nature are likely to be valuable and should be taken into account.

2. At page 4 of the draft Report, under the heading of "Machinery and Mechanical Equipment", the vessel is described as being fitted with a Ford FSD 4 cylinder diesel engine with a power output of about 38 KWs (kilowatts) , being 50.93 horsepower. The Report of James Moore, Marine Surveyor, dated the 19th of April, 1999, appearing at appendix 4 in the Report specifies the engine as being a Kelvin model P4. It appears, therefore, that the engine of the vessel was changed on some date between the 19th of April, 1999 and the 28th of July, 2002. This is not commented upon in the draft Report. Perhaps the changing of a fundamental component of the vessel is of some significance?

3. Similarly, Mr. Moore's Report described the vessel as having a single fuel tank only located forward whereas as the time of the loss of the vessel it appears that a second fuel tank was located aft (but was not in use).

4. At the time of Mr. Moore's survey the vessel had two bilge pumps, one automatic and one manual whereas, at the date of the loss of the vessel the manually operated bilge pump had been removed and it appears that a second electric bilge pump had been fitted.

5. It appears that at the time of Mr. Moore's Survey some form of GPS (Global Positioning System) equipment was fitted whereas this equipment does not appear as listed under the heading of Navigational/Radio Equipment on page 5 of the draft Report of the MCIB.

The foregoing apparent amendments to the lay out and equipment of the vessel are not commented upon in the draft Report of the MCIB.

6. It appears that the view of the MCIB Inspector, as expressed in the draft Report, is that the retro fitting of a new working deck in the area aft of the wheelhouse was a significant contributing factor in the ultimate loss of the vessel, with a consequent loss of life. It is noted that the vessel was so modified between 1991 and 1993 (see page 7 of the draft Report, under the heading "Modifications to Vessel"). What efforts have been made to determine when, precisely, such ,modifications were carried out, and by whom? It is not clear for example, on reading Mr. Moore's Report (dated 19th April, 1999) as to whether this work had been carried out at that time.

It is submitted that it is a matter of considerable concern to those with an interest in this matter that the date of such conversion/modification and the identity of the person or persons who carried out such modifications should be clarified. The drawings appearing at appendices numbers, 3, 6 and 8 appear to be relevant in this context.

Is it not the case that the addition of the aft deck had effects beyond the reduction of the freeboard from 550 mm to 76 mm, as follows?;-

- (a) does the addition of the new deck not result in the boat floating lower in the water than it did prior to the addition of the new deck, and should this not be represented in the drawing appearing in appendix number 3?.

- (b) is it not the case that following the addition of the new deck the centre of gravity of the vessel is raised significantly (in that passengers will now be positioned at a much higher level than heretofore) with a consequent adverse effect on the lateral (side to side) stability of the vessel?

- (c) it is submitted that the addition of the deck has the effect of masking a potentially lethal build up of water in the bilges/below deck area leading to the ultimate loss of effective stability of the vessel/sinking.

It appears that the fact of the retro fitting of a deck to the aft portion of this vessel, coupled with the apparent poor standard of design and execution of those works contributed significantly and directly (in the view of the MCIB Investigator) to the loss of the vessel and the loss of life.

In all of those circumstances, perhaps legislation should be introduced and enforced to the effect that alterations to the original design of a vessel (particularly significant alterations) should either be absolutely unlawful or be authorised only in certain stringent and supervised circumstances.

It is submitted that the draft Report does not sufficiently explore the circumstances and details regarding the modifications to the vessel.

The history of the design, construction, alteration and ownership of the vessel must be of significance to the survivors and the relatives of those who died. The draft Report is not sufficiently specific in relation to these matters. For example, the last two owners are the only previous owners identified. Furthermore, the draft Report simply states that;- " it is understood that the vessel was built in Kinvara, Co. Galway in the last 1970's but a precise date could not be established" and, at a later point, in the draft Report, it is stated that;- " it is understood that this modification

(the retro fitting of the aft deck) was carried out between 1991 and 1993".

With respect, the foregoing information is not sufficient.

Surely it is possible to identify the original designer of the vessel? Is it not possible to identify the original builder and the date of original construction? Are plans not available? I would be surprised if this vessel had not, at some time prior to April of 1999, come to the attention of the Authorities. It appears that the previous owner, Robert Chapman, required a commercial sea fishing licence/authorisation (hence the Report of Mr. Moore dated the 19th of April, 1999). The vessel had a fishing number – D397. I would expect that there should be records available in relation to the construction and subsequent history of the vessel. Perhaps the original construction was financed/grant aided by BIM or some other statutory/non statutory body? Are previous condition surveys available? What explanations are offered in relation to the apparent replacement of the engine and other components, from time to time?

A detailed history in these matters may be relevant to both the authorities and persons likely to be adversely affected by the publishing of the Report.

7. Perhaps it should be unlawful to have freeing ports unless such freeing ports are fitted with a flap or flange which permits the drainage of water from open decks into the sea but not vice versa.

8. Lacunae in the regulations for certification and licensing of any vessel to which any member of the public may have recourse, under any circumstances, should forthwith be rectified, with no possibility for any delay in the implementation/ application of such licensing/regulating provisions.

9. Perhaps it would be worthwhile to enact legislation requiring the publication and maintenance of cautionary/warning notices for public display at all piers/jetties in the State being points of embarkation on recreational type vessels.

10. There should be no possibility of derogation from a statutory requirement that adequate life saving and safety equipment for each passenger should be kept on every vessel operating in Irish territorial waters. It would seem from the draft MCIB Report that such equipment should include, at a minimum, a single life jacket for each and every passenger together with a life raft and flares/related emergency alert equipment.

11. It should be a requirement that the Skipper of any vessel involved in the type of activity the subject of this Report should hold a suitable Health and Safety

Qualification in Safety and First Aid and that a Safety Briefing, in a specified format, should be a pre-requirement before departure from the pier/jetty. (This type of requirement is already complied with in the context of travel by air, car ferry and in public places such as theatres, cinemas, etc.)

12. Consideration should be given to the requirement for an annual (start of season) survey by an independent and adequately insured and qualified person to certify (annually) the safety of vessels of any description to which the public may have access during each boating season.

13. Consideration should be given to a requirement for the compulsory insurance and indemnification of vessels used for the conveyance of the public, under any circumstances. It is submitted that in the event of such requirement the Underwriting Insurance Companies would, of necessity, take an interest in the Safety and sea worthiness of vessels and such interest would have a beneficial effect for the public at large.

Yours faithfully,

SHANE Ó NEILL

Shane O'Neill

## THE MCIB RESPONSE TO MR. O'NEILL'S LETTER OF 13 DECEMBER, 2002.

1. The MCIB acknowledges the assistance of all those who helped in this investigation.

2. The engine at the time of the survey in April, 1999 was a Kelvin model P4 (see Appendix 4). This engine was replaced during the time of Robert Chapman's ownership with a Ford engine which was onboard on the day of the casualty. The total weight of the previous engine and gearbox was approximately 304 Kg. The weight of the replacement engine and gearbox was 311 Kg. Because of the small weight difference, the change of engine is not considered to be relevant.

3. The Report notes there was a second fuel tank aft, which was not in use, and therefore not relevant to the cause / loss of the vessel.

4. The Report notes that this pump had been removed. If it had been present, its usefulness in this particular incident would have been dependent on some person being able to identify its function and to operate it rapidly before the vessel lost stability.

5. There was no GPS equipment onboard on the day of the casualty.

6. The Report gives a brief history of the vessel. A new deck was added between 1991 and 1993 in order to facilitate a certain type of commercial fishing. The vessel then operated as a fishing vessel apparently without incident for at least 9 years. The person who undertook such modifications could not be expected to foresee that the vessel would subsequently be used for the carriage of passengers in such a condition. It would be unfair to name this person in our Report. Similarly the names of the other previous owners are not relevant.

6{a&b} The details of the inclining experiment and stability analysis contained in the Report clearly identified the stability problems experienced by the vessel in her described condition. (However if the deck was removed and the analysis was re-done, there would be a consequent improvement in the stability condition due to the lowering of the height of the centre of gravity above the keel and the vessel would be lighter and would float marginally higher in the water).

6{c}: The presence of the deck conceals what is below. The Report recommends that bilge alarms and pumps with auto start facilities be fitted in underdeck locations. (see Recommendation 7).

Meylers Park,
New Ross,
Co. Wexford.
15/12/02


Mr. Dick Heron,
Secetary,
M.C.I.B.,
Leeson Lane,
Dublin 2.

Dear Mr. Heron,

We wish to express our overall satisfaction with your report and investigation. We are especially pleased with the rescue efforts of the local fishermen and the emergency services for their quick and skillfull response.

However on:

(a) pg 4. It states that the vessel was fitted with a FORD FSD 4 cylinder diesel engine with a power output of abour 38 KWs (kilowatts) (50.93 horsepower)

Yet on:

(b) appendix 4 pg 2. Under the survey report it states that the engine was a Kelvin model P4 coupled through a marine gearbox, single shaft to 3 bladed propeller developing 15 KW.

What effect if any would the engine change regarding weight and horsepower have on the boyancey and stability of the vessel ?

On page 8 regarding the voyage on the 23rd July 2002 as a matter of couriosity how many persons were on board that day ?

Page 10 The sea conditions were observed to be slight with a swell running in the bay. In layman terms what would the height or the estimated height of the waves be ?

Thanking you for your courtesy and efficiency.

Yours Sincerely

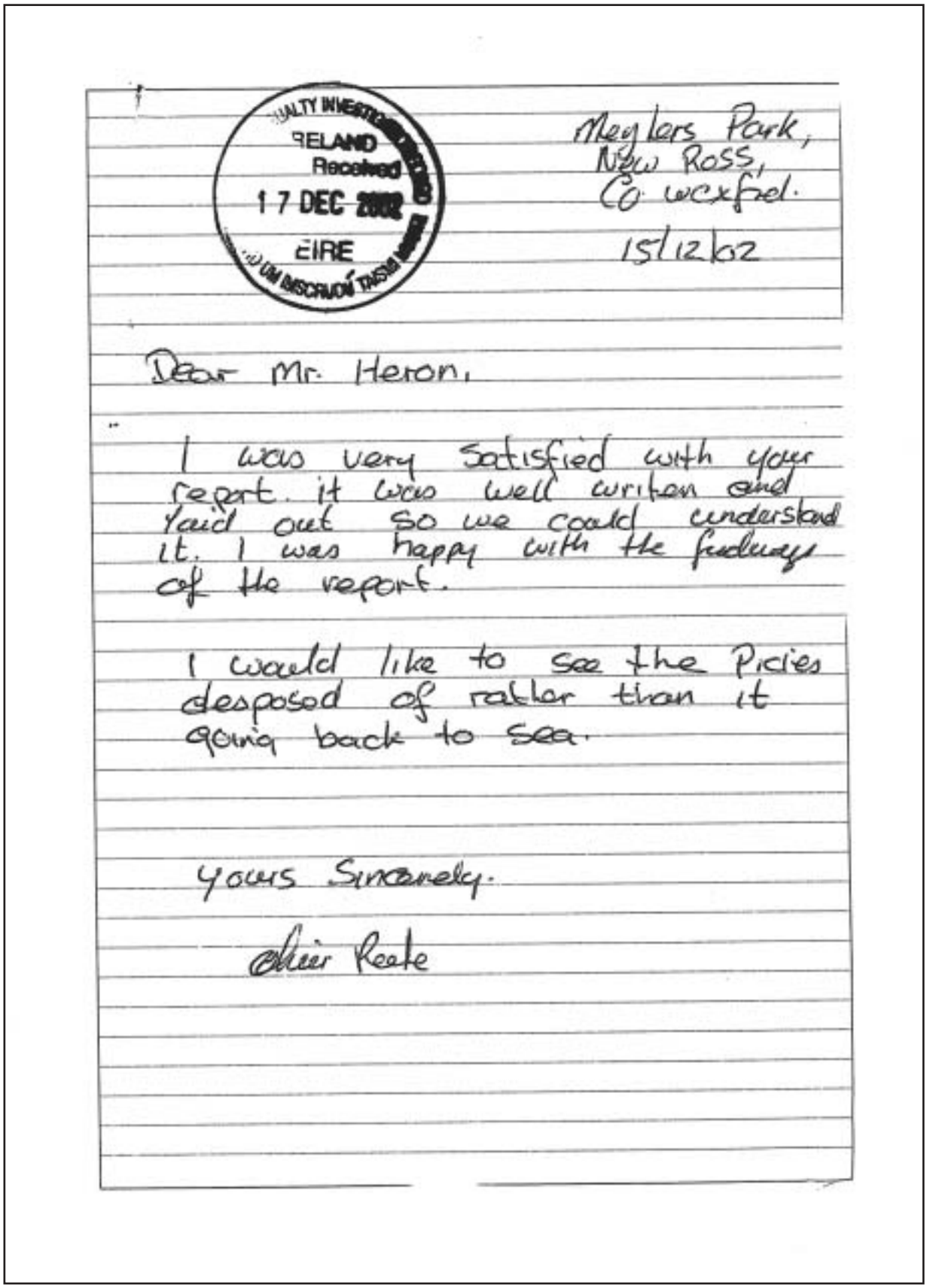
gretta o Connor

## THE MCIB'S RESPONSE TO MS. O'CONNOR'S LETTER OF 15 DECEMBER, 2002

Pt (a) The engine at the time of the survey in April, 1999 was a Kelvin model P4 (see Appendix 4). This engine was replaced during the time of Robert Chapman's ownership with a Ford engine which was onboard on the day of the casualty. The total weight of the previous engine and gearbox was approximately 304 Kg. The weight of the replacement engine and gearbox was 311 Kg. Because of the small weight difference, the change of engine is not considered to be relevant.

Para 4: It is not known how many people were aboard on 23 July, 2002.

Para 5: Wave height was 0.5 metre and wave length was 10.0 metres.




Meylers Park,
New Ross,
Co. Wexford.

15/12/02

Dear Mr. Heron,

I was very satisfied with your report. it was well written and laid out so we could understand it. I was happy with the findings of the report.

I would like to see the Pixies desposed of rather than it going back to sea.

Yours Sincerely.

Aine Reale

**The MCIB has noted the contents of this letter.**

Your Ref. M.C.I.B. 35

Robinstown
Clonroche
Co. Wexford
16-12-2002

Dear Sir,

Please note the only comment I have to offer on the draft report is, I consider it is a very comprehensive document. Very thorough & well prepared, certainly it represents a large input of work, for which I am very thankful to everyone involved.

Yours Sincerely

Patrick Doyle


**The MCIB has noted the contents of this letter.**

**Patrick Doyle**
Robinstown
Clonroche
Co. Wexford
Home Phone (051) 428317

05 May 2003


Mr. Dick Heron
Secretary
Marine Casualty Investigation Board
29-31 Adelaide Road
Dublin 2

Your ref: MCIB 35

Dear Mr. Heron,

Thank you for your letter of the 9th ultimo with draft report. The report does not seem to address a number of issues:

In both reports received, there have been no references to the lack of experience of the Skipper of the Pisces, the fact that he went out in dense fog without a GPS and an appropriate radar system. The fact that the VHF radio was not tuned to the appropriate frequency. All these point to an inexperienced , unskilled and careless seaman.

From discussion with survivors of the tragedy, it would appear that the Skipper of the Pisces, did not take the appropriate action in dealing with the emergency that occured. By turning the boat, when she had taken water on, the bilge pump having failed, this was the real source of the tragic event that followed. This has not been borne out in the draft reports, to date.

On one previous occasion the Skipper of the Pisces had taken this group of anglers out, in a fully equipped boat, namely the Fethard Bay. From the report it would appear to indicate that he had taken them out in the Pisces on a number of occasions. This is not the case. Clarification should be sought in regard to these issues and also the Skipper's ability and his lack of expereince in handling a sea-going boat.

Yours sincerely,

Patrick Doyle
Patrick Doyle

## MCIB RESPONSE TO LETTER DATED 05/05/'03 RECEIVED FROM MR. PATRICK DOYLE IN RELATION TO THE SECOND DRAFT REPORT ON THE LOSS OF THE MFV PISCES.

**2nd Paragraph:**- Comment on "*lack of experience of the Skipper of the Pisces*".

The draft report does not make reference to the level of experience of the Skipper in operating a vessel. There is currently no formal qualification for operators of such vessels and similarly no requirement to demonstrate any previous experience. The Skipper served in the Merchant Navy for a number of years and is the holder of an efficient deck hand certificate from the UK authorities.

**2nd Paragraph:**- Comment on "*the fact that he went out in dense fog without a GPS and an appropriate radar system*".

The report clearly states the weather conditions on the day of the casualty as being foggy with visibility down to 50 metres. This was certainly a factor in the rescue operation but had no influence on the cause of the vessel sinking. (Vessels holding a Passenger Boats License are only permitted to operate when visibility is good).

If the Pisces had been equipped with GPS, Radar etc., the Skipper may have been able to give his position as the vessel sank, but the Skipper of the St. Coran did already have a position for the Pisces from his own equipment and was therefore able to proceed directly to the casualty position.
(Licensed passenger boats operating up to 3 miles from land are not required to carry either radar or GPS equipment).

**2nd Paragraph:**- Comment on "*on the fact that the VHF radio was not tuned to the appropriate frequency*".

The VHF was "tuned" to the working channel for the area; Marine Channel 6, which was entirely appropriate up to the time of the distress message. The VHF set was fitted with a push button which if pressed would automatically change the channel to the emergency channel 16. The Skipper did not change the channel setting when he gave his distress message because he knew other boats were in the area listening on Ch 6. As stated in the report the distress message should have been transmitted on Ch 16 in order to alert the Irish Coastguard.

**3rd Paragraph:**-Comment on *"it would appear that the Skipper of the Pisces did not take the appropriate action in……."*.

By turning the boat the Skipper may indeed have induced the upsetting (capsizing) moment which caused the boat to heel to a level where the edge of the gunwale was submerged. However the stability analysis conducted during the investigation demonstrated that the vessel's condition before the Skipper attempted the turn was already unstable, i.e. there was already an upsetting (capsizing) moment present and the vessel did not have any range of positive stability. The vessel was liable to capsize whether any turn was attempted or not. Similarly any wave or wind action or movement of persons on the boat could also have caused an increase in the capsize moment. The action of Mr. Barden to try and turn the boat back to port would be considered as the natural thing to do give the situation that the Pisces was in.

**4th Paragraph:-** Comment *"from the report it would appear to indicate that……"*.

Mr. Barden had owned the Pisces since 31.05.02 and had taken other parties out previous to the incident. Some of the group on board on the day of the casualty had been on a fishing trip with Mr. Barden the previous year on board a different vessel.

**Haven Maritime (Kilmore) Ltd**

Phone (053) 29965
Kilmore Quay
Fax (053) 29754

Co. Wexford

16th December 2002

The Secretary
Mr. Dick Heron
M.C.I.B
Leeson Lane
Dublin 2

Re. Draft Report into the incident involving "Pisces"

Dear Mr Heron,

We have had the opportunity to read the draft report into the incident involving the "Pisces". We are taking this opportunity to make the following observations to the draft report and request you include the factual additions for the sake of balance, fairness and completeness.

1. At page 7 under the heading "Modifications to Vessel"

The vessel was obviously altered and modified since the survey of the 19th of April 1999 by the removal of the Kelvin 15 kW engine and the installation of the larger Ford 38 kW inboard diesel engine together with the second fuel tank and a deck access opening to the new engine with deck cover.

2. At page 9 under the heading "Ownership of the Pisces"

We are not aware of the extent of the wear and tare on the boat during the three year period prior to the incident.

There is no evidence of the servicing or repair works carried out during the said period of three years.

We acknowledge this opportunity to respond to the draft report and are available to assist your further efforts should they arise.

Yours sincerely

James Moore
For and on behalf of
Haven Maritime (Kilmore) Ltd.


**The MCIB has noted the contents of this letter.**

An Roinn Cumarsáide,
Mara agus Acmhainní Nádúrtha
Baile Átha Cliath 2.

Department of Communications,
Marine and Natural Resources
Dublin 2.

17 December 2002

Mr John G O'Donnell B.L.
Chairman
Marine Casualty Investigation Board

Dear Mr O'Donnell

I refer to your letter of 19 November 2002 enclosing a copy of the draft report of the investigation into the foundering of the vessel "PISCES" on 28 July 2002 in accordance with section 36 of the Merchant Shipping (Investigation of Marine Casualties) Act 2000.

I welcome the Board's early and comprehensive investigation of this tragic incident. I note the circumstances of this tragedy, as set out in the Board's draft report and in particular the conclusions and recommendations. I fully agree with the recommendations and I intend to deliver on these as a matter of priority. Following the "PISCES" accident I announced a review of safety issues relating to small watercraft and I have already made progress on a number of fronts. Many of these actions mirror the recommendations in your draft report.

Attached to this letter, for your assistance, is a resumé of the actions I have already taken or will put in train in relation to your recommendations. The Maritime Safety Directorate will work to implement as rapidly as possible the various actions set out.

The Board may wish to note in particular the following actions that I have taken in the context of my review of small craft safety:

- I brought forward the implementation date for the new passenger boat regulations to 1 January 2003
- The exemption from the requirement to hold a passenger boat licence for boats used exclusively for angling will also cease on 1 January 2003 and after that date all boats used for the carriage of passengers for reward under the 1992 Merchant Shipping Act will require a licence.
- The Maritime Safety Directorate of my Department has organised 5 public consultation / workshop sessions around the country to publicise the introduction of the new passenger boat regulations and to assist existing boat owners who will be applying for passenger boat licences for the first time.

- I have issued a consultation paper on the wearing of life jackets and personal floatation devices (PFDs) and invited views from stakeholders and the public at large. A key element of the consultation process is to canvass the public's view on the introduction of statutory provisions to require the wearing of lifejackets and PFDs in a wider range of circumstances than is currently the position.

- The Maritime Safety Directorate is reviewing the form and circulation of marine notices. It is also considering measures to ensure that the public are fully aware of licensing conditions and safety requirements applicable to passenger boats, including posting details of licence holders on the web and providing a new form of licence identification notice that would be prominently displayed on a licensed vessel.

- The Maritime Safety Directorate are considering measures to enhance the enforcement of existing legislation, including in consultation with other services such as the Gardaí and the Defence Forces.

- I have also asked the Maritime Safety Directorate to finalise proposals in relation to the training for operators. This matter was raised on a number of occasions during the consultation / workshop information sessions referred to earlier.

Once again, I would like to thank the Board for issuing the draft report so quickly and I await the final publication.

Yours sincerely

pp Dermot Ahern TD
Minister for Communications, Marine and Natural Resources

## THE MCIB RESPONSE TO MINISTER DERMOT AHERN'S LETTER OF 17TH DECEMBER, 2002.

It is noted that Minister Ahern, by Statutory Instrument No. 555 of 2002 - Merchant Shipping (Passenger Boat)(Amendment) Regulations, 2002, brought into operation the Merchant Shipping (Passenger Boat) Regulations, 2002 on the 1st January, 2003 (these regulations were originally to come into operation on the 6th June, 2003).

An Roinn Cumarsáide,
Mara agus Acmhainní Nádúrtha
Baile Átha Cliath 2.

Department of Communications,
Marine and Natural Resources
Dublin 2.

6 May 2003.

Mr. John O'Donnell, B.L.,
Chairman,
Marine Casualty Investigation Board,
29-31 Adelaide Road,
Dublin 2.

Dear Mr. O'Donnell,

I refer to the final draft of the report on the incident involving the "Pisces" which you sent to this Department on the 9 April 2003.

I note the recommendations of the Report and have responded directly to each recommendation in the attached document.

I can assure you that I have attached the highest priority to maritime safety, since coming into office last June. In August 2002, I initiated a review of safety in the maritime sector and in November 2002, I announced a consultation process on the wearing of lifejackets.

Arising from these initiatives, a number of significant new measures have been implemented and are being introduced. These include:

- Strengthening of the regulations governing the operation of passenger vessels. Under the 2002 Passenger Boat Regulations, exemptions are no longer permissible and ALL passenger boats must therefore be licensed by the Department of Communications, Marine and Natural Resources.

- I will be launching a safety campaign on 29 May, as part of a three year safety programme which is being promoted by the Coast Guard and the Maritime Safety Directorate of the Department. The campaign this year will involve a series of local radio advertisements on the June and August Bank Holiday weekends, advising the public of the need to wear lifejackets and ensure that they do not travel on unlicensed vessels. A series of brochures dealing with safety issues will be posted on the Department's website and, for the first time ever, the Department will embark on an internet advertising campaign, targeting tourists, holiday makers and specific interest groups, linking them to the safety information and brochures available on the Department's

Office of the Minister for Communications, Marine and Natural Resources
Oifig Aire Cumarsáide, Mara agus Acmhainní Nádúrtha
Leeson Lane, Dublin 2
Lána Chill Mochargáin
Baile Átha Cliath 2
Tel +353 1 678 2000
LoCall 1890 44 99 00
Fax +353 1 6782029
e-mail minister.ahern@dcmnr.gov.ie

website. An important aspect of the safety campaign is to convey the message that everybody has a role to play in ensuring safety on the water.

- I intend to introduce a new Safety Code for Leisure Craft as quickly as possible. Under the Code, owners of vessels will be liable for ensuring that anyone on board their vessel complies with the conditions of the Code, such as the wearing of lifejackets. I intend also to announce shortly additional legal measures requiring the wearing of lifejackets by children in a wider array of circumstances than is currently the position.

- Seven information seminars have taken place around the coast, to inform the public and assist vessel owners in applying and complying with the new licensing requirements. The Maritime Safety Directorate of my Department will meet with local Garda Siochana to inform them of vessel licensing requirements and ensure compliance. Marine Surveyors from my Department are also engaging in a series of spot-checks on operators around the coast as part of a new enforcement regime.

- Enforcement of rules and regulations will be an important feature of the work of the Maritime Safety Directorate going forward. In this regard more unannounced inspections, closer liaison with the Gardai and an active policy of seeking prosecutions for infringements will be pursued.

I am aware that the majority of vessel owners are fully conscious and compliant with safety requirements and that members of the public are, to a large extent, aware of the need for vigilance and safety on the water, and I applaud those who have taken the necessary steps to ensure the highest safety standards on the water. It is my sincere hope that our continuing campaign to raise awareness, regulate and enforce a new safety regime will ensure that we do not have a repeat of some of the terrible and unnecessary tragedies which we have experienced in recent years.

Yours sincerely

Dermot Ahern

**Dermot Ahern, T.D.,**
Minister for Communications,
Marine and Natural Resources

**Recommendations and Actions arising from the Pisces Report**

| | Recommendation | Action |
|---|---|---|
| 1. | Unlicensed vessels should not be used for the carriage of passengers. The operators of such vessels should be investigated and if found to be operating illegally, prosecuted. Greater vigilance should be exercised in ensuring improved inspection and enforcement. | All exemptions for passenger boats have ceased since 1 January 2003. ALL passenger boats are therefore now required to have a licence. Enhanced enforcement and inspection arrangements are in place, including unannounced inspections and closer liaison with the Gardai. |
| 2. | The Merchant Shipping Act, 1992, should be better enforced to ensure that passengers, being carried for reward are being carried in safety | A programme of unannounced inspections will be undertaken closer liaison with local Gardai will be maintained and an active policy of prosecution of infringements by operators will be pursued. |
| 3. | All vessels, carrying passengers as defined by Section 2 of the Merchant Shipping Act 1992 should be required to carry an approved inflatable liferaft capable of accommodating all persons on board. Skippers and all members of crew who have responsibility for the operation of same should be properly trained in their use. | The Minister introduced new passenger boat regulations on 1 January 2003. Under the new regulations, passenger boats must carry life rafts. Where a vessel is too small to allow the safe carriage of a life raft, lifejackets must be provided and worn at all times. Under the regulations, passenger boats of classes P1, P2 and P4 fall into this category. The Minister will bring forward training requirements for skippers in relation to the use of inflatable life rafts which will apply from 2004 onwards. |
| 4. | All vessels, as defined by Section 2 of the Merchant Shipping Act 1992, should be required to carry an approved lifejacket for every person on board. | The Minister initiated a consultation process on the wearing of lifejackets following the Pisces tragedy. 114 responses were received by the Maritime Safety Directorate. The Minister will now draw up a Safety Code for the Leisure Sector, with a view to boat owners being liable for non-adherence to the Code's standards. The onus will clearly rest with boat owners to ensure the Code is complied with in every respect. |
| 5. | All other vessels should have on board an approved lifejacket or personal flotation device (PFD) for every person on board that should be worn at all times by every person when on the open deck of such vessels. The skipper or person-in-charge has the responsibility to ensure | |

| | Recommendation | Action |
|---|---|---|
| | compliance with this. | |
| 6. | Dept should issue a Marine Notice warning of the dangers associated with modifying vessels without proper evaluation of the consequences. | A Marine Notice will issue before the end of May on this matter. |
| 7. | Bilge alarms or automatic pumps, having external running indication, should be fitted to detect water accumulation in any underdeck spaces of all passenger boats where such accumulation could have an adverse effect on the stability of the vessel. | This is now a requirement under the Merchant Shipping (Passenger Boat) Regulations 2002. |
| 8. | Dept should initiate a publicity campaign aimed at increasing public awareness to the requirement that any vessels, which carry passengers for reward, must be properly certificated or licensed. | In support of the new Passenger Boat Regulations introduced in 2003 a total of seven information seminars have been held around the country to publicise the new regulations and assist boat owners who wish to apply for licences.<br><br>Details of passenger boat licences and ship certificates are now available on the Department's website so that intending passengers can check the status of any vessel on which they intend to travel.<br><br>The Department's Maritime Safety Directorate and the Irish Coast Guard are promoting a 3-year programme of safety awareness. As part of this programme, the Minister will launch a public awareness campaign at the end of May:<br><br>• local radio advertising on the June and August Bank Holidays will advise the public of the need to wear lifejackets and to check that passenger vessels are licensed by the Department;<br><br>• a number of safety information leaflets will be |

| | Recommendation | Action |
|---|---|---|
| | | available on the Department's website;<br><br>• the Department will promote a safety campaign on the internet, targeting young people, holidaymakers and tourists and linking to the safety information on the Department's website;<br><br>• and the Coast Guard will also visit primary schools in June as part of a new push to bring about cultural change on water safety matters.<br><br>An important aspect of the safety campaign is to convey the message that everybody has a role to play in ensuring safety on the water. |
| 9.<br><br><br><br><br><br><br><br><br><br>10. | The Merchant Shipping Act 1992 should be amended to require a more efficient and user-friendly method of indicating to members of the public that a particular passenger boat is licensed to carry passengers and should include the expiry date of the licence.<br><br>The Merchant Shipping Act 1992 should be amended to ensure that an obligation is placed on the owner, operator or skipper of all passenger boats to produce the relevant passenger boat licence for inspection if requested by a passenger. This licence should be on board at all times when passengers are carried. | Under Section 10 of the 1992 Act a passenger ship certificate must be carried and displayed where it is visible and legible by all persons on board. Under section 17.2 of the Act, passenger boats are required to be marked on the outside with the name of the owner, the serial number of the licence in relation to the vessel and the maximum number of passengers that the vessel is licensed to carry.<br><br>Under section 15.3 of the 1992 Act, the Minister will require that a copy of the licence which will include the expiry date must be carried and displayed similar to that pertaining to passenger ships. Details of licences and certificates are now available on the Department's website at www.dcmnr.ie |
| 11. | Dept should ensure that the Gardai, through the Garda Commissioner, are made more | See response to recommendation 2 above. The Maritime Safety Directorate has forwarded to the |

| | Recommendation | Action |
|---|---|---|
| | aware of the requirements in relation to the carriage of passengers in order to ensure better enforcement of the Merchant Shipping Act 1992. Other means of ensuring better enforcement of this Act at local level should also be explored. | Gardai a copy of all passenger boat licences to facilitate the enforcement of legislation. The Maritime Safety Directorate will also organise information seminars on maritime safety legislation for the Gardai. In addition, the Maritime Safety Directorate inspectors will liase with local Gardai in relation to licensed boat operators in their areas. |
| 12. | Dept should ensure that a Register of licensed vessels is readily available on the Department's website. | Details of licensed passenger boats and ship certificates are available on the Department's website. The vessels are listed on a county-by-county basis and also by vessel name. |
| 13. | Dept should ensure that all skippers and/or persons in charge of the operation of passenger boats have the appropriate training. | The Maritime Safety Directorate will introduce training requirements for skippers operating passenger boats, based on locally provided courses to national standards. The standards will be in place from 2004. An appropriate implementation programme will also be developed. |
| 14. | Owners of all vessels should ensure that where a change of ownership occurs that the appropriate authorities are notified in writing immediately. | This issue may arise in particular in relation to small fishing vessels. The legal position in relation to the maintenance and application of an appropriate register is being examined by my Department in conjunction with BIM. The Attorney General's Office is also being consulted. |
| 15. | Dept should establish procedures for ensuring that all vessels can be uniquely identified. | Section 17.2 of the 1992 Act requires that a vessel cannot be used as a passenger boat unless<br>• the first name and surname of the owner<br>• serial no. of the licence<br>• an indication in the form that the boat is licensed to carry passengers,<br>• that the vessel is the subject of a licence and<br>• the max. No. of passengers authorised by the licence. |

| | Recommendation | Action |
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| | | are painted on the outside of each side of the vessel above the waterline.<br><br>Details of vessels currently licensed to carry passengers are available on the Department's website. |
| 16. | Dept should examine whether insurance provisions, similar to those, which already apply to vessels certificated to carry more than 12 passengers, should apply to vessels licensed to carry 12 or less passengers in order that such vessels have adequate insurance cover. | The Maritime Safety Directorate is consulting with the Attorney General's Office with a view to implementing the recommendation. |
| 17. | Skippers and operators of all passenger-carrying vessels should ensure that appropriate safety announcements are made, prior to leaving port, to ensure that passengers are made aware of the locations of safety equipment and advised on the appropriate procedures in the event of an emergency. | This is now included as a condition of all passenger boat licences being issued and renewed.<br><br>The Maritime Safety Directorate will carry out spot-checks on vessels to ensure that these conditions are complied with. |
| 18. | A Marine Notice should be issued immediately advising owners/operators of small craft on the correct marine radio communication procedures to be followed when a vessel is at sea. | A Marine Notice will issue by the end of May. |
| 19. | All small vessels carrying up to 12 people for reward should be required to install and maintain VHF radio equipment appropriate to the area of operation of each vessel as outlined in the Merchant Shipping (Passenger Boat) Regulations, 2002, S.I. No. 273 of 2002. | This recommendation is being implemented and will be enforced. |
| 20. | A survey programme be put in place to ensure that registered fishing vessels of up to 12 metres are compliant with the Fishing Vessel (Radio Installations) Regulations, 1998, S.I. No. 544 of 1998. | The Maritime Safety Directorate will implement a survey programme as recommended. |

**The MCIB has noted the contents of this letter.**