



MCIB

Marine Casualty Investigation Board
Bord Imscrúdú Taismí Muirí



**REPORT OF AN INVESTIGATION
INTO A MARINE CASUALTY
INVOLVING A
RECREATIONAL CRAFT
IN OR AROUND
LACKEN PIER, BELTRA,
CO. MAYO
16 JULY 2023**

**REPORT NO. MCIB/329
(No.6 OF 2024)**

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

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

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

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

In carrying out its functions the MCIB complies with the provisions of the International Maritime Organisation's Casualty Investigation Code and EU Directive 2009/18/EC governing the investigation of accidents in the maritime transport sector transposed into Irish law by the European Communities (Merchant Shipping) (Investigation of Accidents) Regulations 2011.



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

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Glossary of Abbreviations and Acronyms

C	Celsius
CGU	Coast Guard Unit
CoP	Code of Practice for the Safe Operation of Recreational Craft
GMT	Greenwich Mean Time
IRCG	Irish Coast Guard
LOA	Length Overall
MCIB	Marine Casualty Investigation Board
MN	Marine Notice
MOP	Member of Public
MRCC	Marine Rescue Co-ordination Centre
MSO	Marine Survey Office
NEOC	National Emergency Operations Centre
PFD	Personal Flotation Device
PLB	Personal Locator Beacon
RNLI	Royal National Lifeboat Institution
S.I.	Statutory Instrument
SITREP	Situation Report
SOLAS	International Convention for the Safety of Life at Sea
UTC	Universal Co-ordinated Time
VHF	Very High Frequency
WSI	Water Safety Ireland

Horsepower	hp
Hour	hr
Kilogram	kg
Kilometre	km
Knot	kt
Litre	lt
Metre	m
Newton	N

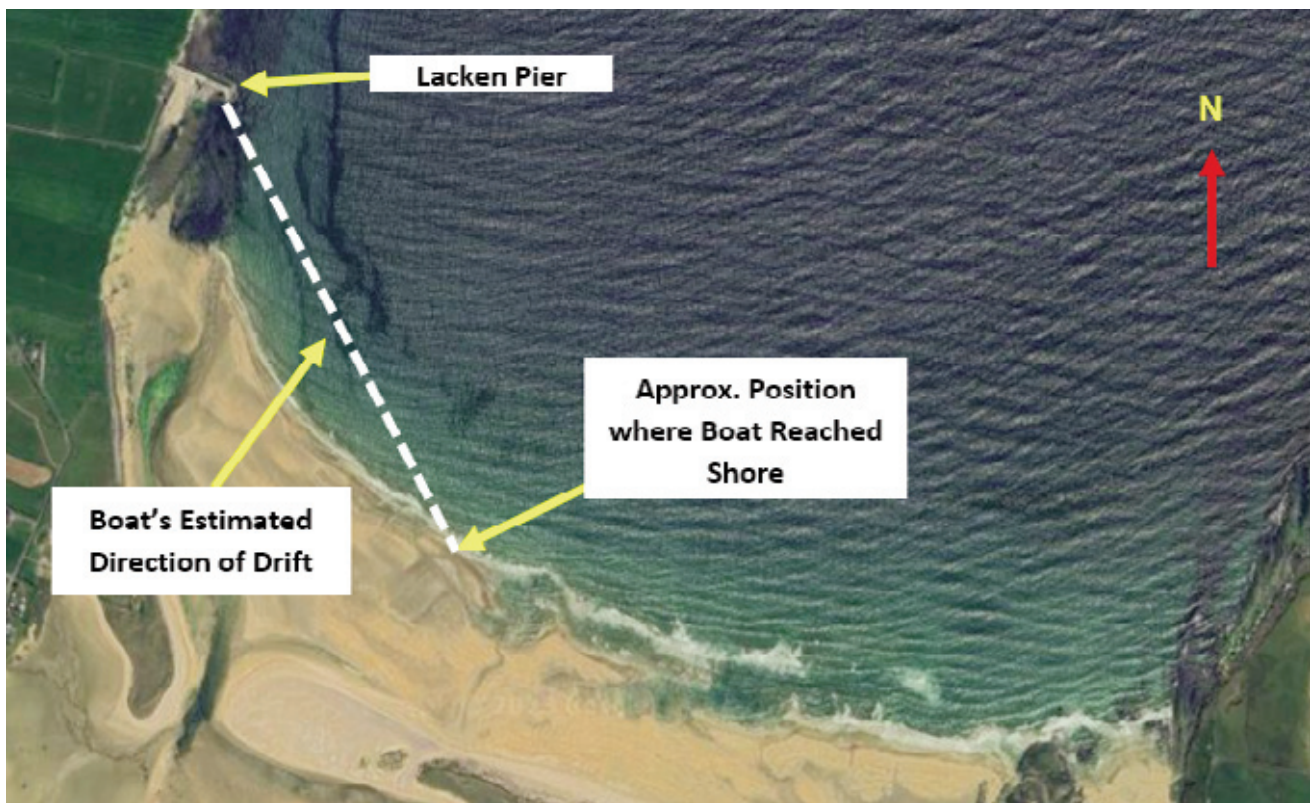
Report MCIB/329 published by the Marine Casualty Investigation Board.
3rd July 2024.

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1. SUMMARY

- 1.1 On the morning of the 16 July 2023 at around 10.20 hours (hrs) a recreational boat was launched from Lacken Pier, Beltra in Co. Mayo to facilitate a day of sea angling for two people. The boat was launched from a trailer towed by a tractor. The Casualty (the owner of the boat) was driving the tractor, and the Survivor was in the boat which was on the trailer. After launching, the Survivor made an unsuccessful effort to hold the boat alongside the pier while the Casualty parked the launch tractor and trailer. When the tractor and trailer were parked, the Casualty attempted to board the drifting boat and entered the water at the East Pier steps. He got into difficulty and was swept out to sea. The boat with the Survivor onboard drifted out to sea.
- 1.2 Emergency services were alerted to the incident by a member of the public (MOP) and Killala Coast Guard Unit (CGU) and Sligo rescue helicopter R118 were mobilised. The drifting boat came ashore at Lacken Strand with the Survivor still onboard. Shortly after, the Casualty was recovered from the water by R118 and transferred to Sligo University Hospital where he was pronounced dead.
- 1.3 The Survivor was recovered by R118 from the beach at Lacken Strand and transferred to Sligo University Hospital for treatment, and subsequently released and returned to Germany where he resided.

Note: Times are local time = UTC + 1 (Co-ordinated Universal Time + 1 hour).



Satellite photograph showing Lacken Pier and location where the boat came ashore.

2. FACTUAL INFORMATION

2.1 Vessel Details

Type:	Open boat with outboard engine.
Distinguishing Markings:	Kn-631-90.
Construction:	Glass Reinforced Plastic.
Length Overall (LOA):	5.18 metres (m).
Breadth:	1.82 m.
Depth:	0.76 m at transom.
Engine:	Honda 20 horsepower (hp) 4-stroke petrol outboard.
Auxiliary Engine:	Yamaha 4hp 2-stroke petrol outboard.



The recreational boat.

- 2.1.1 The boat was operated from the coxswain position on the starboard quarter. Controls included key-start with kill-switch and cord, throttle, and steering wheel. The engine trimming was manually operated with a lock mechanism located on the starboard side of the engine.

2.2 Crew

- 2.2.1 The Casualty was the boat owner and was a German national in his seventies that lived locally to the incident location. He was an experienced boat person who had frequently taken similar voyages in and around the area over many years living there, and it is understood that sea angling was his hobby. It is understood that the Casualty was able to swim. The Survivor was a German national in his seventies visiting the owner and spoke little English. The Survivor arrived in Ireland on the 12 July 2023, four days before the incident, and was unfamiliar with the operation of the boat. There are no records available to the Marine Casualty Investigation Board (MCIB) indicating whether either the Casualty or the Survivor had formal boat handling training or sea survival training.

2.3 Code of Practice

- 2.3.1 The boat was a recreational craft. The relevant provisions of the Code of Practice (CoP) for the Safe Operation of Recreational Craft¹ applies to this boat. There is no requirement for registration of this size of boat and no initial or annual survey requirements or any other applicable regulations for training etc.
- 2.3.2 The CoP sets out the legal regime that applies to all recreational craft at Part 1.2. European Union (EU) Directive 2013/53/EU on recreational craft and personal watercraft updates legislative requirements in Ireland dating from June 1998 for the design and construction of leisure boats and personal watercraft between 2.5 m and 24 m in length, such as sailing craft, motor boats and jet skis. It also lays down particular requirements for manufacturers, importers, private importers and distributors of watercraft. The Directive is aimed at ensuing standards in design and equipment and traceability. No issue in that regard applies in this investigation. A number of regulations in Chapter V of the International Convention for the Safety of Life at Sea (SOLAS Convention) dealing with safety of navigation, apply to all recreational craft. Some of these have relevance, in particular voyage planning and communications.
- 2.3.3 Marine Notice (MN) No. 30 of 2023 outlines the relevant SOLAS provisions, which are summarised as follows:
- It is a requirement that any voyage is properly planned prior to being undertaken.
 - Recreational craft must as far as practicable be fitted with a radar reflector (i.e. if it can reasonably be fitted, it should be fitted).
 - Regulation 29 of Chapter V requires a boat to have access to an illustrated table of the recognised life saving signals, so that it can communicate with search

1. Source: <https://www.gov.ie/en/publication/66ff7e-safe-operation-of-recreational-craft/#>

and rescue services or other boats if it gets into trouble. This is also a legal requirement under the Merchant Shipping (Carriage of Nautical Charts and Publications) Regulations 2021 (Statutory Instrument (S.I.) No. 149 of 2021). An illustrated Table of Life Saving Signals must be carried onboard.

- There is an obligation on the skipper of a recreational craft to report any dangers to navigation and respond to distress messages. This can be done by calling the Irish Coast Guard (IRCG) on Very High Frequency (VHF) radio, if onboard, or by contacting the IRCG at 112 or 999 and reporting directly to them. Information on the IRCG VHF channels can be found in MN No. 61 of 2020.
- It is a requirement that distress signals are not misused.

2.3.4 The CoP was published by the Department of Transport, Tourism and Sport in 2017, with updates in 2021. Chapter 2 of the CoP sets out recommendations for Sail and Motor Boats - Coastal Operation. While not mandatory in terms of legal enforceability the CoP provides guidance on the regulations surrounding recreational craft, which are legally enforceable. The CoP is an authoritative guidance document that encourages compliance with its safety recommendations.

2.3.5 Sections of the CoP particularly pertinent to this incident include Chapter 2, paragraphs 2.1, 2.2, 2.3, and Chapter 10, paragraphs 10.3 and 10.4:

Section 2.1 Training: *“It is recommended that persons participating in sailboat and motorboat activities undertake appropriate training. A number of training schemes and approved courses are available and information can be obtained directly from course providers.”*

Section 2.2 Voyage Planning: *“All voyages, regardless of their purpose, duration or distance, require some element of voyage planning.”*

Section 2.3 Pre-departure Safety Checks and Briefing: *“...Before the commencement of any voyage, the skipper should ensure that all persons on board are briefed on the following emergency procedures: The stowage and use of personal safety equipment such as PFD/lifejackets...”*

“In addition to the above, the skipper should provide a more intensive briefing to at least one other person who will be going on the voyage regarding the following: ...Method of starting, stopping and controlling the main engine, Method of navigating to a suitable place of safety.”

Chapter 10, Paragraph 10.3 headed Slipways, outlines safety guidance and information to slipway users including: *“Note and follow any warnings or safety instructions posted by the owner of the slipway.”*

Chapter 10, Paragraph 10.4 headed Beach Launching provides: “Always wear a suitable PFD/lifejacket and ensure all loose gear is correctly secured”.

- 2.3.6 Table E of Chapter 2 of the Code outlines minimum items of equipment to be carried onboard various categories of recreational vessels.²

Type of Equipment	Category D Vessel Quantity of Equipment
1. Lifesaving and personal safety equipment	
1.1 A suitable PFD/lifejacket for each person on board of at least 150 Newtons (CE EN 396/I.S. EN ISO 12402-3:2006) (see Appendix 5).	✓ (100N)
2.1 Handheld distress flares.	(2)
2.4 Orange smoke signal canisters.	(2)
3 Radios and Communications (see Appendix 2 for additional requirements for Sea Area A1, A2)	
3.5 Waterproof hand-held radio.	✓
3.6 A radio receiver AM/FM, capable of receiving shipping forecasts, and national/local weather forecasts.	✓
3.7 Mobile Phone (in waterproof holder).	✓
5. Navigation Equipment	
5.7 Foghorn, powered or aerosol type.	✓
6 Bilge Pump	
6.1 Manual bilge pump capable of pumping from any hull watertight compartment and with all hatches closed.	✓
6.4 A bucket of capacity 8-12 litres, suitably fitted with a rope lanyard.	✓
7 Anchors and Warps	
7.1 Anchor with chain/warp, as appropriate for a vessels size and operating area ground holding conditions.	✓
7.2 Boats should have a suitably reinforced deck cleat/Samson post on the foredeck, and means of closing over the bow roller or fairlead used when anchoring.	✓

2. The boat would be considered as a Category D vessel “...Operate on tidal estuaries or inshore coastal waters adjacent to a safe harbour;... Be capable of operating in seas of up to 0.3 metres in height with occasional waves of maximum height 0.5 metres, and wind force up to Beaufort 4”. Source: CoP.

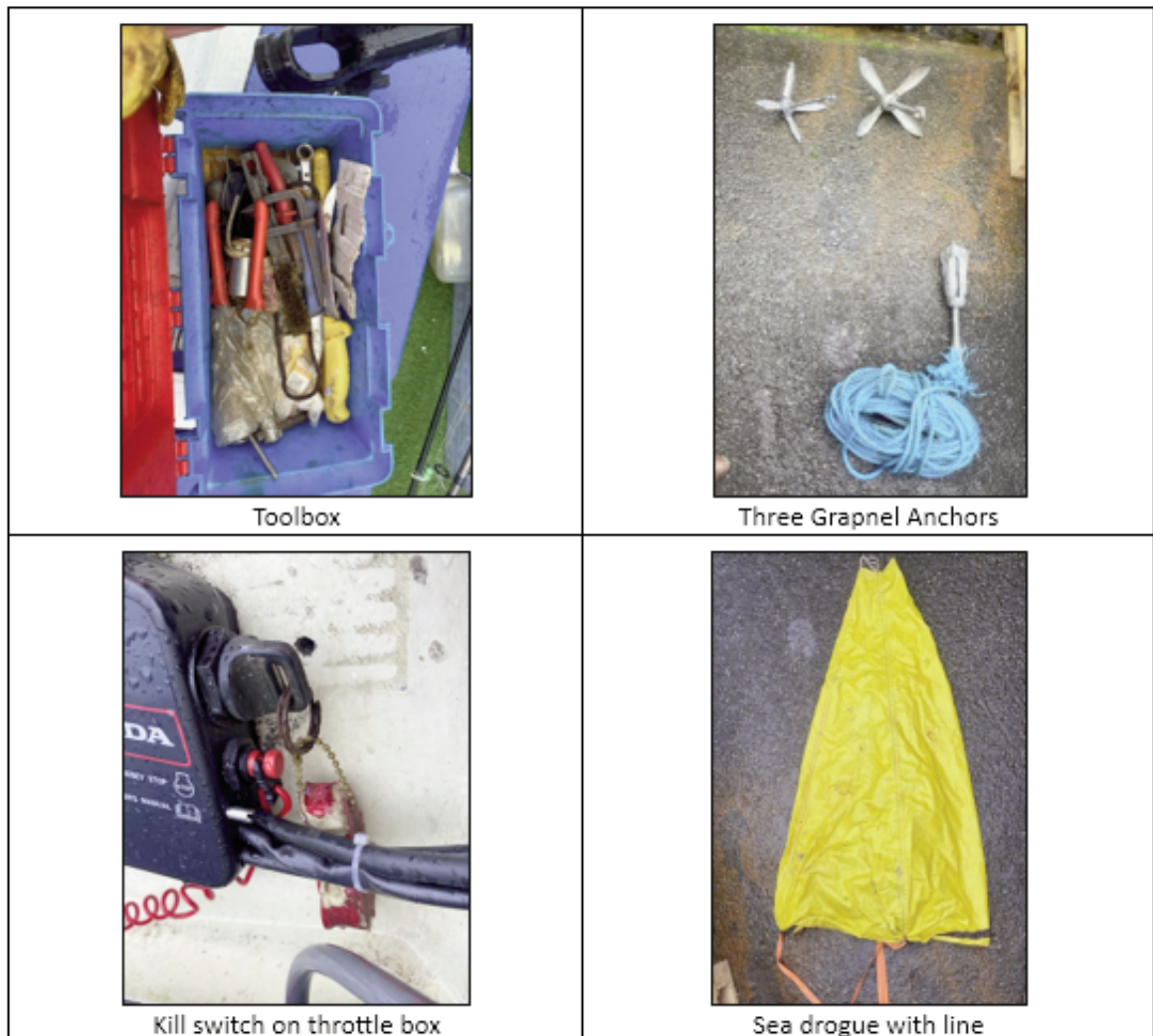
7.3 An adequate supply of warps and fenders. These should include suitable warps to allow the craft to be towed if necessary.	✓
8. General Equipment	
8.1 Emergency steering means, i.e. tiller for vessels fitted with wheel steering as their primary means of steering.	✓
8.2 Waterproof torch, capable of also being used for signalling.	✓
8.3 An appropriate tool kit and spare parts for the type of craft being used.	✓
8.5 Suitable First Aid Kit including a First Aid Manual.	✓

2.4 Safety Equipment Onboard the Boat

2.4.1 The boat was inspected on the 21 July 2023 at a Garda secure facility.

The following equipment was observed onboard:

- One main engine, Honda 20hp outboard 4-stroke engine in good condition, secured in the trimmed-up position.
- One fuel tank that was half full for use in the main engine.
- One auxiliary engine, Yamaha 4hp outboard 2-stroke engine in good condition, secured in the trimmed-up position.
- One fuel tank that was full for use in the auxiliary engine.
- Three orange lifejackets with whistles, two of which were 110 newtons (N).
- Three grapnel anchors with anchor lines.
- One sea drogue with lines.
- One engine toolkit.
- One set of oars.
- One boat hook.
- Six fishing rods.
- One Lowrance brand fish finder.
- Fresh food, water.
- Wet gear.



A selection of items of equipment onboard the boat.

- 2.4.2 Three lifejackets in good condition were fitted with whistles and were stowed in a forward compartment of the boat. Two of the lifejackets were rated at 110 N, one of the lifejackets was rated for between 70 kilogram (kg)-90kg.
- 2.4.3 Lifejackets were not worn by either person at the time of the incident.



Two of the lifejackets were 110 N, and the third rated to 70kg-90kg.

2.5 Water Safety Regime in Ireland

2.5.1 Water Safety Ireland (WSI) is a body under the aegis of the Department of Rural and Community Development. It has a statutory role that includes the promotion of both public awareness of water safety and measures to prevent accidents in water. Its website (www.watersafety.ie/boating) has specific guidance for boating, which includes 14 steps to safe boating as follows:

- “1. Check condition of boat and equipment, hull, engine, fuel, tools, torch.*
- 2. Check the weather forecast for the area.*
- 3. Check locally concerning dangerous currents, strong tides.*
- 4. Do not drink alcohol while setting out or during your trip.*
- 5. Carry an alternative means of propulsion e.g. sails and oars or motor and oars.*
- 6. Carry a first aid kit on board and distress signals (at least two parachute distress rockets, two red hand flares).*
- 7. Carry a fire extinguisher, a hand bailer or bucket with lanyard and an anchor with rope attached.*
- 8. Carry marine radio or some means of communication with shore.*
- 9. Do not overload the boat - this will make it unstable.*
- 10. Do not set out unless accompanied by an experienced person.*
- 11. Leave details of your planned trip with someone ashore - including departure and arrival times, description of boat, names of persons on board, etc.*
- 12. Wear a lifejacket at all times.*
- 13. Keep an eye on the weather - seek shelter in good time.*
- 14. In Marine Emergencies, call 999 or 112 and ask for the coast guard.”*

2.5.2 Training and certification for the operation of vessels of all types, including recreational craft, is a matter for the Minister for Transport, who is the approving authority for existing courses provided by Sailing Ireland including recreational craft courses. The Department of Transport’s approach to the safety of recreational craft is described in the Irish Maritime Directorate Strategy 2021-2025³ and includes work on policy development, statutory regulation, safety awareness promotion and enforcement.

3. The Irish Maritime Directorate Strategy is available in hard copy and at:
<https://www.gov.ie/en/publication/a7b8d-irish-maritime-directorate-strategy-2021-2025/>

- 2.5.3 MNs are information notices issued by the Department of Transport to publicise important safety, regulatory and other information relating to the maritime sector in Ireland. All MNs are published and catalogued online at www.gov.ie/en/collection/e762fd-marine-notices and are issued by email directly to those who subscribe to the relevant mailing list. MNs concerning recreational craft are directed to the owners and operators of these vessels. Each MN includes contact details for individuals seeking additional technical assistance regarding the discussed topics. The following MNs pertain to regulations regarding the proper wearing of Personal Flotation Devices (PFD) for pleasure craft, as well as the publication and accessibility of the CoP for the Safe Operation of Recreational Craft.

Marine Notices related to the issues raised in this investigation report		
Number	Date Published	Subject
No. 52 of 2023	27 July 2023	Think and Prepare- Important safety advice for owners and users of recreation craft
No. 30 of 2023	20 April 2023	Application of SOLAS Chapter V to Recreational Craft including weather, crew, limitations of vessel, contingency plan, navigational dangers, info ashore
No. 32 of 2022	2 June 2022	Code of Practice for the Safe Operation of Recreational Craft
No. 40 of 2021	25 June 2021	Code of Practice for the Safe Operation of Recreational Craft
No. 32 of 2019	29 August 2019	Personal Flotation Devices for Pleasure Craft and Personal Watercraft

MN No. 52⁴ “*Think and Prepare - Important safety advice for owners and users of recreation craft*” in particular is directed to masters, owners and users of recreational craft and contains essential information and guidance. Of particular relevance to this investigation is the following content:

- “✓ *Get training from an approved training provider in the correct use of the type of craft you wish to use;*
- ✓ *Wear a suitable Personal Flotation Device/Lifejacket: Know about the legal requirements in relation to the wearing and carrying of Personal Flotation Devices/Lifejackets and the need for the proper care and maintenance of such devices. Select the proper type based on activity or boating conditions. See Marine Notice No. 32 of 2019 for further information;*

4. <https://www.gov.ie/pdf/?file=https://assets.gov.ie/265723/5489b3cd-1103-4bff-b1ae-d0c9d4c1d11e.pdf#page=null>

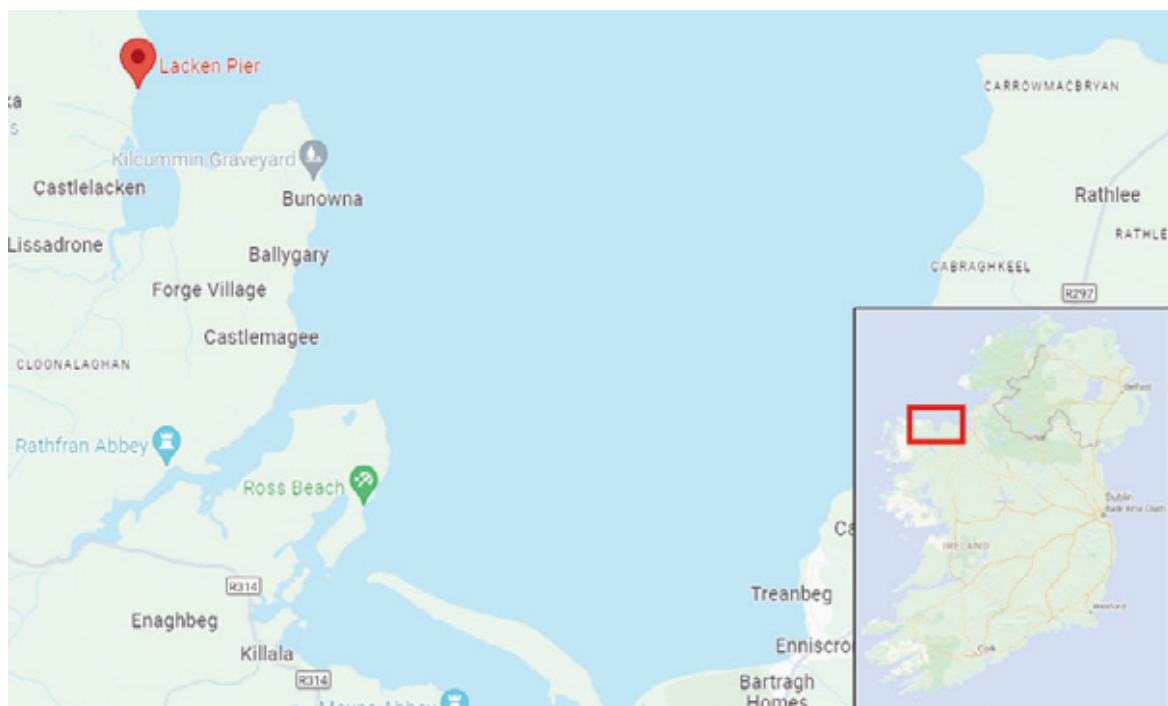
- ✓ *Check current weather forecasts and sea/lake/river conditions prior to departure and plan your voyage accordingly;*
- ✓ *Check for any hazards and risks and Prepare a Passage Plan;*
- ✓ *Avoid operating alone: There are increased risks involved with single person operation when there is nobody else on board or nearby to help you or to raise the alarm. Make sure you have an effective means of quickly re-boarding the boat in the event that you fall overboard;*
- ✓ *Carry out Pre-Departure Safety Checks and Briefing: Check your craft and safety equipment. All persons on board should know what to do in the event of an emergency, where the safety/emergency equipment is on board, e.g. flares, radio equipment, life jackets, etc., and how to use the equipment;*
- ✓ *Tell someone about the plans for your trip: A designated person ashore should know your departure and return times, where you are going, and what to do to raise the alarm if necessary;*
- ✓ *Bring a dependable means of communication: VHF radio equipment is the recommended method of communication and craft users should be familiar with its use, reference Marine Notice No. 70 of 2022. Mobile phones should not be relied on and should only be considered as a back-up means of communication. Where mobile phone use is proposed, the phone should be in a waterproof pouch with a lanyard, be fully charged at all times and the signal strength and charge indicator should be regularly checked while the vessel is underway;*
- ✓ *Relax and float: If you fall into the water, the initial shock of being in cold water can cause you to gasp and panic. Stay calm and relax. Try to float or tread water while you catch your breath. A properly fitted lifejacket will keep your head above water, ensuring you gasp air. Try to get hold of something that will help you float and get as much of your body out of the water as possible. To lessen heat escape, keep your legs together with arms/elbows by your side. Once you are calm, call for help;*
- ✓ *In a marine emergency, raise the alarm on VHF Channel 16 or call 999 or 112 and ask for the Coast Guard."*

See Appendix 7.1 - Marine Notice No. 52 of 2023.

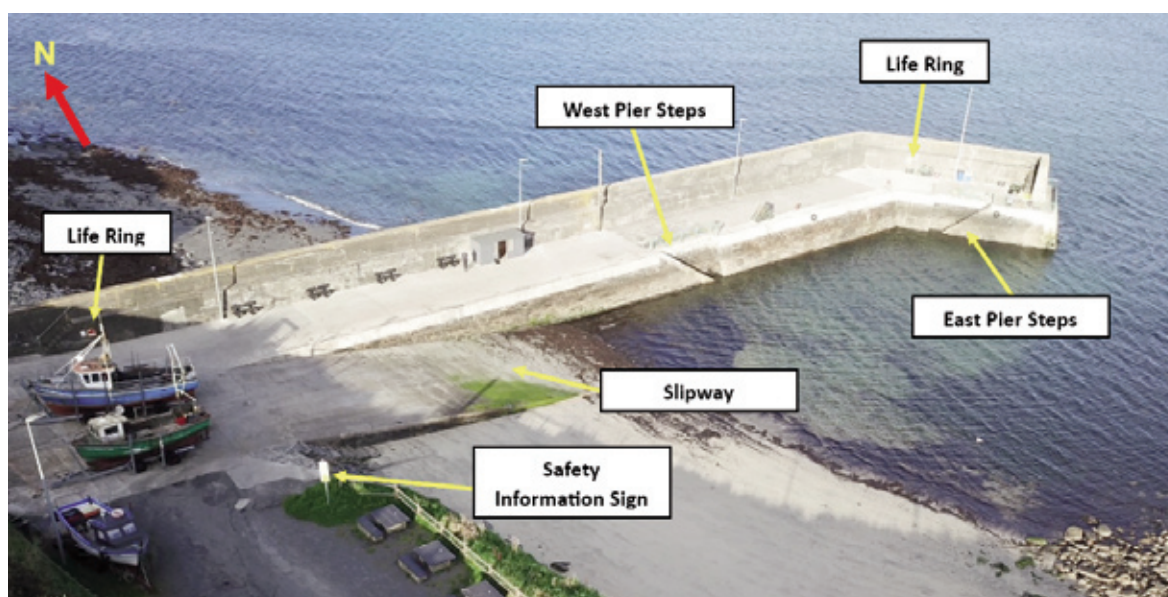
2.6 Incident Location

- 2.6.1 Lacken Pier is located to the north of Killala Bay at Beltra, Co. Mayo. The pier consists of a slipway, pier, two sets of access steps - one at the head of the pier to the east, one at the foot of the pier to the west.

- 2.6.2 During low spring tide the West Pier steps are not accessible by boat due to shallow water. Due to sand deposition and erosion around the East Pier, the seabed at the steps was uneven and undulated. As the Casualty planned to board at the East Pier steps, the depth of water at the steps must have permitted this but deepened quickly as one moved seawards away from the pier.



Map showing location of Lacken Pier.



Lacken Pier showing slipway and access steps.

- 2.6.3 At the access to the slipway, there was a safety information sign that included “Warning Slipway” and “Caution Slippery surface”. There were two life rings in good condition on the pier with one at the foot of the pier, and one at the head of the pier - both accessible.
- 2.6.4 Lacken Pier is a local authority owned amenity and as such the maintenance, upkeep and safety of the pier and slipway is the responsibility of Mayo County Council.



Safety signage at Lacken Pier.

2.7 Marine Incident Information

Type:	Marine casualty resulting in one fatality and which posed a risk to another person.
Date:	16 July 2023.
Time:	10.20 hrs (local time).
Position:	Latitude 54° 16.96' N - Longitude 009° 14.73' W Lacken, Killala Bay, Co. Mayo.
Wind Speed:	Beaufort force 4 (mean wind speed 10 - 15 knots (kts)) with occasional gusts up to 20 kts
Wind Direction:	West-Northwest.
Sea State:	Rough (3.0 m to 3.5 m) offshore at buoy M4 (approximately 100 kilometre (km) northwest of Lacken Pier).

Air Temperature:	Between 11° Celsius (C) and 15° C.
Sea Temperature:	15.0° C.
Tide Information:	Killala Bay (Inishcrone) High: 04.48 hrs Greenwich Mean Time (GMT) Low: 10.38 hrs (GMT).
Range:	Spring tides.
Sunrise:	Approximately 05.23 hrs.
Sunset:	Approximately 22.01 hrs.
Boat Operation:	Sea angling - preparation for departure.
Human Factors:	Lack of knowledge and skills in boating operations, lack of adequate planning.
Consequences:	Single fatality.

- 2.8 This incident resulted in a marine casualty as defined in Section 2 of the Merchant Shipping (Investigation of Marine Casualties) Act, 2000, which defines a marine casualty and a vessel in the following terms:

“marine casualty” means an event or process which causes or poses the threat of—

- (a) death or serious injury to a person;*
 - (b) the loss of a person overboard;*
 - (c) significant loss or stranding of, or damage to, or collision with, a vessel or property; or*
 - (d) significant damage to the environment,*
- in connection with the operation of—*
- (i) a vessel in Irish waters;*
 - (ii) an Irish registered vessel, in waters anywhere; or*
 - (iii) a vessel normally located or moored in Irish waters and*
- under the control of a resident of the State, in international waters contiguous to Irish waters, and includes an accident or damage referred to in section 26(1)(b).”*

2.9 Weather Report Sunday 16 July 2023

Meteorological Synopsis:	An unstable moderate to fresh north-westerly airflow with a frontal trough (occlusion) covered Ireland on the morning of 16-July-2023. A depression (986hPa) was centred off the northeast of Scotland.
Estimated weather conditions in the vicinity of Lacken Pier Co Mayo on the morning of Sunday 16-July-2023 between 6am and 12noon Local Time (=UTC+1).	
Wind:	Winds were moderate Beaufort force 4 (mean wind speed 10 – 15 knots) from west-northwesterly direction occasional gusts up to 20 knots may have occurred.
Weather:	Variable cloud and frequent showers, some showers were heavy (rainfall amount for the period 6am to 12noon is estimated at 4 to 8 mm). In between showers there were bright or sunny spells.
Visibility:	Visibility was moderate or poor at times in showers otherwise visibility was good.
Temperature:	Air temperature ranged between 11 and 15 degrees Celsius.
Estimated Sea State conditions (offshore): ⁵	Rough with estimated significant wave height of 2.5 to 3 m on a north-northwesterly swell.
Sea Temperature:	~15 degrees Celsius

See Appendix 7.2 - Met Éireann Weather Report.

2.10 Shore Authority Involvement and Emergency Response

Summary from IRCG Situation Reports (SITREP).

16 July 2023

Time:	Event:
10.35	MOP reported small vessel in difficulty off Lacken Pier. Urgent message was broadcast.
10.40	Killala CGU tasked to scene.
10.42	Helicopter R118 was tasked to scene.
10.44	MOP reported the possibility of a second person in water.

5. Offshore weather data recorded from Offshore buoy M4, located approximately 102 km north-west of Lacken Pier.

- 10.50 Urgent message was broadcast informing of a possible second person in water.
- 10.58 Vessel with one person onboard landed on Lacken Strand.
- 11.08 R118 was on scene.
- 11.18 R118 recovered second person from water and proceeded to Sligo University Hospital.
- 11.20 R118 crewmember's Personal Locator Beacon (PLB) activated unintentionally.
- 11.28 R118 landed Sligo University Hospital.
- 11.38 Second person transferred to ambulance. R118 active PLB switched off.
- 11.48 Road ambulance arrived at Lacken Pier.
- 11.50 First Casualty reported to have laboured breathing. Killala CGU on scene.
- 12.05 R118 re-tasked to the scene.
- 12.33 Killala CGU with the Casualty.
- 12.47 Casualty onboard R118 and proceeded to Sligo University Hospital.
- 13.11 R118 returned to base.
- 14.10 Killala CGU returned to base.

See Appendix 7.3 - Irish Coast Guard SITREP.

3. NARRATIVE

- 3.1 On Sunday morning the 16 July 2023 the Casualty and the Survivor prepared the boat at the Casualty's house with the intention to go sea angling on Killala Bay. They equipped the boat with the gear required for the day of fishing, including fishing rods, wet gear, lifejackets, and provisions. At around 10.10 hrs a neighbour saw them leaving the house, with the Casualty driving the tractor and the Survivor sitting in the boat on top of the launch trailer being pulled by the tractor. They made the 1.35 km journey to Lacken Pier.
- 3.2 On arrival at Lacken Pier the Casualty positioned the tractor and trailer on the slip to launch the boat from the slipway. He reversed the trailer down the slipway and when the boat was floating (with the Survivor onboard), he cast off the boat from the launch trailer and drove the tractor up the slipway and parked. Neither had donned the available lifejackets.
- 3.3 The boat was afloat, and it is presumed that the Survivor attempted to manoeuvre the boat clambering along the pier towards the East Pier steps to allow the Casualty to board. The boat started to drift away from the pier and the Survivor lost contact with the wall.
- 3.4 The Survivor remained in the boat as it drifted towards the East Pier steps. From the time it took for the Casualty to drive away from the slipway, park and alight from the tractor and make his way along the pier to the East Pier steps, the boat had drifted away from the pier wall seawards.
- 3.5 There was no small-craft weather warning on the day of the incident but there was a large swell present. The pier offered shelter to the slipway from the prevailing west-northwest swell which allowed the boat to be launched into flat water. As the swell and seas hit the northeast side of the pier it followed the pier wall around to the south facing side. The surge flowed along the pier wall and seawards, making it difficult to hold the boat to the pier wall and may have caused the boat to drift seawards.
- 3.6 The Survivor made attempts to throw a line from the boat to the Casualty ashore at the East Pier steps, but attempts were unsuccessful, and the boat continued to drift further away from the pier. The Casualty did not seek to avail of either of the two available safety rings. As he sought to embark on the boat, he ended up in the water at the East Pier steps and then got into difficulty.
- 3.7 At around 10.35 hrs a MOP who was at Lacken Pier observed the boat drifting towards Lacken Strand with the occupant in distress, signalling for help. The MOP called the emergency services, who tasked the local CGU, emergency services, and rescue helicopter R118. The report was that there was someone adrift in a boat. There was no reference to the Casualty being in the water and he was only sighted about ten minutes later by another call to the emergency service. At that time visibility was poor and it was only much later when the

emergency services reached the Survivor that it was confirmed that there was a person in the water.

- 3.8 The boat with the Survivor still onboard, continued to drift in a south-southeast direction for approximately 750 m and was brought ashore intact onto Lacken Strand by the prevailing swell and breaking waves.
- 3.9 At 11.08 hrs rescue helicopter R118 was on scene and commenced searching for the Casualty off Lacken Pier, and at approximately 11.18 hrs he was recovered from the water and brought onboard R118 and transferred to Sligo University Hospital, where he was later pronounced dead.
- 3.10 A road ambulance arrived on scene and was directed to the Survivor at Lacken Strand, which was inaccessible to road traffic. Getting the Survivor to the road ambulance would have required him to walk towards the road, which would have taken some time and considerable effort. Rescue helicopter R118 was re-tasked to rescue the Survivor from Lacken Strand and transfer him to Sligo University Hospital for treatment.
- 3.11 The boat was recovered from the beach by local personnel and brought near to the road, from where it was secured by An Garda Síochána and transferred to their secure location in Castlebar for examination.



Photograph taken after boat was transported to the Garda secure location, showing equipment onboard including main and auxiliary engine.

- 3.12 On 21 July the boat was inspected by an MCIB Investigator and was found to be in reasonable condition with the hull fully intact and no sign of a hull breach.
- 3.13 The cause of death is a matter to be determined by the coroner.

4. ANALYSIS

4.1 There are five factors which combined to cause this incident:

1. Failure to appropriately plan for the fishing trip, including equipment.
2. Failure to wear lifejackets.
3. The lack of familiarity with the boat, its controls and operation, and general knowledge and experience.
4. Evaluation of the hazards and requirements for mitigation.
5. Cold water immersion.

4.2 Failure to Appropriately Plan and Lack of Equipment

4.2.1 Table E of Chapter 2 of the CoP for Recreational Craft recommends the inclusion of the following equipment for boats in sheltered/coastal waters:

- Suitable PFD/Lifejacket 150 N for each person onboard (at least 100 N for sheltered waters).
- Two handheld distress flares and two orange smoke signals.
- VHF radio and a waterproof hand-held VHF radio.
- Mobile phone (in waterproof holder).
- Foghorn (powered or aerosol type).
- Manual bilge pump.
- Anchor and warp.

This boat complied with a number of the above recommendations including lifejacket requirements, mobile phone in a waterproof case, manual bilge pump, anchor, and warp, although the mobile phone was in the possession of the Casualty, and not onboard the boat at the time of the incident. The Survivor had no mobile phone or appears not to have used it. There was no foghorn or distress flares onboard the boat, which lack of was a contributing factor (with the absence of the Survivor's mobile) to the incident. Had they been available the Survivor may have been able to alert the Casualty at an earlier stage to the fact that he was drifting with no control over the boat, or, to alert the MOP who called the emergency services at 10.35 hrs.

4.2.2 The Casualty and Survivor prepared the boat for a day of sea angling on Killala Bay and planned their departure from Lacken Pier. The boat was supplied with

fishing rods, food, lifejackets, and water, which indicated some planning. The presence of three anchors, a sea drogue⁶, the main and auxiliary engines, and an engine tool kit, suggests the boat was prepared to deal with unplanned events such as engine failure.

4.3 Failure to Wear Lifejackets

4.3.1 When the Casualty and Survivor arrived at the pier, they did not don their lifejackets, and still proceeded to launch the boat. This miss-step resulted in the Survivor being onboard the waterborne boat, and the Casualty being on the pier without a lifejacket. There is no legislative requirement to wear a PFD/lifejacket whilst on a pier or when a vessel is made fast to the shore. However, WSI guidelines, set out in section 2.5.1 in this report, clearly states that a lifejacket should be worn at all times. Further, as the Survivor was on a boat that was not made fast to the shore, he should have been wearing a PFD.

4.3.2 The Pleasure Craft (Personal Flotation Devices and Operation) (Safety) Regulations 2005 (S.I. No. 921 of 2005) as amended⁷, provides for the wearing of PFDs/lifejackets in small boats. Section 6(1) of the Regulations state that *'...A person on a pleasure craft (other than a personal watercraft) of less than 7 metres length overall shall wear a suitable personal flotation device⁸ while on board an open craft or while on the deck of decked craft, other than when the craft is made fast to the shore or at anchor...'*.

4.3.3 The provisions are addressed in MN No. 32/2019. Lifejackets were available and were stowed in the forward compartment of the boat.

See Appendix 7.4 - Marine Notice No. 32 of 2019.

4.3.4 Despite the regulatory framework in place, for the enforcement of the requirements of the Pleasure Craft (Personal Flotation Devices and Operation) (Safety) Regulations 2005 (S.I. No. 921 of 2005) as amended, instances of non-compliance appear to persist. Although the Department of Transport continue to communicate MNs to inform maritime users of legislative requirements including MN No. 32 of 2019, incidents involving pleasure craft continue to be observed of casualties or bodies being recovered from the water without lifejackets.

4.4 Lack of Familiarity with the Boat

4.4.1 As the Casualty parked the tractor and trailer after launching the boat, the Survivor remained in the boat as it drifted along the pier wall. The boat started to drift away from the pier and the Survivor lost contact with the wall. The

6. A sea drogue is a device that is streamed from a boat in heavy weather in order to stabilise the boat and to limit progress through the water.

7. See <https://www.irishstatutebook.ie/eli/2005/si/921/made/en/print>

8. The definition for which was amended by the Pleasure Craft (Personal Flotation Devices and Operation) (Safety) (Amendment) Regulations 2018 S.I. No. 400 of 2018.

Survivor attempted to throw a line to the Casualty on the pier, but these attempts were unsuccessful, and the boat continued to drift away from the pier, prompting the Casualty to enter the water and attempt to wade or swim to the boat.

- 4.4.2 The boat had a functioning engine that was secured in the trimmed-up position and out of the water. The start key was in the ignition located on the throttle box and was available for use. Lowering and starting the engine (water depths permitting) whilst keeping it in neutral gear, before final disconnection from the trailer would have ensured the engine was available for immediate use. Having the engine running and steering controls available could have allowed the Survivor to control the boat and manoeuvre it to the access steps, or back to shore, however the Survivor did not start or operate the boat controls. Section 2.3 of the CoP for Recreational Craft recommends “...the skipper should provide a more intensive briefing to at least one other person who will be going on the voyage regarding the following: ...method of starting, stopping and controlling the main engine...”. It is uncertain if such a briefing took place before departure. Although such a pre-departure briefing was not a substitute for experience, sufficient information could have been shared regarding the engine operation to allow the Survivor to lower and start the engine and gain control of the boat as it drifted away from the pier wall.

4.5 Evaluation of the Hazards and Requirements for Mitigation

- 4.5.1 The CoP for The Safe Operation of Recreational Craft recommends boat operators to “...Note and follow any warnings or safety instructions posted by the owner of the slipway...” (Chapter 10.3 The Safe Operation of Recreational Craft). Safety signage at Lacken Pier included two signs posted at the access to the slipway warning of the slipway and slippery surface. There was no signage for advisory wearing of lifejackets on the pier. A simple diagrammatic sign may have prompted the Casualty and Survivor to suspend the launching of the boat to allow them to don their lifejackets.
- 4.5.2 There was no small-craft weather warning on the day of the incident but there was a large swell present. The pier offered shelter to the slipway from the prevailing west-northwest swell which allowed the boat to be launched into flat water. As the swell and seas hit the northeast side of the pier it followed the pier wall around to the south facing side, the surge flowed along the pier wall and seawards making it difficult to hold the boat to the pier wall and causing the boat to drift seawards. The ability to operate and control the boat may have mitigated the effect of the surge and allowed the boat to be navigated to the pier.
- 4.5.3 After the boat was launched, there was no line or painter from the boat made fast to the shore. The lack of a secure arrangement attaching the boat to the pier resulted in the boat drifting away from the pier to the sea.

- 4.5.4 As the boat drifted away from the pier wall there were unsuccessful attempts by the Survivor to throw a line ashore to the Casualty. This would have been of concern to the Casualty and impacted their ability to process the situation. The Casualty ascended the East Pier steps and entered the water. It is likely that he started to wade towards the drifting boat, and quickly got out of depth due to the uneven nature of the seabed. The Casualty was then taken out to sea.
- 4.5.5 The Survivor witnessed the Casualty enter the water and get into difficulty. This was a traumatic event for the Survivor to witness, who was drifting out to sea in the boat. The Survivor managed to raise the alarm by raising and lowering his hands, which was seen by a MOP ashore, who in turn contacted the emergency services. Had the Survivor the skills, knowledge, training to operate the boat, he may have been able to power up the engine and navigate the boat back to the pier or had the boat been equipped with a foghorn or flares the Survivor may have been able to alert the Casualty to what was unfolding early on.

4.6 Cold Water Immersion

- 4.6.1 Cold water is defined as water of 15°C or less⁹. The Met Éireann weather report for the date of this incident describes the water temperature as 15°C. Outlined below are important aspects from Chapters 4 and 6 of *Essentials of Sea Survival* (Golden, F., & Tipton, M. (2002). *Essentials of sea survival*. Human Kinetics) dealing with the critical effects on the human body of the initial and short-term responses that occur following immersion in cold water, followed then by the long-term hypothermia effects.

See Appendix 7.2 - Met Éireann Weather Report.

4.7 Initial and Short-Term Responses

- 4.7.1 The initial response is known as cold shock. The cold water causes a sudden lowering of skin temperature, which has a significant effect on a person's circulation and breathing. The body's responses commence almost immediately upon immersion, peaks during the first 30 seconds, and lasts for two to three minutes. This effect is believed to be responsible for the majority of immersion deaths in cold water, not the later onset of hypothermia.
- 4.7.2 The initial changes to the circulation system occur because of constriction of the skin's blood vessels. This increases the resistance to blood flow in the skin. Blood pressure rises dramatically. The heart works harder as it tries to pump blood through constricted blood vessels.
- 4.7.3 In cold water an initial breathing gasp of up to two or three litres (lts), close to the total lung capacity for an adult, is followed by uncontrollable rapid over-

9. Source: Golden, F., & Tipton, M. (2002). *Essentials of sea survival*. Human Kinetics.

breathing (hyperventilation). The rapid over-breathing can result in a tenfold increase in the volume of gas entering and leaving the lungs each minute, which can cause dizziness and confusion, and can create a sensation of breathing difficulty or suffocation. These are physiological effects that can contribute to the feelings of panic experienced by a person.

- 4.7.4 The reduction in breath-hold time that occurs after initial immersion in water is a major danger for a person who is otherwise fit and healthy. While a person may normally be able to hold their breath on average for over one minute, this reduces to less than ten seconds upon immersion in cold water. Consequently, in choppy or turbulent water where small waves may intermittently submerge the head or airway, a person is at risk of inhaling water during the first few minutes until they can regain control over their breathing. Near drowning can occur after someone has inhaled only a small volume of water, of 0.25-0.5 lts for an average individual, which is a particularly small volume when compared with breathing volumes of over 150 lts recorded in the first minute after immersion in cold water.
- 4.7.5 Many of the activities that are critical to survival require effective use of the hands. However, in some cases as short as just minutes, the ability to use the hands is impaired in cold water as they, and the muscles in the forearms that help control them, experience cooling. This can lead to a significant decrease in manual dexterity, handgrip strength, and speed of movement.
- 4.7.6 Having survived the initial responses, those without a flotation aid will have to make swimming movements to remain afloat or swim to a safe refuge, but it has been shown to be extremely difficult to swim during the first minutes after immersion in cold water, even for those considered to be 'good' swimmers in warm water, even to save their lives.
- 4.7.7 A common misconception about drowning is that it is caused by the weight of saturated clothing dragging a person under, which can lead to the misguided action of undressing in the water, which has the undesired effect of removing insulation between a body and cold water. As buoyant air within the clothing gradually escapes from within the fabric the person experiences a lowering in the water, which requires them to try and lift the head higher out of the water to breathe, which can further exacerbate the effects. Even small waves on the surface can have the effect of bringing the mouth close to water, thereby tending to cause inhalation of water.

4.8 Hypothermia Response

- 4.8.1 If a casualty survives the initial and short-term effects of immersion in cold water, they remain at risk from the effects of impaired sensation and muscle function, leading to loss of consciousness, drowning or cardiac arrest through the response known as hypothermia. The signs of hypothermia can include a visible shivering; slurred speech; quieter/less communicative; uncharacteristic

behaviours or personality; uncoordinated limb movements; a general slowing in physical and mental activity; increased errors or forgetfulness, poor judgment, bad decisions; reduced perception; or the dropping or damaging of vital equipment. As the cooling progresses, the person will become progressively more withdrawn until there is eventually a loss of consciousness leading to death.

- 4.8.2 The rate of cooling, and the rate of onset of hypothermia can be reduced by remaining as motionless as possible in the water while adopting a position to reduce heat loss. Ideally a person should get out of the water as soon as possible, even if this is only a partial removal from the water by floating on a wooden plank, inverted hull, or open boat. Although being out of the water may feel colder than being in it, the rate of cooling while in water is far greater than in air. Because a person cannot always remove themselves from water, it is essential to have some form of personal protective clothing against the effects of cold water.
- 4.8.3 The importance of remaining as motionless as possible in the water while adopting a position to reduce heat loss is advocated by the Royal National Lifeboat Institution (RNLI)¹⁰ with the guidance shown in the photograph below, and described as follows:

- “1. Tilt your head back - with ears submerged.*
- 2. Relax - and try to breathe normally.*
- 3. Move your hands - to help you stay afloat.*
- 4. It's OK if your legs sink - we all float differently.*
- 5. Spread your arms and legs - to improve stability”.*

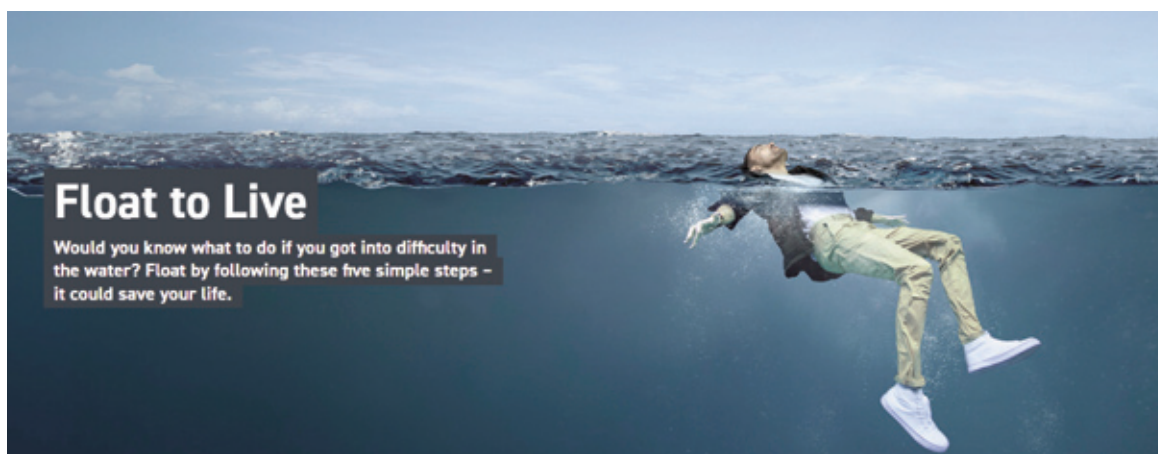


Image showing position to help reduce the effects of cold-water shock as advocated by the RNLI.

10. Source : <https://rnli.org/safety/float>

- 4.8.4 From the Met Éireann Weather Report in Appendix 7.2, the sea temperature on the day of the incident was 15°C although it was July. When the Casualty entered the water, he was subjected to initial cold shock, which could have had a significant effect on the Casualty's ability to regulate his breathing.
- 4.8.5 The MCIB's analysis cannot determine definitively that cold water immersion contributed substantially to the Casualty getting into difficulties in particular as the swimming ability of the Casualty is unknown. The cold temperature combined with the length of time in the water and the stress of the situation would certainly have had an adverse effect and probably contributed to the loss of the Casualty.

5. CONCLUSIONS

- 5.1 This incident resulted in a fatality, which was likely caused by drowning. The Casualty got into difficulty after he entered the water whilst attempting to wade and/or swim to the boat, which was drifting out to sea.
- 5.2 The failure to secure a line or painter to the shore, as well as lowering and having the engine ready for use during the boat launching procedure was the immediate causal factor in this incident.
- 5.3 Had the Casualty been wearing a PFD/lifejacket his chances of survival would have been greatly improved. Had the Survivor been wearing a PFD/lifejacket, a) the Casualty may have assessed the risk to his companion differently and may not have felt the need to enter the water, and b) the Survivor might have exited the boat before it was out of his control and/or before it got too far from the pier while still in water he could wade in.
- 5.4 Had the boat been equipped with a foghorn or distress flares the Survivor may have been able to alert the Casualty at an earlier stage to the fact that he was drifting with no control over the boat. He might also have been able to alert a MOP, which might have resulted in either an earlier call to the emergency services or one that alerted the latter to there being someone in the water. The Survivor also had no mobile phone although he may not have been aware how to call the emergency services. The lack of communications facilities was a contributing factor.
- 5.5 The presence of signage requiring wearing of lifejackets by persons on the pier may have prompted the Casualty and Survivor to don the lifejackets that were available to them.
- 5.6 While the boat was adequately prepared for sea angling in Killala Bay, there was a lapse in detailed planning for the launch and especially concerning actions in emergencies and the prevailing conditions. The Survivor's inability to assist in boat operations was due to a deficiency in knowledge, training, experience, and a lack of pre-departure briefing on engine controls and operation. Inadequate planning was the root cause of this incident.
- 5.7 It can be observed that many of the essential safety recommendations that are set out in MN No.52 of 2023 were not followed. It is highly likely that the Casualty knew nothing of the existence of MNs, never mind the content of the specific MN, or the content of the CoP.

6. SAFETY RECOMMENDATIONS

6.1 Preamble

6.1.1 The following safety recommendations are made having regard to the findings from this investigation; the Marine Casualty Investigation Board's continued observation of a pattern to the repeated incidence of marine casualties in the recreational craft sector; the recommendations in the Maritime Safety Strategy 2015-2019, and the likelihood that the Casualty was not aware of the Code of Practice or the content of relevant marine notices.

6.1.2 The Marine Casualty Investigation Board recognises the valuable input by the Maritime Safety Policy Division of the Department of Transport in communicating information via marine notices, which are an invaluable source of information to recreational craft users. The question remains as to why there still appears to be limited compliance with the basic safety recommendations set out in Marine Notice No. 52 of 2023. The Marine Casualty Investigation Board is of the view that there is no point in recommending the issuance of another marine notice with similar or related content. The issues that may arise for consideration, which are outside the remit of the Marine Casualty Investigation Board, are those relating to communication and training.

6.1.3 The importance of training is recognised in the Code of Practice:

"2.1 Training It is recommended that persons participating in sailboat and motorboat activities undertake appropriate training. A number of training schemes and approved courses are available and information can be obtained directly from course providers (see Appendix 9 for details of course providers)."

The Code of Practice has no regulatory remit but it does provide guidance on the regulations surrounding recreational craft, which are legally enforceable. It provides safety information and guidelines (albeit important ones). The training referred to is voluntary, and it is unlikely that the current revisions to the Code of Practice will alter that. A further issue arises as to the nature of that training and whether there should be some sort of regime that requires recreational craft users to have engaged in basic safety training/awareness, similar perhaps to the online preliminary driving test assessment.

6.1.4 The Marine Casualty Investigation Board is not equipped to conduct any comparative study in respect of the content or efficacy of other European regimes for privately owned recreational/small vessels. There does not appear to be any single approach.

6.1.5 Water Safety Ireland is a body under the aegis of the Department of Rural and Community Development. It has a statutory role that includes the promotion of both public awareness of water safety and measures to prevent accidents in water. It was established by Statutory Instrument No. 56/2019 - Water Safety

Ireland (Establishment) Order 2019¹¹. Section 4 (1) of the Order sets out mandatory obligations and section 4 (2) sets out additional functions that Water Safety Ireland may carry out. Section 4 (1) sub sections (a), (b), (c) and (e) mandate its functions in respect of education awareness and training (it is also enabled to licence trainers)¹². It should be noted that training and certification for the operation of vessels of all types, including recreational craft, is a matter for the Minister for Transport, who is the approving authority for existing courses provided by Sailing Ireland including recreational craft courses.

- 6.1.6 The Marine Casualty Investigation Board recognises the valuable work carried out by Water Safety Ireland and acknowledges the difficulties in effecting behavioural change, and the limitations of regulation in some respects. It is, however, relevant to have regard to the powers of the Minister for Transport who has the statutory power to introduce legislation in accordance with Section 20 of the Merchant Shipping Act 1992 (as amended by the 2000 Act) which can:

“(2)(e) provide for the registration of specified classes of pleasure craft¹³ and the licensing or certification of masters or persons in control of or operating pleasure craft or specified classes of pleasure craft,

(2)(f)(i) regulate the use of pleasure craft or specified classes of pleasure craft by reference to the age or other qualifications of masters or persons in control of or operating pleasure craft or pleasure craft of a specified class,”

- 6.1.7 The Recommendations made below to the Minister for Transport and to Water Safety Ireland are made having regard to the above.

6.2 Safety Recommendations

6.2.1 Mayo County Council:

The Chief Executive of Mayo County Council is recommended to consider conducting a review of the safety signage posted at Lacken Pier and in particular the erection of signage or any other communications considered to be useful, advising the wearing of lifejackets at Lacken Pier and slipway.

11. <https://www.irishstatutebook.ie/eli/2019/si/56/made/en/print>

12. 4. (1) *The Body shall provide the following services for or on behalf of the Minister:*

- (a) the promotion of public awareness of water safety;*
- (b) the promotion of measures, including the advancement of education, related to the prevention of accidents in water;*
- (c) the provision of instruction in water safety, rescue, swimming, resuscitation and recovery drills;*
- (e) the establishment of, and provision of training in, national standards for lifeguards, lifesaving and water safety;*

13. (6) *In this section ‘pleasure craft’ means vessels used otherwise than for profit and used wholly or mainly for sport or recreation but includes mechanically propelled vessels that are on hire pursuant to contracts or other arrangements that do not require the owners of the vessels to provide crews or parts of crews for them.*

6.2.2 The Minister for Transport:

The Minister for Transport should:

- a) maintain the ongoing communication strategy aimed at conveying to recreational craft operators the critical significance of all owners and users acquainting themselves with, and adhering to, the Code of Practice for the Safe Operations of Recreational Craft. Emphasis should also be placed on the importance for individuals to wear lifejackets in situations where a potential risk of falling into the water exists.
- b) consider the development of a communications strategy to effectively disseminate the information outlined in Marine Notice No.32 of 2019 to all recreational craft users. This may involve the reissuance and reinforcement of the content contained in Marine Notice No.32 of 2019.
- c) review the effectiveness of the lifejacket enforcement regime and consider ways in which inspections for the mandatory wearing of lifejackets can be increased.
- d) consider the introduction of basic safety training for operators of marine leisure vessels. Such basic training could cover the safety features set out in Marine Notice No.52 of 2023, including the use of lifejackets, sea survival techniques, voyage planning, use of engines and actions to take in emergency situations.

6.2.3 Water Safety Ireland:

Water Safety Ireland should:

- a) Consider actions to further promote both public awareness of safe boating and measures to prevent related accidents, in particular to those members of the public who use recreational craft on their own without involvement in any local club or group.
- b) Consider whether research should be carried out to assess, if possible, whether the introduction of some form of regulated training (which would be a matter for the Minister for Transport) would improve basic safety education.

7. APPENDICES

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Appendix 7.1 Marine Notice No. 52 of 2023



Marine Notice No. 52 of 2023

Notice to all Masters, Owners and Users of Pleasure and Recreational Craft.

Think and Prepare – Important safety advice for owners and users of recreational craft

The Department of Transport wishes to remind all masters, owners and users of recreational craft of the need to think and prepare before going out on the water. All owners and users of recreational craft should follow this **Checklist of Basic Requirements and Advice** both before going on the water and while on the water:

- ✓ **Get training** from an approved training provider in the correct use of the type of craft you wish to use;
- ✓ **Wear a suitable Personal Flotation Device/Lifejacket:** Know about the legal requirements in relation to the wearing and carrying of Personal Flotation Devices/Lifejackets and the need for the proper care and maintenance of such devices. Select the proper type based on activity or boating conditions. See [Marine Notice No. 32 of 2019](#) for further information;
- ✓ **Check current weather forecasts and sea/lake/river conditions prior to departure** and plan your voyage accordingly;
- ✓ **Check for any hazards and risks and Prepare a Passage Plan;**
- ✓ **Avoid operating alone:** There are increased risks involved with single person operation when there is nobody else on board or nearby to help you or to raise the alarm. Make sure you have an effective means of quickly re-boarding the boat in the event that you fall overboard;
- ✓ **Carry out Pre-Departure Safety Checks and Briefing:** Check your craft and safety equipment. All persons on board should know what to do in the event of an emergency, where the safety/emergency equipment is on board, e.g. flares, radio equipment, life jackets, etc., and how to use the equipment;
- ✓ **Tell someone about the plans for your trip: A designated person ashore** should know your departure and return times, where you are going, and what to do to raise the alarm if necessary;
- ✓ **Bring a dependable means of communication:** VHF radio equipment is the recommended method of communication and craft users should be familiar with its use, reference [Marine Notice No. 70 of 2022](#). Mobile phones should not be relied

Appendix 7.1 Marine Notice No. 52 of 2023

on and should only be considered as a back-up means of communication. Where mobile phone use is proposed, the phone should be in a waterproof pouch with a lanyard, be fully charged at all times and the signal strength and charge indicator should be regularly checked while the vessel is underway;

- ✓ **Emergency Beacons:** Consider having a Personal Locator Beacon (PLB) or an Emergency Position Indicating Beacon (EPIRB) as appropriate. See [Marine Notice No. 25 of 2010](#) as amended, [Marine Notice No. 38 of 2013](#) and [Marine Notice No. 70 of 2022](#) for further information, including in relation to registration of PLBs and EPIRBs;
- ✓ **Do not consume alcohol or drugs before or during a trip:** When operating a recreational craft, a person must not be under the influence of alcohol or drugs or any combination of drugs or of drugs and alcohol;
- ✓ **Be aware of and recognise the symptoms of fatigue:** Get proper sleep and rest before your journey;
- ✓ **Relax and float:** If you fall into the water, the initial shock of being in cold water can cause you to gasp and panic. Stay calm and relax. Try to float or tread water while you catch your breath. A properly fitted lifejacket will keep your head above water, ensuring you gasp air. Try to get hold of something that will help you float and get as much of your body out of the water as possible. To lessen heat escape, keep your legs together with arms/elbows by your side. Once you are calm, call for help;
- ✓ **Wear suitable clothing and footwear;**
- ✓ **In a marine emergency,** raise the alarm on **VHF Channel 16** or **call 999 or 112** and **ask for the Coast Guard.**

Code of Practice for the Safe Operation of Recreational Craft

The Code of Practice for the Safe Operation of Recreational Craft provides information on the legislation that applies to recreational craft, as well as safety advice and best practice operational guidance for owners, masters, operators and users of a range of pleasure and recreational craft operating in Irish coastal and inland waters.

The Code highlights the importance of personal responsibility for all those who take to the water. Each person must take maritime safety seriously, prepare and plan for a safe trip, behave responsibly on the water and be properly equipped to be able to respond to any incidents that may arise.

A revised Code of Practice is being developed following a review of the 2017 edition within the Irish Maritime Directorate and consultation with the public and key stakeholders. An updated edition will be published later in 2023.

The existing edition is available to view or download at www.gov.ie and www.safetyonthewater.ie. For the convenience of those who may only be interested in a particular type of recreational craft, individual chapters of the Code are also available to view or download from the above websites.

Appendix 7.1 Marine Notice No. 52 of 2023

Additional online publications in relation to safety on the water are available at <https://www.gov.ie/en/collection/60fd1-all-safety-on-the-water-booklets/>.

Note: Marine Notices are issued purely for maritime safety and navigation reasons and should not be construed as conferring rights or granting permissions.

Irish Maritime Administration,
Department of Transport,
Leeson Lane, Dublin 2, D02 TR60, Ireland.

27/07/2023

For any technical assistance in relation to this Marine Notice, please contact:
The Marine Survey Office, email: MSO@transport.gov.ie.
For general enquiries, please contact the Maritime Safety Policy Division, email:
MaritimeSafetyPolicyDivision@transport.gov.ie.
Written enquiries concerning Marine Notices should be addressed to:
Dept. of Transport, Maritime Safety Policy Division, Leeson Lane, Dublin 2, D02 TR60, Ireland.
email: MarineNotices@transport.gov.ie or visit us at: www.gov.ie/transport.

Appendix 7.2 Met Éireann Weather Report



Met Éireann

The Irish Meteorological Service

Climate Services
Glasnevin Hill
Dublin 9

Seirbhísí Aeráide
Cnoc Ghlas Naíon
Baile Átha Cliath 9

Tel: +353-1-8064260
Email: legal@met.ie

Our Ref: WS1730/2309_25

Your Ref: MCIB/ /12/329

WEATHER REPORT

Sunday 16-July-2023

Meteorological Synopsis: An unstable moderate to fresh northwesterly airflow with a frontal trough (occlusion) covered Ireland on the morning of 16-July-2023. A depression (986hPa) was centred off the northeast of Scotland.

Estimated weather conditions in the vicinity of Lacken Pier Co Mayo on the morning of Sunday 16-July-2023 between 6am and 12noon Local Time (=UTC+1)

Wind: Winds were moderate Beaufort force 4 (mean wind speed 10 – 15 knots) from west-northwesterly direction; occasional gusts up to 20 knots may have occurred.

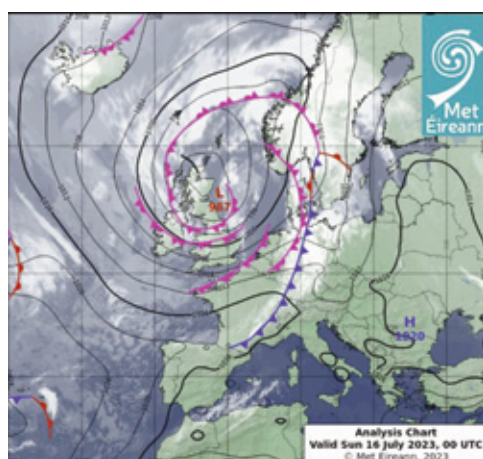
Weather: Variable cloud and frequent showers, some showers were heavy (rainfall amount for the period 6am to 12noon is estimated at 4 to 8 mm). In between showers there were bright or sunny spells.

Visibility: Visibility was moderate or poor at times in showers otherwise visibility was good.

Temperature: Air temperature ranged between 11 and 15 degrees Celsius.

Estimated Sea State conditions (offshore): rough with estimated significant wave height of 2.5 to 3 m on a north-northwesterly swell.

Sea temperature: ~15 degrees Celsius.



Analysis Chart, Satellite 16-July-2023

Appendix 7.2 Met Éireann Weather Report



Met Éireann

The Irish Meteorological Service

Climate Services

Glasnevin Hill

Dublin 9

Seirbhísí Aeráide

Cnoc Ghlas Naíon

Baile Átha Cliath 9

Tel: +353-1-8064260

Email: legal@met.ie

Day summary estimated weather conditions in vicinity of Lacken Pier Co Mayo (24-hour period from midnight to midnight)							
July 2023	Wind direction	Wind description (Beaufort)	Wind speed (knots)	Sea state (offshore)	Swell direction	Weather precipitation	Rainfall day total (mm)
Thursday 13th	W -> Vrb -> E	Light to moderate force 3 or 4	Mean of 5 to 12 knots; occasional gusts up to 20 knots	Slight to moderate	NW	Cloudy and dry at first; outbreaks of rain in evening	4 – 6 mm
Friday 14th	SE -> E -> NE -> N	Moderate force 4 to fresh force 5 by day; light force 3 or less by night	Mean of 4 to 16 knots. Gusts up to 30 knots in the late afternoon.	Slight	N	Cloudy with heavy rain from midmorning onwards	20 – 30 mm
Saturday 15th	Vrb -> NW	Light to moderate at first increased fresh to strong force 5 to 6 from mid-morning onwards	Mean of 20 to 26 knots. Gusts up to 35 knots	Moderate to rough	N	Cloudy with frequent outbreaks of rain, heavy downpours at times.	15 – 25 mm
Sunday 16th	NW -> WNW -> SW	Fresh force 5 at first decreased moderate force 4 then light force 3 or less	Mean of 20 knots with gusts up to 30 knots before 6am then decreased 10 to 15 knots, decreased near calm in evening	Rough	NNW	Variable cloud. Scattered heavy showers in the morning. Cloudy and dry in afternoon and evening.	6 – 10 mm
Monday 17th	SW -> W	Light to moderate force 3 to 4	Mean of 5 to 14 knots	Moderate	NW	Variable cloud, sunny spells, occasional showers.	1 – 3 mm

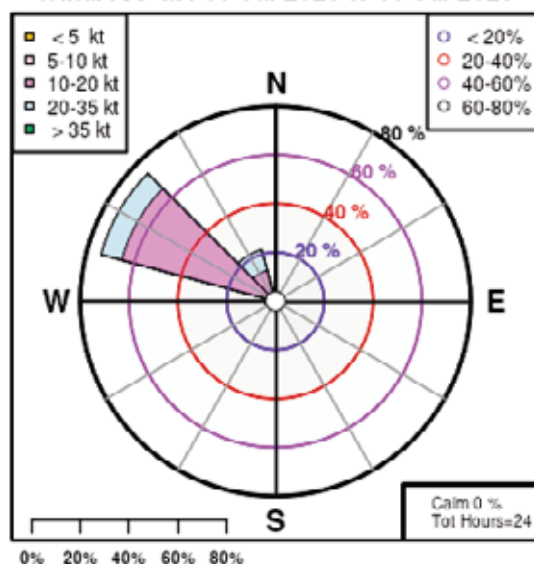
This report was issued on: 30 September 2023

Met Éireann | Climate Services Division | Enquiries Legal Unit | Email: legal@met.ie



Appendix 7.2 Met Éireann Weather Report

**Met Éireann****The Irish Meteorological Service**Climate Services
Glasnevin Hill
Dublin 9Seirbhísí Aeráide
Chnoc Ghlas Naíon
Baile Átha Cliath 9Tel: +353-1-8064260
Email: legal@met.ie**16-July-2023 Buoy M4 Observations**

buoy_id	date_time_utc	wind_dir	mean_wind_speed_knots	max_wind_gust_knots	sig_wave_height	max_wave_height	wav_dir	sig_wave_period	sea_temp_degreec
M4	16-Jul-2023 00:00:00	318.9	21.2	26.5	3.5	6.2	337.5	6.4	14.9
M4	16-Jul-2023 01:00:00	312.9	20.6	24.8	3.4	5.6	343.1	6.3	14.8
M4	16-Jul-2023 02:00:00	309.0	20.6	26.1	3.4	5.8	340.3	6.3	14.8
M4	16-Jul-2023 03:00:00	319.6	21.0	27.2	3.3	5.3	338.9	6.1	14.8
M4	16-Jul-2023 04:00:00	305.9	14.2	20.7	3.3	5.8	343.1	6.2	14.8
M4	16-Jul-2023 05:00:00	315.0	16.1	20.3	3.2	4.7	336.1	6.2	14.7
M4	16-Jul-2023 06:00:00	317.1	16.3	21.0	3.3	5.6	336.1	6.2	14.7
M4	16-Jul-2023 07:00:00	318.2	17.9	23.9	3.1	5.0	331.9	6.2	14.7
M4	16-Jul-2023 08:00:00	304.5	15.5	19.9	2.9	4.7	333.3	6.2	14.7
M4	16-Jul-2023 09:00:00	315.4	13.8	18.1	3.0	4.5	340.3	6.4	14.8
M4	16-Jul-2023 10:00:00	287.9	14.1	17.8	2.9	4.7	343.1	6.6	14.9
M4	16-Jul-2023 11:00:00	289.3	14.2	18.1	2.9	4.7	345.9	6.7	14.9
M4	16-Jul-2023 12:00:00	296.0	13.8	17.9	3.1	5.2	345.9	6.7	14.9
M4	16-Jul-2023 13:00:00	282.3	13.7	16.6	2.8	5.0	344.5	6.4	14.9
M4	16-Jul-2023 14:00:00	296.4	13.2	17.2	2.7	4.7	338.9	6.3	15.0
M4	16-Jul-2023 15:00:00	308.0	13.3	17.1	2.8	4.4	350.2	6.6	15.0
M4	16-Jul-2023 16:00:00	290.7	12.0	15.6	2.5	5.2	343.1	6.0	15.0
M4	16-Jul-2023 17:00:00	295.3	12.3	16.7	2.6	4.5	338.9	6.0	15.0
M4	16-Jul-2023 18:00:00	302.3	12.9	16.2	2.4	4.4	341.7	5.9	15.0
M4	16-Jul-2023 19:00:00	293.6	11.3	13.8	2.5	3.9	338.9	6.1	15.0
M4	16-Jul-2023 20:00:00	307.3	11.3	14.2	2.3	3.9	340.3	6.1	15.0
M4	16-Jul-2023 21:00:00	297.1	10.4	13.2	2.3	4.1	340.3	6.1	15.0
M4	16-Jul-2023 22:00:00	293.9	10.7	14.0	2.3	4.4	337.5	6.3	15.0
M4	16-Jul-2023 23:00:00	296.4	11.4	15.1	2.4	4.5	343.1	6.6	14.9

Windrose M4 16-Jul-2023 to 16-Jul-2023

Appendix 7.2 Met Éireann Weather Report

<div>  <h3>24-hour Sea Area Forecast</h3> <p>Updated at 0000 / 0600 / 1200 / 1800</p> <p>Sea Area Forecast until 1200 Sunday, 16 July 2023 Issued at 1200 Saturday, 15 July 2023</p> <ol style="list-style-type: none"> 1. Gale warnings: In operation Small craft warnings: In operation 2. Meteorological situation at 0900: A depression of 994hPa centred over northern parts of Ireland maintains an unstable cyclonic or easterly airflow over the area. An unstable sea to northeast airflow will strengthen over the country as the depression tracks slowly northwards becoming centred over Scotland this evening and tonight. Associated frontal troughs are embedded in the flow. 3. Forecast for Irish coastal waters from Bloody Foreland to Fair Head to Belfast Lough Wind: Cyclonic variable force 3 to 5, imminent becoming west to northwest. Soon increasing west to northwest force 5 to 7 and gully. Weather: Frequent showers or longer spells of rain today, some heavy with isolated thunderstorms. Showers becoming scattered later. Visibility: Moderate or poor in precipitation. <p>Forecast for Irish coastal waters from Belfast Lough to Wicklow Head to Roches Point and for the Irish Sea Wind: South to southwest force 5 to 7 and gully, imminent veering southwest to west and occasionally reaching gale force 8 on the Irish Sea. Later decreasing force 4 to 6, but still occasionally touching force 7 on the Irish Sea. Weather: Showers or longer spells of rain today. Showers becoming scattered later. Visibility: Moderate or poor in precipitation.</p> <p>Forecast for Irish coastal waters from Roches Point to Loop Head to Bloody Foreland Wind: West to northwest force 5 to 7 and gully, imminent increasing force 6 to gale force 8. Soon decreasing force 5 to 7 and gully. Later decreasing force 4 or 5. Weather: Showers or longer spells of rain today, some heavy. Showers becoming scattered later. Visibility: Moderate or poor in precipitation.</p> <p>Warning of Heavy Swell: NE</p> <ol style="list-style-type: none"> 4. Outlook for a further 24 hours until 1200 Monday 17 July 2023: Moderate to fresh westerly winds occasionally strong in northern sea areas and on the Irish Sea at first. Winds gradually moderating by the end of </div>	<div>  <p>the period. Weather: Fair to cloudy with scattered showers, some heavy with isolated thunderstorms possible on Sunday. Showers becoming isolated later.</p> </div> <table border="1"> <thead> <tr> <th colspan="2">Text of Gale Warning</th> </tr> </thead> <tbody> <tr> <td>1. Northwest winds will occasionally touch gale force 8 this afternoon and evening on Irish coastal waters from Loop Head to Erris Head to Bloody Foreland.</td> <td></td> </tr> <tr> <td>2. 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Appendix 7.2 Met Éireann Weather Report

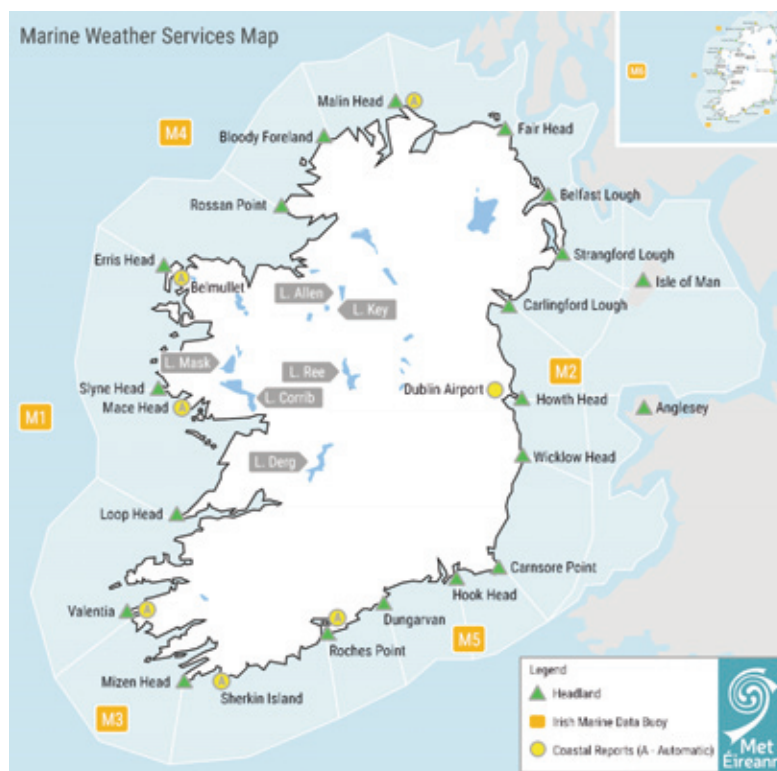

Met Éireann

The Irish Meteorological Service

Climate Services
Glasnevin Hill
Dublin 9

Seirbhísí Aeráide
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Baile Átha Cliath 9

Tel: +353-1-8064260
Email: legal@met.ie

Appendix 3a Terminology Sea Area Map & Beaufort Scale of Wind


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

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

Appendix 7.2 Met Éireann Weather Report



Met Éireann

The Irish Meteorological Service

Climate Services
Glasnevin Hill
Dublin 9

Seirbhísi Aeráide
Cnoc Ghlas Naíon
Baile Átha Cliath 9

Tel: +353-1-8064260

Email: enq@met.ie

Email: legal@met.ie

Appendix 3b Terminology Sea State & Visibility

Wave Heights / State of Sea:

The wave height is the vertical distance between the crest and the preceding or following trough. The table below gives a description of the wave system associated with a range of significant wave heights.

The Significant wave height is defined as the average height of the highest one-third of the waves. (It is very close to the value of wave height given when making visual observations of wave height.)

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

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

Visibility Descriptions:

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

Please Note:

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

Appendix 7.3 Irish Coast Guard SITREP

ROUTINE
16 1015Z JUL 23
FROM MRSC MALIN
TO MALIN HEAD SITREP GROUP

BT
MAR SAR -CONCERN FOR SMALL V/L - LACKEN
UIIN1394/23
SAR SITREP ONE AND FINAL

A - IDENTITY OF CASUALTY:
GERMAN NATIONAL X2

B - POSITION
54°16.96'N 009°14.72'W

C - SITUATION
MOP REPORTS SMALL V/L P[OSSIBLY IN DIFF // LACKEN PIRER

D - NUMBER OF PERSONS
2

E - ASSISTANCE REQUIRED
R118// KILALLA CGU

F - COORDINATING RCC
MRSC MALIN

G - DESCRIPTION OF CASUALTY
MALE X 2

H - WEATHER ON SCENE
WIND: 4, W / SEA: ROUGH / SWELL: LOW WAVE / AIR TEMP: 14.3°C / WATER
TEMP: 15.6°C / VIS: GOOD / PRECIP: SLIGHT / SITREP WEATHER-TIME: 16 0935Z
JUL 23

J - INITIAL ACTIONS TAKEN
TASKED R118 // KILALLA CGU

K - SEARCH AREA
KILALLA

L - COORDINATING INSTRUCTIONS
R118// KILALLA CGU .. SEARCH AREA

M - FUTURE PLANS
NONE

Appendix 7.3 Irish Coast Guard SITREP

N - 0935 MOP REPORTS SMALL V/L IN DIFF LACKEN PIER/ KILALLA BAY /1 POB
0940 KILALLA CGU TASKED
0942/0955/1008 R118 TASKED /PROCEEDING / ON SCENE.//
0958 F// INF ADVISE CAS NO 1 ON BEACH WITH MOP //NURSE //
/ CAS NO 1(GERMAN NATIONAL) CONFIRMS THROUGH INTERPRETER CAS NO
2 STILL IN WATER //R118 ADVISED //
1008 R118 ADVISE CAS NO 2 SIGHTED AND RECOVERED //PROCEEDING TO
SUH//AGS ADVISED //
NEOC ADVISED //REQ AMB TO BEACH //
1050 CGU ON SCENE ADVISE CAS NO 1 INACCESSABLE AREA .
1105 R118 RETASKED TO SCENE TO TX CAS NO 1 TO SUH.
1147 R118 QTO SCENE .. TX CAS NO 1 TO SUH.
1200 AGS ADVISE CAS NO 2 CONFIRMED T4 BY SUH.// ON CALL INFORMED.
1157 R118 LANDED SUH// CAS NO 1 HANDED OVER TO HSE .
1211 R118 RTB
1410 KILALLA CGU RTB
REGARDS, [REDACTED] . W/O EJM.

Appendix 7.4 Marine Notice No. 32 of 2019



Marine Notice No. 32 of 2019

This Marine Notice replaces Marine Notice Nos. 45 of 2012 and 10 of 2016.

Notice to all owners, masters and users of pleasure craft and personal watercraft

Personal Flotation Devices for Pleasure Craft and Personal Watercraft

1. Purpose

The purpose of this Marine Notice is to highlight the requirements for the carriage, certification, selection and wearing of Personal Flotation Devices (PFDs) for pleasure craft and personal watercraft. The Marine Notice also contains recommendations on correct use for users of Personal Flotation Devices.

2. What is a Personal Flotation Device?

A PFD is:

- a lifejacket that is  marked¹ or  wheel marked², or
- a buoyancy aid that is  marked.

Tables B and C of this Marine Notice provide further information on the differences between a lifejacket and a buoyancy aid and associated use.

3. Personal Flotation Device Regulations

The *Pleasure Craft (Personal Flotation Devices and Operation) (Safety) Regulations 2005* ([S.I. No. 921 of 2005](#)) as amended by the *Pleasure Craft (Personal Flotation Devices and Operation) (Safety) (Amendment) Regulations 2012* ([S.I. No. 349 of 2012](#)) and the *Pleasure Craft (Personal Flotation Devices and Operation) (Safety) (Amendment) Regulations 2018* ([S.I. No. 400 of 2018](#)), apply to pleasure craft being operated in Irish waters and to:

- any person on board a pleasure craft;
- any person being towed by a pleasure craft, or on board a craft or object of any kind being towed by a pleasure craft.

¹ Lifejackets and buoyancy aids that are marked with the CE conformity marking consisting of the initials 'CE' taking the form shown in the specimen in Annex II of Regulation (EC) 765/2008 of 9 July 2008.

² Lifejackets that have the mark of conformity in the form of the wheel mark symbol set out in Annex I to Council Directive 2014/90/EU of 23 July 2014.

Appendix 7.4 Marine Notice No. 32 of 2019

Table A of this Marine Notice provides further details on the application of the regulations to particular types/size of craft and sets out the carriage, certification and wearing requirements for PFDs on pleasure craft and personal watercraft.

There **must** be suitable PFDs for everyone on board any pleasure craft.

Failure to comply with the legal requirements – Fixed Payments and Fines:

Where an authorised officer has reasonable grounds for believing that a person is committing or has committed an offence under the PFD regulations, he or she may serve a fixed payment notice in the prescribed form on the person in question. The person who is alleged to have committed the offence may pay **€150** during the period of 21 days from the date of the notice. Failure to pay the €150 within the 21 days will lead to the institution of prosecution proceedings and, on summary conviction, to a fine not exceeding €5,000.

4. Selection of Personal Flotation Devices

When selecting a PFD, it is very important to select the correct device that is suited to the particular conditions and circumstances in which it will be used. Reference should be made to Tables B, C and D of this Marine Notice, which set out the various PFD performance levels available and their associated description of use.

5. Recommendations for correct use of a Personal Flotation Device

- Users should read and understand the manufacturers' instruction manual when they acquire a new PFD as each device may have specific user instructions.
- **PFDs should be worn over all clothing and not underneath.** This is to ensure that there is sufficient space for the device to inflate and that the user's breathing is not restricted.
- PFDs should be worn in the **correct position** on the torso as per the manufacturer's instructions. Hold-down devices can greatly assist in keeping the PFD in the correct position, as detailed below.
- Users should be fully **familiar with the operation of their inflatable PFDs** both manually and automatically.
- **Automatically inflatable PFDs**, which operate by means of a soluble bobbin, may activate in error if left in a damp condition. When inflatable PFDs are not being worn, they should be hung to dry vertically to ensure that all moisture drains away from the bobbin. Covers are available which reduce the problem of accidental inflation.
- Whilst not a requirement of the PFD regulations, it is recommended that anyone alone on board a craft should **wear a PFD at all times** regardless of weather conditions, the size of the craft or whether the craft is made fast to the shore or at anchor.
- It is recommended that all persons should wear a lifejacket at all times while on an open pleasure craft or on the deck of a decked pleasure craft.
- Where PFDs are required to be carried on board a craft, it is recommended that they are stored in a **readily accessible position** which may save time in an emergency situation.

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Table A of this Marine Notice provides further details on the application of the regulations to particular types/size of craft and sets out the carriage, certification and wearing requirements for PFDs on pleasure craft and personal watercraft.

There must be suitable PFDs for everyone on board any pleasure craft.

Failure to comply with the legal requirements – Fixed Payments and Fines:

Where an authorised officer has reasonable grounds for believing that a person is committing or has committed an offence under the PFD regulations, he or she may serve a fixed payment notice in the prescribed form on the person in question. The person who is alleged to have committed the offence may pay **€150** during the period of 21 days from the date of the notice. Failure to pay the €150 within the 21 days will lead to the institution of prosecution proceedings and, on summary conviction, to a fine not exceeding €5,000.

4. Selection of Personal Flotation Devices

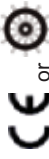
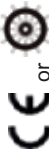





When selecting a PFD, it is very important to select the correct device that is suited to the particular conditions and circumstances in which it will be used. Reference should be made to Tables B, C and D of this Marine Notice, which set out the various PFD performance levels available and their associated description of use.

5. Recommendations for correct use of a Personal Flotation Device

- Users should read and understand the manufacturers' instruction manual when they acquire a new PFD as each device may have specific user instructions.
- **PFDs should be worn over all clothing and not underneath.** This is to ensure that there is sufficient space for the device to inflate and that the user's breathing is not restricted.
- PFDs should be worn in the **correct position** on the torso as per the manufacturer's instructions. Hold-down devices can greatly assist in keeping the PFD in the correct position, as detailed below.
- Users should be fully **familiar with the operation of their inflatable PFDs** both manually and automatically.
- **Automatically inflatable PFDs**, which operate by means of a soluble bobbin, may activate in error if left in a damp condition. When inflatable PFDs are not being worn, they should be hung to dry vertically to ensure that all moisture drains away from the bobbin. Covers are available which reduce the problem of accidental inflation.
- Whilst not a requirement of the PFD regulations, it is recommended that anyone alone on board a craft should **wear a PFD at all times** regardless of weather conditions, the size of the craft or whether the craft is made fast to the shore or at anchor.
- It is recommended that all persons should wear a lifejacket at all times while on an open pleasure craft or on the deck of a decked pleasure craft.
- Where PFDs are required to be carried on board a craft, it is recommended that they are stored in a **readily accessible position** which may save time in an emergency situation.

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Table A – Personal Flotation Devices: Certification, carriage, selection and wearing requirements

LENGTH OVERALL of craft	PFD CERTIFICATION AND CARRIAGE REQUIREMENTS <i>See notes (1) and (2)</i>	SELECTION OF PERSONAL FLOTATION DEVICES	REQUIRED WEARING OF PERSONAL FLOTATION DEVICE		
			PERSONAL WATERCRAFT <i>See note (6)</i>		PERSONAL WATERCRAFT <i>See note (6)</i>
			PLEASURE CRAFT <i>See note (3)</i>	DECKED CRAFT <i>See note (5)</i>	
			OPEN CRAFT <i>See note (4)</i>		
Less than 4 metres	 or  For all persons	Refer to Tables B, C and D.	All persons	All persons while on deck	All persons
Less than 7 metres	 or  For all persons	Refer to Tables B, C and D.	All persons	All persons while on deck	Not applicable
7 metres or greater	 or  For all persons	Refer to Tables B, C and D.	All persons under 16 years of age	All persons under 16 years of age while on deck	Not applicable
Over 13.7 metres	 For all persons <i>See note (7)</i>	Refer to Table C.	All persons under 16 years of age	All persons under 16 years of age while on deck	Not applicable
Notes:					
(1) Means lifejackets and buoyancy aids that are marked with the CE conformity marking consisting of the initials 'CE' taking the form shown in the specimen in Annex II of Regulation (EC) 765/2008 of 9 July 2008.					
(2) Means lifejackets that have the mark of conformity in the form of the wheel mark symbol set out in Annex I to Council Directive 2014/90/EU of 23 July 2014.					

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(3) Does not apply to:

- a person on board a pleasure craft (other than a personal watercraft), which is not under way, when the person is wearing, putting on, or taking off, scuba diving equipment, or is about to engage in, or has just completed swimming (including snorkelling) from the craft;
- The PFD regulations do not apply to rowers in boats which are designed and specifically used for rowing in boat races and are capable of being entered into regattas or other events recognised by the Irish Amateur Rowing Union, and of a design and type in respect of which events are held in the Olympic Games or other international rowing regattas.

(4) "Decked craft" means a pleasure craft which is not an open craft.






(5) "Open craft" means a pleasure craft which does not have a cabin or below deck facilities for the use of persons and where seating, or any place on the craft used for seating, is exposed or partially exposed to the elements.

(6) "Personal watercraft" means a craft of less than 4 metres in length which uses an internal combustion engine having a water jet pump as its primary source of propulsion, and which is designed to be operated by a person or persons sitting, standing or kneeling on, rather than within the confines of, a hull.

(7) Consideration to be given to the carriage of  marked lifejackets for use on deck in addition to  marked lifejackets.

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Table B - Selection of lifejackets

 LIFEJACKETS (INFLATABLE AND NON-INFLATABLE)	
PERFORMANCE LEVEL	APPLICATION
LEVEL 275  Offshore, extreme conditions, special protective clothing, heavy equipment	This level is intended primarily for offshore use under extreme conditions. It is also of value to those who are wearing clothing which traps air and which may adversely affect the self-righting capacity of the lifejacket. It is designed to ensure that the user is floating in the correct position with his/her mouth and nose clear of the surface of the water.
LEVEL 150  Offshore, foul weather clothing	This level is intended for general application or for use with foul weather clothing. It will turn an unconscious person into a safe position and requires no subsequent action by the user to maintain this position.
LEVEL 100  Sheltered waters, light clothing	This level is intended for those who may have to wait for rescue, but are likely to do so in sheltered water. The device should not be used in rough conditions.
 LIFEJACKETS (INFLATABLE AND NON-INFLATABLE)	
APPLICATION	
Survival lifejackets that have the mark of conformity in the form of the wheel mark symbol set out in Annex I to Council Directive 2014/90/EU of 23 July 2014. Refer to Note (7) from Table A.	

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Table C - Selection of buoyancy aids




 BUOYANCY AIDS	
<i>PERFORMANCE LEVEL</i>	<i>APPLICATION</i>
<p>LEVEL 50</p>  <p>Swimmers only, sheltered waters, help at hand, limited protection against drowning, not a lifejacket.</p>	<p>This level is intended for use by those who are competent swimmers and who are near to bank or shore, or who have help and a means of rescue close at hand. These garments have minimal bulk, but they are of limited use in disturbed water, and cannot be expected to keep the user safe for a long period of time. They do not have sufficient buoyancy to protect people who are unable to help themselves. They require active participation by the user.</p>

Table D - Special purpose lifejackets and buoyancy aids

 SPECIAL PURPOSE LIFEJACKETS AND BUOYANCY AIDS	
<i>PERFORMANCE LEVEL</i>	<i>APPLICATION</i>
<p>LEVEL 275</p> <p>LEVEL 150</p> <p>LEVEL 100</p> <p>LEVEL 50</p>	<p>Lifejackets and buoyancy aids that have different levels of support but have modifications related to special applications for use, e.g. firefighting. These applications shall not relate to essential requirements such as in-water performance, stability and safety in use. The specific conditions for use shall be stated on their label to maintain essential requirements. Users should refer to the manufacturer's documentation for guidance on selecting this type of PFD.</p>

For any technical assistance in relation to this Marine Notice, please contact:
The Marine Survey Office, tel: +353-(0)1-678 3400.
For general enquiries, please contact the Maritime Safety Policy Division, tel: +353-(0)1-678 3418.
Written enquiries concerning Marine Notices should be addressed to:
Dept. of Transport, Tourism and Sport, Maritime Safety Policy Division, Leeson Lane, Dublin 2, D02 TR60, Ireland.
email: MarineNotices@dtas.gov.ie or visit us at: www.dttas.gov.ie

Irish Maritime Administration,
Department of Transport, Tourism and Sport,
Leeson Lane, Dublin 2, D02 TR60, Ireland.

29/08/2019

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Appendix 1:

Cold water shock kills

Stage 1: Cold shock (3 – 5 minutes)

Stage 2: Swimming failure (3 – 30 minutes)

Stage 3: Hypothermia (after 30 minutes)

Stage 4: Post rescue collapse (during or hours after rescue)

What does a correctly sized and worn lifejacket DO for YOU?

Makes YOU feel safe

Keeps YOU alive

Stops YOU from panicking

Supports YOU even when unconscious

Supports and protects YOU until help arrives

But only if you keep YOUR lifejacket from riding-up!

SECTION 36 PROCESS

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

It is a requirement under Section 36 that:

- (1) Before publishing a report, the Board shall send a draft of the report or sections of the draft report to any person who, in its opinion, is likely to be adversely affected by the publishing of the report or sections or, if that person be deceased, then such person as appears to the Board best to represent that person's interest.
- (2) A person to whom the Board sends a draft in accordance with subsection (1) may, within a period of 28 days commencing on the date on which the draft is sent to the person, or such further period not exceeding 28 days, as the Board in its absolute discretion thinks fit, submit to the Board in writing his or her observations on the draft.
- (3) A person to whom a draft has been sent in accordance with subsection (1) may apply to the Board for an extension, in accordance with subsection (2), of the period in which to submit his or her observations on the draft.
- (4) Observations submitted to the Board in accordance with subsection (2) shall be included in an appendix to the published report, unless the person submitting the observations requests in writing that the observations be not published.
- (5) Where observations are submitted to the Board in accordance with subsection (2), the Board may, at its discretion -
 - (a) alter the draft before publication or decide not to do so, or
 - (b) include in the published report such comments on the observations as it thinks fit.

The Board reviews and considers all observations received whether published or not published in the final report. When the Board considers an observation requires amendments to the report, those amendments are made. When the Board is satisfied that the report has adequately addressed the issue in the observation, then no amendment is made to the report. The Board may also make comments on observations in the report.

Response(s) received following circulation of the draft report (excluding those where the Board has agreed to a request not to publish) are included in the following section.

The Board has noted the contents of all observations, and amendments have been made to the report where required.

8. MSA 2000 - SECTION 36 OBSERVATIONS RECEIVED

No correspondence was received on the draft of this report.



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

