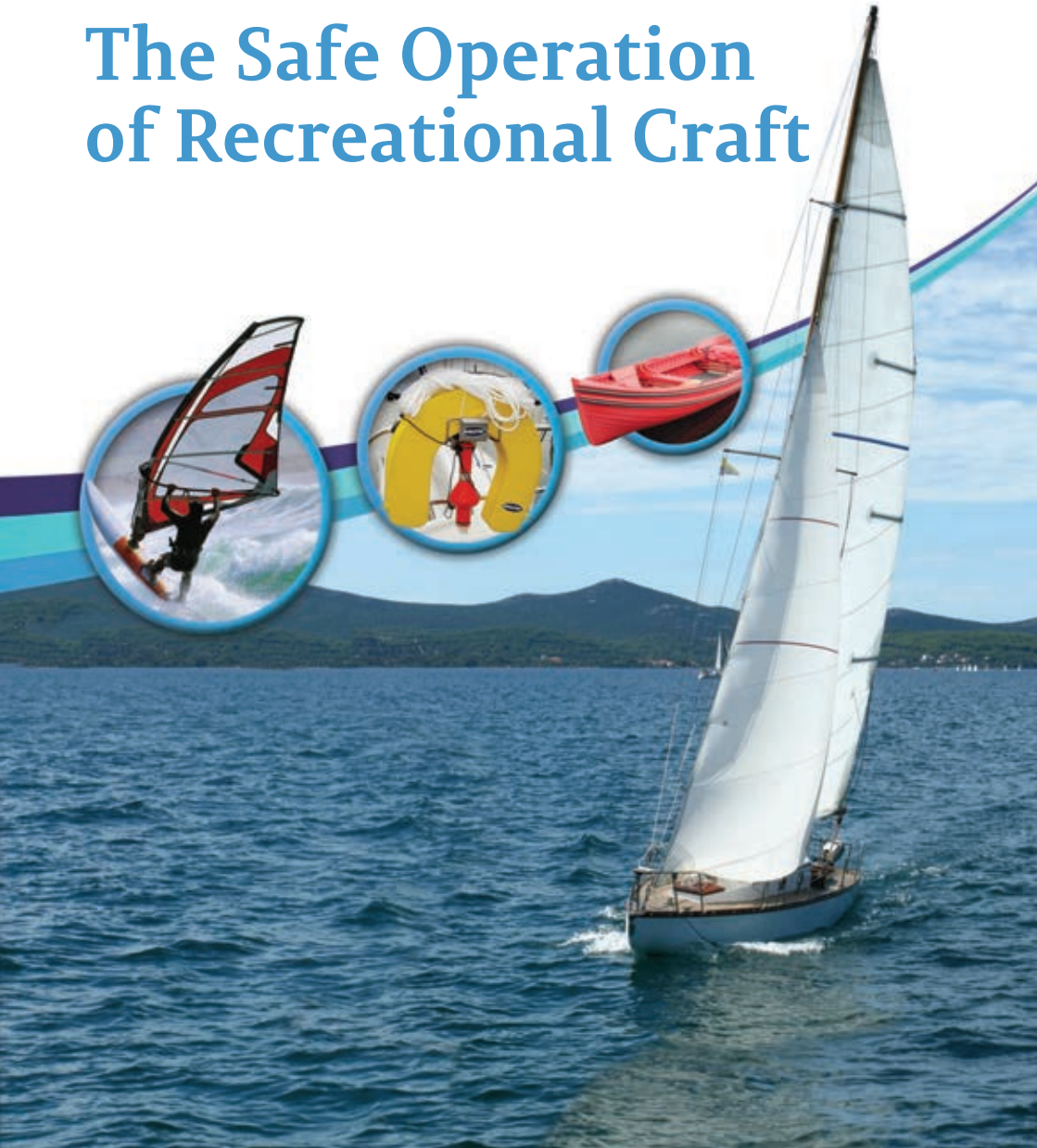
An Roinn Iompair, Turasóireachta agus Spóirt
Department of Transport, Tourism and Sport

Code of Practice:
The Safe Operation of Recreational Craft



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Important Contact Information

Irish Coast Guard

In an emergency ring 999 or 112 and ask for the Coast Guard

Irish Coast Guard HQ

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Foreword

I encourage all recreational craft users to familiarise themselves with this Code of Practice for the Safe Operation of Recreational Craft and to heed the safety advice and recommendations in the Code. By making time for maritime safety and taking simple measures such as wearing a lifejacket, each person can contribute to saving lives, starting with their own.

The safe enjoyment of our coastal and inland waters requires each person who takes to the water to take responsibility for their actions and to take maritime safety seriously. Unless attitudes change, accidents will continue to happen and sadly lives will be lost as a result.

A significant number of Irish Coast Guard call-outs in recent years have been to assist recreational craft. It is also clear from the reports of the Marine Casualty Investigation Board that many accidents and deaths in this sector can be avoided. The key is to think and act safely. Anyone taking to the water in any capacity, on any type of craft, must think about their own safety and plan accordingly. The *Maritime Safety Strategy 2015 – 2019* sets it out plainly: every trip on the water should be a safe one, which means planning for a safe trip every time, behaving responsibly once afloat, and maximising the chances of survival in the water should an incident occur.

The Code of Practice has played an important role in promoting maritime safety and providing safety information for the users of recreational craft since it was first published in 2006. Today, the need for safety advice, guidance and awareness in the operation of recreational craft remains as important as ever. This new edition takes into account recent legislative changes and provides updated and expanded safety information for the users of a range of recreational craft.

My Department and other maritime bodies will continue to promote maritime safety at every opportunity. However, at the end of the day, everyone taking to the water must take responsibility for his or her own safety.

Be informed, be prepared – the life you save could be your own.

Shane Ross T.D.
Minister for Transport, Tourism and Sport

Introduction

Background

In accordance with the Statement of Strategy 2016 – 2019, the high level goal of the Irish Maritime Administration of the Department of Transport, Tourism and Sport is to facilitate safe and sustainable maritime transport and deliver emergency management services. The approach to maritime safety involves a combination of policy development, statutory regulation, safety awareness promotion and enforcement.

The Code of Practice for the Safe Operation of Recreational Craft was first published in 2006 following a review of safety measures on small watercraft and a public consultation process. A revised edition was published in 2008. Under Action 16 of the *Maritime Safety Strategy 2015 – 2019*, the Department committed to updating the Code of Practice to take into account changes in the legislative requirements that apply to recreational craft. This revised Code of Practice represents the culmination of an extensive stakeholder consultation process undertaken in 2016 and 2017.

Who is the Code for?

This Code of Practice for the Safe Operation of Recreational Craft is intended for use by owners, operators and users of recreational craft.

Recreational craft are vessels used for leisure or sport purposes, regardless of their means of propulsion. They are also sometimes referred to as pleasure craft.

This Code applies to all recreational craft operating in Irish waters, including:

- Sailing craft
- Motorboats, ski boats, powerboats, sports boats and dive boats
- Personal watercraft (e.g. jet skis)
- Canoes, kayaks
- Windsurfers
- Non-powered craft.

The Code incorporates both competitive and non-competitive use of recreational craft. General information is also provided on Safety Operations and Emergency Procedures.

It should be noted that where passengers are carried by commercially operated craft manned by a skipper and crew, they

are regarded as passenger vessels and are subject to the requirements of the Merchant Shipping Act 1992, as amended, and any associated rules and regulations.

How to use this Code

It is the responsibility of owners and operators of recreational craft to ensure that a vessel is properly maintained, equipped and operated. This Code aims to assist owners and operators in their responsibility by setting out legislative requirements governing recreational craft and best practice for vessel standards, equipment and operation for the different types of recreational craft and their areas of operation.

The Irish Maritime Administration encourages all those engaged in leisure pursuits on the water to be aware of and familiar with the contents of the Code of Practice, and to comply with the safety advice.

The Code of Practice is in two Parts followed by a series of Appendices:

Part A of the Code – Chapter 1 outlines the **legislative requirements** that apply to all recreational craft or specific types or size of craft. Owners and operators **must** comply with the requirements appropriate to their craft;

Part B of the Code – Chapters 2 to 11 contain **recommended guidelines and best practice** for the safe operation of recreational craft. Chapters 2 to 9 provide guidance in relation to particular types of recreational craft/activities. Chapters 10 and 11 provide safety guidance applicable to recreational craft generally.

Owners and operators should familiarise themselves with Part A of the Code, the particular chapter in Part B appropriate to their type of vessel, together with Chapters 10 and 11 and the Appendices.

In the tables, all rows that contain a tick mark or number indicate a mandatory and/or recommended requirement for the type of craft indicated. Any mention of 'miles' in the Code of Practice is a reference to nautical miles.

Amendments

The Code of Practice will be kept under review to ensure that it remains up to date. Revisions will be posted on the website of the Department of Transport, Tourism and Sport (www.dttas.ie) and on www.safetyonthewater.ie as they occur.

If you have any queries, comments or suggestions regarding the Code, please forward them to:

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Ireland

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Fax: + 353 (0)1 678 3409
Email: marineleisuresafety@dttas.ie

Checklist of Basic Requirements and Advice

Particular attention is drawn to the following **Checklist of Basic Requirements and Advice** which all owners and users of recreational craft should be aware of before taking to the water:

- ✓ 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. These requirements are dealt with in Part A of the Code of Practice;
- ✓ the need to **check current weather forecasts and sea conditions** prior to departure and to **plan your voyage accordingly** (see Appendix 6 (Weather, Sea States and Tides) and Appendix 8 of the Code of Practice for an example of a passage planning template);
- ✓ **Pre-Departure Safety Checks and Briefing** – the briefing of all persons on board on emergency procedures and the location and use of safety/emergency equipment on board, e.g. flares, radio equipment, life jackets;
- ✓ the need to ensure that a **designated person ashore** is aware of your departure and return times, where you are going, and have a procedure in place to raise the alarm if necessary;
- ✓ the importance of having a **dependable means of communication**. VHF radio equipment is the recommended method of communication and craft users should be familiar with its use. Where mobile phone use is proposed, the phone should at all times be fully charged and the signal strength and charge indicator should be regularly checked while the vessel is underway;
- ✓ when operating a pleasure craft, a person must not be under the influence of **alcohol or drugs** or any combination of drugs or of drugs and alcohol to such an extent as to be incapable of having proper control of the craft;
- ✓ in a **marine emergency**, the alarm can be raised on **VHF Channel 16** or **call 999 or 112 and ask for the Coast Guard**.

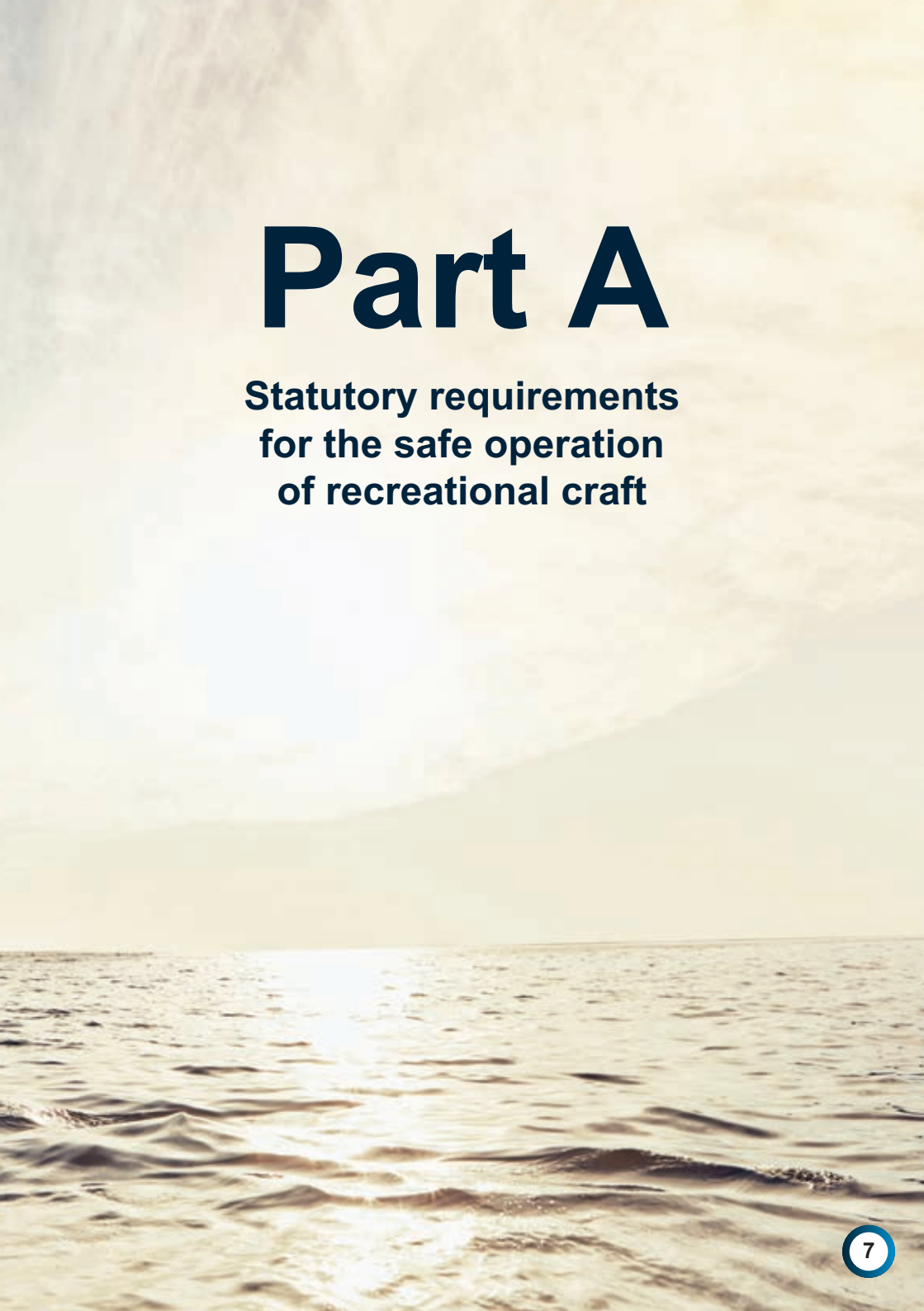
Make time for Maritime Safety

The *Maritime Safety Strategy 2015 – 2019* highlights the need for all individuals taking to the water to work together to ensure that potentially avoidable fatalities in the maritime sector are eliminated. It is the responsibility of each individual to be mindful of their own safety and to take personal responsibility for their actions. That means preparation and knowing what steps to take in emergency situations. Failure to operate safely puts not just an individual's life at risk, but the lives of others on board the craft and potentially the lives of emergency and rescue services personnel.

Persons engaged in water-based activities are encouraged to learn to swim and to acquire lifesaving skills.

Part A

Statutory requirements for the safe operation of recreational craft



Chapter 1
Legislation

1.1 Statutory requirements for recreational craft

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

Legislation comprises primary legislation such as the Merchant Shipping Acts 1894 to 2015 and associated secondary legislation in the form of Statutory Instruments (Merchant Shipping Rules and Regulations). National legislation relating to the maritime sector is available on the Irish Maritime Administration (IMA) webpage at www.dttas.ie and in the Irish Statute Book at www.irishstatutebook.ie.

While much of the national maritime legislation is primarily directed at commercial shipping, there are certain parts of it that apply to recreational craft and these are set out in Table A.

1.1.1 Marine Notices

Attention is drawn to Marine Notices that are published by the IMA throughout the year. Marine Notices are information notices issued to publicise important safety, regulatory and other information relating to the maritime sector in Ireland. They are organised into three categories as follows:

Statutory – to draw attention to a regulation or other legal requirement;

Information – to give information on non-statutory topics such as safety alerts, Marine Survey Office procedures and examinations, publications and product recalls;

Works – to advise of construction, works or surveys at sea that affect navigation.

Marine Notices are available on the Department of Transport, Tourism and Sport webpage at www.dttas.ie. If you wish to be added to the email circulation list for new IMA Marine Notices, please send a request to marinenotices@dttas.ie.

The Commissioners of Irish Lights, Waterways Ireland, harbour and local authorities also issue marine notices from time to time for waters under their jurisdiction. For example, the Waterways Ireland Special Marine Notice Number 1 of each year deals with a range of inland navigation matters.

Table A – Legislation that applies to recreational craft

Legislation	All Recreational Craft	Recreational Craft >12 m	Recreational Craft >15 NRT	Recreational Craft >13.7 m
Merchant Shipping (Collision Regulations) (Ships and Water Craft on the Water) Order 2012 (S.I. No. 507 of 2012)	✓			
SOLAS Chapter V – safety of navigation	✓			
MARPOL Annex I and V – prevention of pollution from ships	✓			
Pleasure Craft (Personal Flotation Devices and Operation) (Safety) Regulations 2005, as amended (S.I. No. 921 of 2005 as amended by S.I. No. 349 of 2012)	✓			
Recreational and personal watercraft Directive 2013/53/EU and European Union (Recreational Craft and Personal Watercraft) Regulations 2017 (S.I. No. 65 of 2017)	✓			
Merchant Shipping (Investigation of Marine Casualties) Act 2000 (No. 14 of 2000) – Marine Casualty Investigation Board	✓			

Table A – Legislation that applies to recreational craft – continued

Legislation	All Recreational Craft	Recreational Craft >12 m	Recreational Craft >15 NRT	Recreational Craft >13.7 m
Harbours Acts 1996 to 2015 and Fishery Harbour Centres Act 1968, as amended	✓			
Signals of Distress (Ships) Rules 2012 (S.I. No. 170 of 2012)	✓			
Maritime Safety Act 2005 (No. 11 of 2005), as amended	✓			
Merchant Shipping (Carriage of Nautical Publications) Regulations 1985 (S.I. No. 282 of 1985)		✓	✓	✓
Mercantile Marine Act 1955 (No. 29 of 1955), as amended			✓	✓
Merchant Shipping (Life Saving Appliances) Rules 1983 and 1993				✓
Merchant Shipping (Fire Appliances) Rules 1967, 1983 and 1985				✓

1.2 Legislation applicable to all recreational craft

1.2.1 Collision Regulations

Applicable Legislation:

- Merchant Shipping (Collision Regulations) (Ships and Water Craft on the Water) Order 2012, S.I. No. 507 of 2012
- Signals of Distress (Ships) Rules 2012, S.I. No. 170 of 2012.

All recreational craft must comply with the International regulations for preventing collisions at sea.

All owners, skippers or persons in charge of a recreational craft should be fully familiar with the collision regulations. Some of the main requirements are included in Appendix 1.

1.2.2 SOLAS Chapter V – safety of navigation

On 1 July 2002, a number of new regulations in Chapter V of the International Convention for the Safety of Life at Sea (SOLAS) came into force which directly affect recreational craft.

While most of the SOLAS Convention only applies to large commercial ships, parts of Chapter V dealing with safety of navigation apply to all recreational craft. Marine Notice No. 9 of 2003 explains the implications of the legislation, which is summarised as follows:

- It is a requirement that any voyage is properly planned prior to being undertaken. See Appendix 8 for an example of a Passage Planning Template.
- 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 with one).
- An illustrated table of lifesaving signals must be carried on board where possible. A copy is included in the Marine Notice and in Appendix 1.
- 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 contacting the Irish Coast Guard at 112 or 999 and reporting directly to them.
- It is a requirement that distress signals are not misused.

1.2.3 The International Convention for the prevention of pollution from ships (MARPOL)

1.2.3.1 Prevention of pollution by garbage from ships – Annex V of MARPOL

All recreational craft must comply with the following requirements in relation to the disposal of garbage:

(a) It is prohibited to dispose into the sea any items of plastic including plastic garbage bags, wrappings, synthetic rope, etc.

(b) The disposal into the sea of the

following garbage must be made as far away as practicable from the nearest land but is in any case prohibited if the distance from the nearest land is less than:

(i) 25 nautical miles for dunnage – lining and packing materials that will float.

(ii) 12 nautical miles for food wastes and all other garbage including paper products, rags, glass, metal, bottles, crockery and similar refuse.

Additionally, **recreational craft of 12 metres or more in length overall** must display placards which notify the crew of the requirements concerning the disposal of garbage.

1.2.3.2 Prevention of pollution by oil from ships – Annex I of MARPOL

Recreational craft are required to be equipped as far as practicable and reasonable with installations to ensure the storage of oil or oily mixtures on board. Their discharge into the sea is prohibited unless the craft is proceeding en route and the oil content of the effluent without dilution does not exceed 15 parts per million.

1.2.4 Wearing of Personal Flotation Devices/Lifejackets

The term "personal flotation device" (PFD) covers all forms of lifejackets and buoyancy aids which, when correctly worn and used in water, will provide buoyancy and increase the likelihood of survival. Buoyancy aid clothing ensures a degree of buoyancy and support in the water while enabling the user to swim or take action to escape from danger.

A lifejacket is designed to prevent drowning and must be capable of returning the user to the surface as quickly as possible and of keeping the person afloat, permitting breathing while waiting for help.

Legislative Requirements

- 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).

These Regulations do not apply to "Olympic style" rowing boats. These are described in the Regulations as craft designed and specifically used for rowing in boat races and capable of being entered into regattas or other events recognised by the Irish Amateur Rowing Union, and also events held in the Olympic Games or other international rowing regattas.

1.2.4.1 Lifejacket regulations on recreational craft other than personal watercraft (PWC)

The following provisions apply to all

recreational craft:

- All persons on board any craft of less than 7 m in length must wear a personal flotation device (PFD) or a lifejacket while on board an open craft or while on the deck of a decked craft, other than when the craft is made fast to the shore.
- The master or owner of any craft is required to ensure that either a PFD or a lifejacket is carried on the craft for each person on board.
- The master or owner of a craft is required to take all reasonable steps to ensure that all persons under the age of 16 years wear a PFD/lifejacket while on board an open craft or while on the deck of a decked craft.
- The term "open craft" refers to a craft without a cabin or below deck facilities for persons on board and where any seating is exposed or partially exposed to the elements.
- The master or owner of a craft is required to take all reasonable steps to ensure that a person wears a suitable PFD/lifejacket at all times while:
  (a) being towed by the craft, or
  (b) on board a vessel or object of any kind that is being towed by the craft.

The PFD/lifejacket requirements under the Regulations do not apply to a person on board a craft which is not underway and is made fast to the shore or at anchor, and when the person:

(a) is wearing, putting on or taking off scuba diving equipment or
(b) is about to engage in, or has just completed swimming (including snorkelling) from the craft.

1.2.4.2 Lifejacket regulations on personal watercraft (PWC), e.g. Jet Skis

- Every person on a PWC is required to wear a PFD/lifejacket at all times while on board or being towed in any manner by a PWC.
- The master or owner of a PWC is required to take all reasonable steps to ensure that a person under the age of 16 years complies with the requirement to wear a PFD/lifejacket while on board or being towed by a PWC.

1.2.4.3 Lifejacket regulations for Waterskiing, Wake Boarding, Paragliding and other towed rides

The Pleasure Craft (Personal Flotation Devices and Operation) (Safety) Regulations 2005 (S.I. No. 921 of 2005), as amended, apply as follows to waterskiing, wake boarding, paragliding and other towed rides:

- All persons while being towed by a pleasure craft or on board any vessel or object of any kind being towed by a craft must wear a personal flotation device or lifejacket. The responsibility for compliance with this requirement lies with the master or owner of the towing craft.

- Persons partaking in towed rides must not consume alcohol or drugs.

More information on PFD/lifejackets is set out in Appendix 5.

1.2.5 Operation of recreational craft – minimum age levels

- The master or owner of a PWC or fast power craft is required to take all reasonable steps to ensure that persons under the age of 16 years do not operate or control the craft. The term "fast power craft" means a craft that can attain a speed through or over water of 17 knots or more.
- The master or owner of a craft with an engine rating of more than 5 hp (3.7 kW) is required to take all reasonable steps to ensure that a person under the age of 12 years does not operate or control the craft.

1.2.6 Controls on alcohol and drugs

- The master or owner of a pleasure craft must not operate or control or allow another person to operate or control the craft while under the influence of alcohol or drugs or any combination of drugs or of drugs and alcohol.
- Any person on board a pleasure craft must not consume alcohol or drugs or any combination of drugs or of drugs and alcohol in circumstances that could affect the safety of persons on board or others using Irish waters, or create a disturbance on board the craft or be a nuisance to others using Irish waters.
- Any person being towed or on board a vessel or object of any kind that is being towed by a pleasure craft shall not consume alcohol or drugs or any combination of drugs or drugs and alcohol.

Violation of any of the provisions of the Pleasure Craft (Personal Flotation Devices and Operation) (Safety) Regulations 2005 may result in a fixed payment notice for €150 issued by an Authorised Officer, or prosecution in the District Court and, on summary conviction, a fine of up to €5,000.

Authorised Officers include members of the Garda Síochána, Naval Service, Harbour Masters and members of the Irish Maritime Administration who are authorised by the Minister.

The Maritime Safety Act 2005 (No. 11 of 2005), as amended, also contains prohibitions on operating a vessel in Irish waters while under the influence of alcohol or drugs (see section 1.7 of this Code).

1.2.7 Marine Equipment Directive

Directive 2014/90/EU sets the

performance and testing standards for marine safety equipment. Equipment complying with the Marine Equipment Directive is marked with a distinctive ships wheel mark.

The Directive has been given effect in Irish law through the European Union (Marine Equipment) Regulations 2017 (S.I. No. 177 of 2017).

When purchasing marine equipment other than PFDs, ensure it always carries the approval wheel mark shown below as required by legislation.

Marine Equipment Directive approval Wheelmark

In the case of a PFD, ensure it always carries the approval CE mark shown opposite.

CE

1.2.8 Directive 2013/53/EU on recreational craft and personal watercraft

Summary of Directive

Directive 2013/53/EU updates legislative requirements in Ireland dating from June 1998 for the design and construction of leisure boats and personal watercraft between 2.5 metres and 24 metres in length, such as sailing craft, motorboats and jet skis. It also lays down particular requirements for manufacturers, importers, private importers and distributors of watercraft. The following watercraft products come within the scope of the Directive:

- Recreational craft of hull length from 2.5 metres to 24 metres;
- Personal watercraft of less than 4 metres in hull length;
- Partly completed watercraft, being either a recreational craft or personal watercraft;
- Components, listed in Annex II of the Directive, when placed separately on the EU market;
- Propulsion engines installed or intended to be installed on or in watercraft;
- Propulsion engines installed or specifically intended for installation in or on watercraft, or subject to major engine modification;
- Watercraft subject to major craft conversion.

Under Directive 2013/53/EU, any watercraft falling under its scope (whether new or second-hand) that is placed on the EU market for the first time must comply with the essential requirements as set out in the Annexes to the Directive. This guarantees their suitability for sale or use in the EU. The essential requirements cover technical, safety and environmental specifications.

Directive 94/25/EC, amended by Directive 2003/44/EC, continues to apply to recreational craft, personal watercraft, components or propulsion engines placed on the EU market for the first time before 18 January 2017.

Exempted watercraft

Directive 2013/53/EU does not apply to some watercraft products intended for sports and leisure purposes as listed in Article 2.2 of the Directive. However, particular products are required to be labelled as specified in the Directive. With regard to the design and construction requirements, specified in Part A of Annex 1, the Directive does not apply to the following products:

- Watercraft intended solely for racing, including rowing racing boats and training rowing boats labelled as such by the manufacturer.
- Canoes and kayaks designed to be propelled solely by human power, gondolas and pedalos.
- Surfboards designed solely to be propelled by wind and to be operated by a person or persons standing.
- Surfboards.
- Original historical watercraft and individual replicas thereof designed before 1950, built predominately with original materials and labelled as such by the manufacturer.
- Experimental watercraft, provided that the watercraft is not placed on the Union market.
- Watercraft built for own use, provided that they are not subsequently placed on the Union market during a period of five years from the putting into service of the watercraft.
- Watercraft specifically intended to be crewed and to carry passengers for commercial purposes.
- Submersibles, air cushion vehicles, and hydrofoils.
- Amphibious vehicles, i.e. wheeled or track-laying motor vehicles, which are able to operate both on water and on solid land.
- External combustion steam powered watercraft, fuelled by coal, coke, wood, oil or gas.

Certain exemptions with regard to exhaust and noise emission requirements also apply as set out in the Directive.

Design categories for watercraft coming within the scope of the Directive

The Directive specifies design categories (A, B, C and D) for watercraft based on suitability for navigation conditions such as ranges of wind force and significant wave height. Further information on these design categories can be found in Part A of Annex 1 to the Directive, and they are summarised as follows:

■ **Category A**
Recreational craft designed for winds that may exceed wind force 8 (Beaufort scale) and significant wave height of 4 m and above but excluding abnormal conditions, such as storm, violent storm, hurricane, tornado and extreme sea conditions or rogue waves.

■ **Category B**
Recreational craft designed for a wind force up to and including 8, and significant wave height up to and including 4 m.

■ **Category C**
Watercraft designed for a wind force up to and including 6, and significant wave height up to and including 2 m.

■ **Category D**
Watercraft designed for a wind force up to and including 4, and significant wave height up to and including 0.3 m, with occasional waves of 0.5 m maximum height.

CE marking and essential requirements
All watercraft, components and propulsion engines are subject to CE marking, indicating that a product complies with the Directive. In the case of a watercraft, CE marking must be affixed to the Watercraft Builder's Plate, mounted separately from the craft's identification number, and in the case of a propulsion engine, directly on the engine. In the case of a component, where it is not possible to affix the CE mark to the product, it shall be affixed to the packaging and to the accompanying documentation.

In summary, the CE marking must be affixed to:
- all newly manufactured watercraft, components and propulsion engines, whether manufactured in the Member States or in third countries;
- all used and second-hand products when imported from third countries and placed on the EU market for the first time;
- modified products that, as new, are subject to this Directive and which have been modified in a way that could affect the safety or the compliance of the product with the EU legislation.

Other essential requirements in the Directive include:
- an identification number for each watercraft and a requirement to carry the craft's builder's plate;
- the need for watercraft to be designed to minimise the risk of falling overboard and to allow for easy re-boarding;
- good all-round visibility for the operator, under normal conditions;
- a written manual in a language easily understood by the end-user, to accompany all watercraft to ensure their safe use;
- sufficient structure, stability and buoyancy in accordance with its design category;

- an emergency stopping device for all tiller-controlled outboard propulsion engines;
- stricter limits for nitrogen oxide, hydrocarbons, and particulate matters for new propulsion engines for watercraft;
- mandatory installation of holding tanks to recreational craft fitted with toilets, in order to contribute to marine environmental protection;
- requirements for engines and engine compartments.

Transition period

Manufacturers must comply with the Directive's requirements from 18 January 2017, while small and medium-sized enterprises that manufacture some smaller outboard spark-ignition propulsion engines have until 18 January 2020 to comply.

The provisions of the Directive are given effect in Irish law by the European Union (Recreational Craft and Personal Watercraft) Regulations 2017 (S.I. No. 65 of 2017) as amended by S.I. No. 217 of 2017. Attention is also drawn to Marine Notice No. 33 of 2015, Marine Notice No. 10 of 2017 and Marine Notice No. 23 of 2017 which provide further information regarding the requirements of the Directive and S.I. No. 65 of 2017, as amended.

The European Union (Recreational Craft and Personal Watercraft) (Procedures for Watercraft Identification) Regulations 2017 (S.I. No. 217 of 2017) amended the rules on the assignment and administration of the Unique Code of the Manufacturer (UCM) and appointed the Marine Survey Office as the competent authority for assigning the UCM.

See Appendix 7 for advice on purchasing products that fall within the scope of the recreational craft and personal watercraft Directive 2013/53/EU.

CE Plate for Category 'C' boat

1.2.9 Marine Casualty Investigation Board

The Marine Casualty Investigation Board (MCIB) was established on 5 June 2002 under section 7(1) of the Merchant Shipping (Investigation of Marine Casualties) Act 2000 (No. 14 of 2000). Under the provisions of the Act, it is the responsibility of all owners, operators and skippers to advise the Board of the MCIB (see Appendix 10 for contact details) of any incident which qualifies as a marine casualty as soon as is practical after it occurs. Where it is considered that an incident warrants it, an investigation will be instigated by the MCIB, and an Accident Investigator appointed.

The European Communities (Merchant Shipping) (Investigation of Accidents) Regulations 2011 (S.I. No. 276 of 2011) set out the regulatory framework governing the investigation of accidents in the maritime transport sector. The purpose of the Regulations is to improve maritime safety and the prevention of pollution by ships, and so reduce the risk of future marine casualties. The Regulations designate the MCIB as the permanent investigative body in Ireland to investigate marine casualties and accidents. See www.mcib.ie for further information.

1.2.10 Harbours Acts – Powers of Harbour Masters

Harbours Acts 1996 to 2015 and Fishery Harbour Centres Acts 1968 to 2015.

Under these Acts, Harbour Masters have the power to create bye-laws within the limits of their port areas. While the majority of shipping within such ports is of a commercial nature, recreational craft are required to comply with any relevant bye-laws, in particular those in relation to:

- Safety of navigation
- Speed limits
- Operating within channels
- Buoyage
- Mooring and berthing.

Details of bye-laws are available from the Harbour Masters Office and should be checked prior to using the port area.

1.2.11 Radiocommunications

It is recommended that all recreational craft carry at least one means of approved marine radiocommunications equipment in order to enable the initiation of a distress alert in the event of an emergency. See Appendix 2 for Guidance notes on Radiocommunications.

If marine radiocommunication equipment is voluntarily fitted or carried on any type of recreational craft, the vessel must be licensed in accordance with the Wireless Telegraphy Act 1926, as amended. Licences are issued under the Wireless Telegraphy (Ship Station Radio Licence) Regulations 2006 (S.I. No. 414 of 2006). The responsibility for the licensing of radio communications equipment on Irish ships and the issuing of associated Certificates of Competency rests with the Marine Survey Office (MSO) of the Department of Transport, Tourism and Sport.

The basic requirements to obtain a Ship Station Radio Licence are as follows:

(a) The radio equipment must be type approved in accordance with either the Marine Equipment Directive (2014/90/EU) or the Radio Equipment Directive (2014/53/EU). Caution should be taken when purchasing marine radio equipment as non-approved equipment may not be licensed. This is particularly relevant for equipment purchased outside the European Union.

(b) The personnel operating the radio equipment must hold an appropriate Radio Operator's qualification.

The licence document will contain a unique Radio Call Sign for the craft and a Maritime Mobile Service Identity (MMSI) number if applicable.

1.2.11.1 Emergency Position Indicating Radio Beacons and Personal Locator Beacons

Emergency Position Indicating Radio Beacons (EPIRBs)

A 406 MHz EPIRB is a radio transmitter that can be activated in an emergency situation to raise a distress alert.

When an EPIRB is activated, it transmits a signal that is detected by the Cospas-Sarsat satellite system. As the satellites orbit the earth, they "listen" for any activated beacons. They retransmit the beacon signals to ground stations, which compute the beacon position and report the distress alert to search and rescue authorities.

The majority of beacon models also transmit a lower powered homing signal on 121.5 MHz as a reference for local search teams. Some older EPIRB models are only capable of transmitting a legacy analogue signal on 121.5 MHz or 243 MHz. The Cospas-Sarsat global satellite system NO LONGER MONITORS those frequencies. These beacons should be replaced with a modern 406 MHz EPIRB.

Although the Cospas-Sarsat System is designed to independently locate activated EPIRBs with good accuracy, newer beacons are available with an integrated receiver chip for the beacon to determine its own location using signals from global navigation satellite systems such as GPS. If the integrated receiver chip is able to calculate a location for the beacon, that location is reported in the distress message transmitted from the beacon. GPS-equipped beacons provide helpful redundancy in determining the beacon location and in certain circumstances can reduce the time needed for Cospas-Sarsat to locate the beacon. In order to ensure the greatest degree of positional accuracy in the event of a GPS EPIRB activation, GPS EPIRBs must be programmed with Standard Location Protocol with the Maritime Mobile Service Identity (MMSI) number of the vessel. Non GPS enabled EPIRBs may be programmed with the vessel's Callsign.

All EPIRBs must be tested regularly as per manufacturers instructions. Care should also be taken to ensure that the EPIRB battery is in date.

All EPIRBs must be correctly programmed and registered with the MSO. Any changes to the vessel's registered details must be immediately notified to the MSO. Search and rescue (SAR) authorities rely on the EPIRB register in the event of an EPIRB activation. Correct programming and registration is essential to ensure that the SAR authorities have accurate, reliable and up to date information about a vessel and its contacts in the event of an emergency. It also allows any inadvertent false alerts to be quickly resolved without the unnecessary deployment of search and rescue resources.

Personal Locator Beacons (PLBs)
PLBs work on the same principle as EPIRBs. When correctly activated in an emergency situation, a PLB transmits a 406 MHz signal which is detected by the Cospas-Sarsat satellite system. The distress alert is then reported to search and rescue authorities.

- PLBs are designed to be carried by an individual.
- EPIRBs can be manually activated or automatically activated on contact with water.
- **PLBs can only be manually activated**.
- EPIRBs are designed to transmit while floating.
- **PLBs MUST be held clear out of the water for transmission**.
- The environmental survivability of EPIRBs is greater than that of PLBs.

In view of the above, a PLB is not considered to be a substitute for an EPIRB. However, the wearing of a PLB by seafarers, particularly those boating alone, is recommended.

All PLBs must be correctly registered with the Commission for Communications Regulation (ComReg). Correct registration of PLBs is essential to ensure that the SAR authorities have accurate, reliable and up to date information and contacts in the event of an emergency.

ComReg maintains an online registration facility for PLB devices in Ireland. PLB owners should register their PLB at https://www.comreg.ie/industry/licensing/personal-locator-beacons/. Any queries relating to PLB registration may be addressed to:

The Commission for
Communications Regulation
1 Dockland Central
Guild Street
Dublin 1
D01 E4X0.
Website: www.comreg.ie
Email: licensing@comreg.ie
Phone: (01) 804 9600 (Industry)
(01) 804 9668 (Consumer)

It is recommended that PLBs carried on Irish vessels be the 406 MHz satellite type and be provided with a 121.5 MHz homing device. It is also recommended that PLBs have an integrated GPS receiver. This is to enable greater position accuracy, hence a quicker response time in the event of activation. PLBs should be type approved by Cospas-Sarsat and certified in accordance with the Radio Equipment Directive (2014/53/EU) and the European Standard ETSI EN 302 152.
Note: Compliance with Directive 2014/53/EU is indicated by a “CE Mark of Conformity”.

1.3 Legislation applicable to recreational craft greater than 12 metres in length

1.3.1 Nautical publications

Applicable Legislation:

- Merchant Shipping (Carriage of Nautical Publications) Regulations 1985, S.I. No. 282 of 1985.

These regulations require that all recreational craft greater than 12 metres in length must carry:

1. Corrected charts for vessels that proceed to sea.
2. For craft that proceed to sea beyond a distance of 5 nautical miles from any coastline, one copy of each of the following publications as is appropriate for the voyage, carried on board in a readily accessible location:

(1) International Code of Signals
(2) Illustrated table of Life Saving Signals (See Appendix 1)
(3) Relevant and applicable Marine Notices (Marine Notices are published on the Department of Transport, Tourism and Sport website)
(4) Mariners Handbook
(5) Notices to Mariners, as relevant, as issued by local Port Authority
(6) Nautical Almanac
(7) Navigational Tables
(8) Lists of Radio Signals
(9) Lists of Lights
(10) Sailing Directions
(11) Tide Tables
(12) Tidal Stream Atlases
(13) Operating and maintenance instructions for navigational aids carried by the ship.

1.4 Legislation applicable to recreational craft greater than 15 net registered tonnes (NRT)

1.4.1 Registration of recreational craft

Applicable legislation:

- Mercantile Marine Act 1955, as amended.

"An Act to provide for the national character, ownership and registry of Irish ships, for the mortgage, sale, transfer and measurement of tonnage of such ships."

Registration imparts nationality on a vessel and brings it within the legal jurisdiction of the flag it flies. Therefore, Irish law binds an Irish flagged vessel even though it may be travelling worldwide. A vessel's registration papers establish its bone fides in a very similar manner as a national passport does for an individual. Registration may establish criminal jurisdiction in the event of an incident or accident in international waters.

A major advantage of registration is the establishment of Title to the vessel, i.e. who actually owns it. This is essential if planning to take the boat overseas. There are also financial aspects to registration – lending institutions will only offer marine mortgages on registered craft, and mortgages on all such craft are recorded.

The 1955 Act does not discriminate between recreational and commercial craft – all are regarded as ships (unless propelled by oars) for the purpose of registration. The Act also defines those persons that may register a boat under the Irish flag as follows:

- Irish or EU Member State nationals
- Irish or EU bodies corporate, based within the EU
- The Government or Ministers of the Government.

Under section 18(1) of the 1955 Act every ship which is wholly owned by an Irish citizen or an Irish body corporate is required to be registered under the Act unless the ship is exempt under section 18(2). Exempt ships include those under 15 net tons while navigating on the rivers, canals, lakes or coasts of Ireland, Great Britain, the Channel Islands and the Isle of Man. Ships owned by Irish citizens not ordinarily resident in the State are also exempt. However, under the Act, recreational craft greater than 15 NRT owned by an Irish citizen or an Irish body corporate must be registered in accordance with the terms of the Act.

If leisure craft are navigating abroad outside the waters described above and are owned by an Irish citizen ordinarily resident in the State, they should be registered on the national register. Generally speaking, if a person is usually resident in Ireland, the person should ensure that his or her yacht is registered on the national register while operating abroad in order to comply with national statutory ship registration requirements.

As a general guide, many boats greater than 12 metres (approximately 40 ft) in length would likely equate to the 15 NRT tonnage figure. Should an owner require advice on the likelihood that his/her craft may qualify for registration, the Mercantile Marine Office of the IMA can advise. As outlined above, there is no current requirement for craft less than 15 NRT or for vessels owned by an Irish citizen who is not ordinarily resident in the State to be registered. However, should an owner wish to do so, these vessels are entitled to be registered in order to avail of benefits offered under the Act.

Further information on registration procedures, including survey and measurement, is available from the Mercantile Marine Office of the IMA or from Revenue. The MMO is contactable at (01) 678 3480 or at mmo@dttas.ie.

1.4.2 Future registration developments – Merchant Shipping (Registration of Ships) Act 2014

The Merchant Shipping (Registration of Ships) Act 2014 (No. 43 of 2014) was enacted in December 2014. With the exception of section 69, the Act has not yet been commenced. The main purpose of the Act is to replace and update the Mercantile Marine Act 1955, as amended, and provide a basis for the establishment and regulation of a modern and comprehensive ship registration system that will be more efficient,

user friendly and accessible for ship owners. Among the changes and improvements that will be introduced under the Act are the following:

- A new centralised, electronic and accessible Irish Register of Ships consisting of different Parts for the registration of different types of ships and for different registration purposes;
- An extension of mandatory ship registration to additional ship categories including fishing boats less than 15 metres in length overall, personal watercraft such as jet skis, small fast powered craft and some small commercial angling boats so that, subject to a number of exemptions, ships operating domestically will be required to be registered on the Register or to have a current valid registration conferring nationality from another country;
- New registration categories, including visitor registration for certain recreational craft visiting Ireland for short periods not exceeding 3 months where such vessels are not registered in another country;
- The introduction of ship registration renewal and a facility to refuse ship registration or remove ships from the Register. A ship registration will have to be renewed up to 5 years after initial registration and at intervals of up to 10 years thereafter;
- An improved enforcement and penalty regime.

Regulations to be made under the Act will set out the detail of the new Register structure and the different registration requirements for each Part of the Register. The requirements and conditions of registration for each Part of the new Register, and the registration fees, will vary depending on the type, size, use, etc., of the vessel involved, with less onerous requirements applying to smaller non-commercial recreational vessels. It is envisaged that the Part of the Register for personal watercraft and small fast powered craft will also accommodate the voluntary registration of most other types of recreational craft less than 24 metres in length if an owner wishes to register such craft.

The new ship registration regime will not come into operation until the necessary regulations are made under the 2014 Act and the new Irish Register of Ships and registration system are established under a separate IT project. Pending the establishment of the new Irish Register of Ships, the current arrangements under the 1955 Act for the registration of ships by officers of the Revenue Commissioners will continue.

1.5 Legislation applicable to recreational craft of 13.7 metres in length and greater

1.5.1 Lifesaving and Safety Equipment

Applicable legislation:

- Merchant Shipping Life Saving Appliances Rules.

Lifesaving appliances consist of items of lifesaving equipment such as lifejackets, liferafts, flares, lifebuoys, EPIRBs, etc.

There are different Rules for craft constructed before and after 1986, as follows:

- Merchant Shipping (Life Saving Appliances) Rules 1983 (S.I. No. 302 of 1983). These apply to craft constructed before 1 July 1986.
- Merchant Shipping (Life Saving Appliances) Rules 1993 (S.I. No. 380 of 1993). These apply to craft constructed on or after 1 July 1986.
- Merchant Shipping (Life Saving Appliances) Rules 1983 (Amendment) Rules 1993 (S.I. No. 381 of 1993).
- Merchant Shipping (Life Saving Appliances) Rules 1983 (Amendment) (No. 2) Rules 1993 (S.I. No. 382 of 1993).

Under these Rules, recreational craft with a length of 13.7 m or greater are classed as **Class XII** vessels. The lifesaving appliances requirements applicable to Class XII vessels under these Rules are set out in Table B. The requirements differ depending on the length and area of operation of the vessel.

Table B: Class XII boats – Mandatory Lifesaving Equipment

Lifesaving Equipment	Recreational Craft (1)* 13.7 – 21.3 metres length Restricted operations	Recreational Craft (2)+ 13.7 – 21.3 metres length Seagoing (post 1986)
Lifebuoys		
Lifebuoy for each 2 persons carried on board (Minimum of 2)	✓	
One Lifebuoy fitted with self-activating smoke and light signal	✓	
One Lifebuoy fitted with buoyant line (18 m)	✓	✓
2 Lifebuoys, one fitted with smoke/light signal		✓
Lifejacket		
Lifejacket for each person on board	✓	
Lifejacket for each person on board with light fitted		✓
Pyrotechnics		
Six parachute flares or red star rockets	✓	✓
Waterproof container for flares	✓	✓
Rescue Signal Table	✓	✓
Liferaft of sufficient capacity for all persons on board		✓
Launching instructions/posters for liferaft on display		✓
Training Manual for onboard safety equipment		✓
Maintenance instructions for safety equipment		✓

1.5.1.1 Class XII recreational craft constructed on or after 1 July 1986 of 13.7 metres in length and greater but less than 21.3 metres in length

These craft are covered by the Merchant Shipping (Life Saving Appliances) Rules 1993 – S.I. No. 380 of 1993.

Coastal areas are divided into areas of "Smooth waters", "Partially smooth waters" and "To Sea". The specific areas are defined in a Marine Notice issued by the IMA, and are subject to periodic review. As of 2017, the relevant Marine Notices are No. 10 of 2003 and No. 24 of 2004. These are available at www.dttas.ie.

Craft in this size range comprise two categories based on the area of operation and the time of the year. Different lifesaving appliances apply to the two categories, as follows:

Category (1)* craft that are either:

- Engaged in voyages which **do not** proceed to sea, or
- Which only **proceed to sea** during the months of **April to October** inclusive, on voyages during which the craft is **never more** than three miles from the coast.

Craft in this category are unlikely to proceed to sea and will always operate in smooth or partially smooth waters. If they do proceed to sea, it is during the period April to October, and they must remain within three miles of the coastline.

Category (2)+ craft that are engaged on either:

- A voyage to **sea**, in the course of which the craft is **more** than three miles from the coast, or
- A voyage to sea during the months of November to March inclusive.

1.5.1.2 Class XII recreational craft constructed on or after 1 July 1986 of 21.3 metres in length and greater

These craft are covered by the Merchant Shipping (Life Saving Appliances) Rules 1993 – S.I. No. 380 of 1993.

Craft greater than or equal to 21.3 metres in length and regardless of sea area operation must carry the lifesaving equipment set out in the following Table C.

Table C: Class XII boats – Mandatory Lifesaving Equipment

Lifesaving Equipment	Recreational Craft 21.3 – 25.9 metres length Restricted operations	Recreational Craft of 25.9 metres length and greater
Lifebuoys		
Lifebuoy for each 2 persons carried on board (Minimum of 2)	✓	
One Lifebuoy fitted with self-activating smoke and light signal	✓	
One Lifebuoy fitted with buoyant line (18 metres)	✓	✓
2 Lifebuoys, one fitted with smoke/light signal		✓
Lifejacket		
Lifejacket for each person on board	✓	
Lifejacket for each person on board with light fitted		✓
Pyrotechnics		
Six parachute flares or red star rockets	✓	✓
Waterproof container for flares	✓	✓
Rescue Signal Table	✓	✓
Liferaft of sufficient capacity for all persons on board	✓	✓
Launching instructions/posters for liferaft on display	✓	✓
Training Manual for onboard safety equipment	✓	✓
Maintenance instructions for safety equipment	✓	✓
Line throwing appliance	✓	✓
Rescue boat and launching davit		✓

1.5.1.3 Class XII recreational craft constructed before 1 July 1986

Safety equipment requirements are broadly similar to those outlined in sections 1.5.1.1 and 1.5.1.2. Specific details can be obtained from the IMA or by reading the Merchant Shipping (Life Saving Appliances) Rules 1983 (S.I. No. 302 of 1983).

1.5.1.4 Recreational craft less than 13.7 metres in length

There are no statutory lifesaving appliance requirements for recreational craft less than 13.7 metres in length apart from the Pleasure Craft (Personal Flotation Devices and Operation) (Safety) Regulations 2005, (S.I. No. 921 of 2005), as amended. However, it is strongly recommended that such vessels carry at least a minimum standard of life saving equipment and guidance on this is given in Part B of this Code.

1.5.2 Fire Fighting Equipment

Applicable legislation:

- Merchant Shipping Fire Appliances Rules.

The term “Fire Appliances” refers to items of fire-fighting equipment such as fire extinguishers, fire blankets, fire hoses and pumps, etc.

While there are different sets of Rules which may apply to a recreational craft depending on its date of construction, the Rules impose similar requirements.

Relevant Legislation:

- Merchant Shipping (Fire Appliances) Rules 1967 (S.I. No. 101 of 1967) apply to craft built before 25 May 1980
- Merchant Shipping (Fire Appliances) (Post 1980 Ships) Rules 1983 (S.I. No. 303 of 1983) apply to craft built between 25 May 1980 and 1 September 1984
- Merchant Shipping (Fire Appliances) (Post 1980 Ships) (Amendment) Rules 1985 (S.I. No. 278 of 1985) apply to craft built on or after 1 September 1984.
- Merchant Shipping (Fire Protection) Rules 1985 (S.I. No. 279 of 1985) apply to craft built on or after 1 September 1984.

1.5.2.1 Recreational craft of 13.7 metres in length and greater

See Table D below.

Table D: Mandatory Fire Fighting Equipment

Equipment Item	Boats 13.7 – 15 metres in length	Boats 15 – less than 21.34 metres in length and less than 150 tonnes	Boats of 21.34 metres in length and greater
Fire Extinguishers			
2 fire extinguishers or fire buckets (one with lanyard)	✓	✓	
3 fire extinguishers or fire buckets (one with lanyard)			✓
2 fire extinguishers suitable for use on oil fires, for boats with internal combustion engines fitted	✓	✓	✓
Fire Pumps/Hoses			
Manual fire pump (hand operated)	✓	✓	
Dedicated fire pump sea suction	✓	✓	✓
Fire hose	✓	✓	
Fire hose nozzle (minimum diameter 6 mm) with jet and water spray	✓	✓	
Power driven fire pump			✓*
Fire main and hydrant			✓
2 fire hoses			✓
Fire hose spray nozzle for machinery spaces			✓
Fireman's axe			✓

*Power driven fire pumps may be driven from the main engine. However, if this option is used, a second manual fire pump, external to the machinery spaces, must also be supplied. This additional manual pump must be able to supply a 6 metre jet of water through a 10 mm nozzle.

1.5.2.2 Recreational craft less than 13.7 metres in length

There are currently no statutory fire appliance requirements for recreational craft less than 13.7 metres in length. However, it is strongly recommended that such vessels carry at least a minimum standard of fire appliances and guidance on this is given in Part B of this Code.

1.6 Inland Waterways and Canal Systems

Inland waterways comprise the navigable sections of the larger rivers, the canal network and lakes. Conditions on inland waterways are generally not as severe as those experienced in coastal regions. For the purposes of this Code, inland waterways refer to non-tidal and/or fresh water. There are a number of different authorities with a role in managing navigable inland waterways in the State. There is more detail on these authorities in Chapter 3.

In Ireland, Waterways Ireland has responsibility for the Shannon Navigation, the Grand Canal, the Royal Canal, the Barrow Navigation and the Shannon Erne Waterway. The Corrib is managed by the Corrib Navigation Trustees. Parts of other waterways come under the jurisdiction of the relevant Harbour Authority and still others (e.g. the Slaney) have no navigation authority per se but may be subject to local authority bye-laws. Appendix 3 provides further information in relation to buoyage and marking schemes on some inland waterways.

1.6.1 Shannon Navigation Acts and associated Bye-Laws

Relevant legislation for the Shannon system:

- Shannon Navigation Acts 1990 and 2005
- Shannon Navigation (Construction of Vessels) Bye-Laws 1992 (S.I. No. 79 of 1992)
- Shannon Navigation Bye-Laws 1992 (S.I. No. 80 of 1992), as amended.

The above legislation applies to any recreational craft based on the Shannon waterway, including lakes and tributaries.

S.I. No. 79 of 1992 specifically refers to vessel construction requirements, the safety equipment required to be carried, engine installations, Liquid Petroleum Gas and cooker installations. S.I. No. 80 of 1992 defines authorised officers and their powers, speed limits, maximum drafts, rules of navigation, crewing levels, use of facilities and groundings.

All vessels operating on the Shannon Navigation must be

registered with Waterways Ireland as set out in Bye-Laws 5 and 6 of the Shannon Navigation Bye-Laws 1992 (S.I. No. 80 of 1992).

A "vessel" is defined as any craft that is not:

- an open boat or undecked punt
- a canoe, skiff, skull
- a row boat
- a boat designed to be propelled primarily by oars or sail
- propelled by engine greater than 15 horsepower.

The bye-laws were amended in 1994 to prevent the discharge of sewage directly into the navigation from any vessel.

1.6.2 Navigation on the Shannon

The Shannon Navigation Bye-Laws (S.I. No. 80 of 1992) identify the rules to be followed by craft navigating the Shannon waterways.

While similar in content to the COLREGS, there are a number of additional specific rules that apply.

- Vessels shall not run abreast or overtake in any part of the navigation less than 13 m in width.
- Vessels navigating **with** the stream shall be given precedence for passage through a bridge by those craft navigating against the stream of the river.
- Boats should keep to the starboard side of the fairway passing port to port.
- A craft proceeding upstream must give way to those going downstream.
- Speed limits are to be adhered to as laid down in the Bye-laws.
- On entering the Shannon Navigation, the direction of Buoyage is **Northwards**.

Buoys, Beacons and Perches are painted **Red** on the **Port** hand and **Green** on **Starboard** hand when proceeding upstream. Navigation marks are not lit on the Shannon.

On the Shannon Erne Waterway east of Lough Scur, the marking system changes to a system of red marks with white flashes where the white flash indicates the safe side. The Corrib system uses a red and green lateral buoyage system which is the same as that on the Shannon.

1.6.3 Canal System Navigation

Navigation on the Royal and Grand Canals is controlled by bye-laws passed under the Canals Act 1986 and 2005. Please contact Waterways Ireland for further details on these bye-laws.

1.6.4 Navigation on the Corrib System

The Lough Corrib Navigation Trustees are responsible for the maintenance of navigation aids and a limited number of piers on the

Corrib system, maintenance of the Eglinton canal system, associated walkways, tow paths, lock gates and boundary walls.

1.7 Maritime Safety Act 2005 (No. 11 of 2005), as amended

One of the primary purposes of this Act is to strengthen the law against improper use of certain recreational craft, to outlaw reckless behaviour in operating or on board vessels and to promote good practice in operating vessels generally. The Act also updates safety regulation-making provisions for passenger boats, fishing vessels and pleasure craft, and updates penalty and other provisions of certain related Acts.

The main provisions of the Act which affect recreational craft are as follows:

Part 2 Personal Watercraft and Recreational Craft

The main provisions of this Part are:

- Clear powers for local authorities, Waterways Ireland, harbour companies, Iarnród Éireann and, in respect of the six fishery harbour centres, the Minister for Agriculture, Food and the Marine, to make bye-laws to regulate and control the use of jet skis and other fast powered recreational craft.
- The appointment by local authorities, Waterways Ireland, harbour companies, Iarnród Éireann and, in respect of the six fishery harbour centres, the Minister for Agriculture, Food and the Marine, of authorised persons to enforce the provisions of the Act. The Garda Síochána also play a key role in enforcement.
- The seizure, detention and forfeiture of craft involved in serious offences and the disqualification of serious offenders from operating the craft in question in the interest of public safety and heritage protection.
- Fines of up to €2,000 on summary conviction for bye-law contraventions.

The Local Government Management Agency website provides links to the individual websites for each local authority area – www.lgcsb.ie/en/irish-local-government. It is recommended that checks are made with the relevant local authority for information on the beach bye-laws that may apply in that county.

Part 3 Prohibitions relating to Vessels – Codes of Practice for the Safe Operation of Vessels

The main provisions of this Part address:

- the prohibition of the use of "unseaworthy" vessels in or on any waters
- a prohibition on careless or dangerous navigation or operation of vessels
- prohibitions on the operation of a vessel while under the influence of alcohol or drugs or any combination of drugs or drugs and alcohol
- actions arising from drunkenness, disruptive behaviour, etc., of persons on board a vessel
- a prohibition on endangering vessels or the safety of persons on board leading, on summary conviction, to a fine of up to €5,000 or to imprisonment for a term not exceeding 6 months, or both, or on conviction on indictment to a fine not exceeding €100,000 or to imprisonment for a term not exceeding 2 years or both
- the preparation and publication of Codes of Practice to promote the proper and safe operation of vessels.

Part 4 Safety Regulations – Passenger Boats, Fishing Vessels and Pleasure Craft

- The main provisions of this Part, as amended, update and restate Ministerial regulation-making provisions dating from 1992 in relation to passenger boats, fishing vessels and pleasure craft.

Part 5 Amendment of Certain Enactments

This Part updates the offences, enforcement and penalty provisions in a number of related Acts, including those relating to fixed payment notices ("on-the-spot-fines").

Part 6 Provisions relating to the foreshore and to foreshore and aquaculture licences

Part 6 amends certain provisions in the Foreshore Acts.

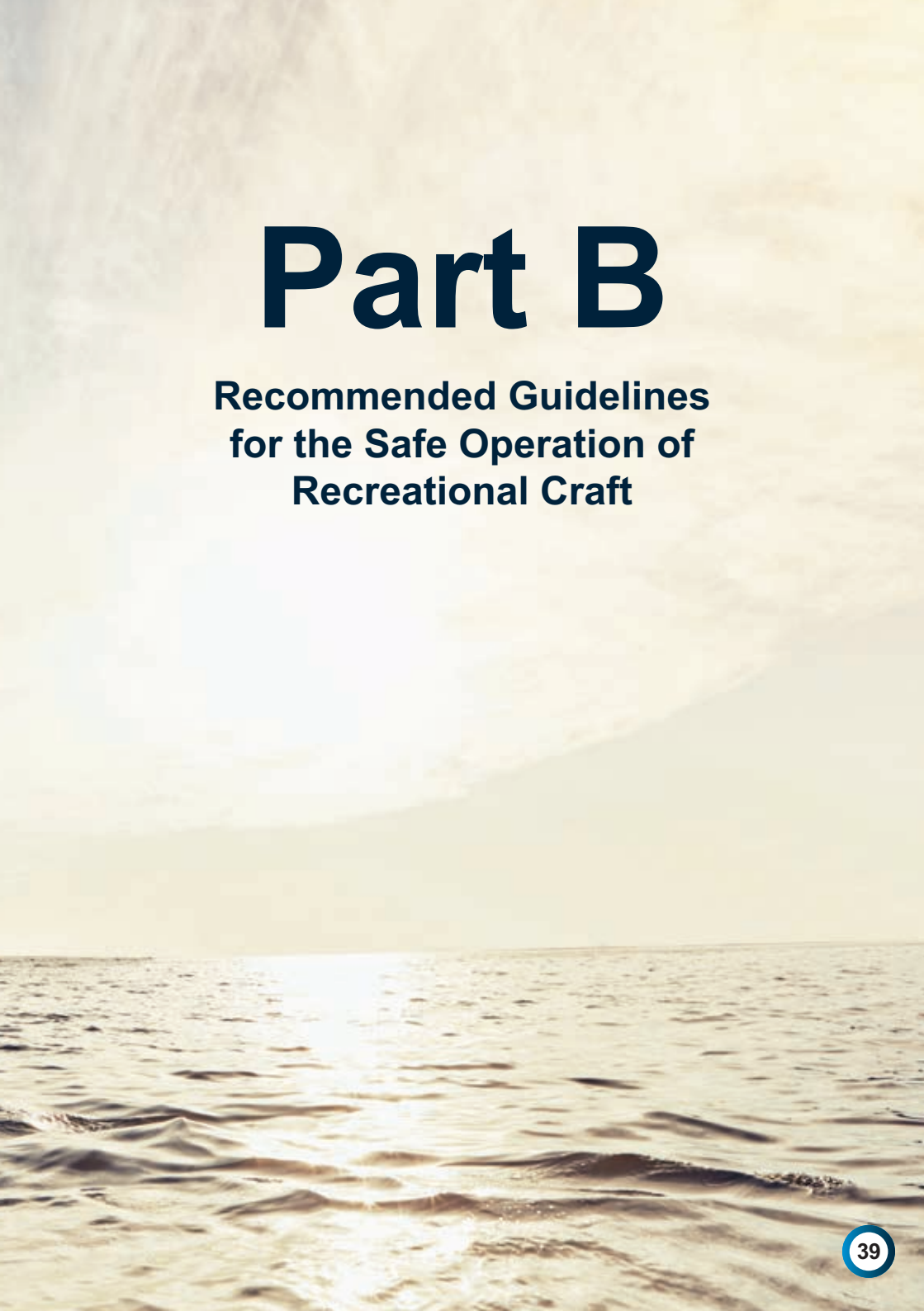
1.8 Other legislation

The main focus of this Code of Practice is the recreational use of craft in Irish waters. However, owners and operators of recreational craft are reminded that where such craft are operated on a commercial basis, certain other legislative requirements under other relevant legislation such as the Merchant Shipping Acts, the Sea Pollution Acts, and the Safety, Health and Welfare at Work Act 2005 (No. 10 of 2005) may apply in particular circumstances.

For example, where the use of recreational craft involves an employer/employee relationship or where the use of such craft directly relates to an undertaking of a self-employed person, there are duties imposed under the Safety, Health and Welfare at Work Act 2005. Further information on the 2005 Act is available from the Health and Safety Authority at www.hsa.ie or Locall 1890 289 389 (between 9am and 12:30pm, Monday to Friday).

Part B

Recommended Guidelines for the Safe Operation of Recreational Craft



Introduction and Application of Part B

Part B of the Code provides guidance for the safe operation of recreational craft. It offers advice on best safe operating practice for a variety of types of recreational craft, with further information contained in a series of Appendices.

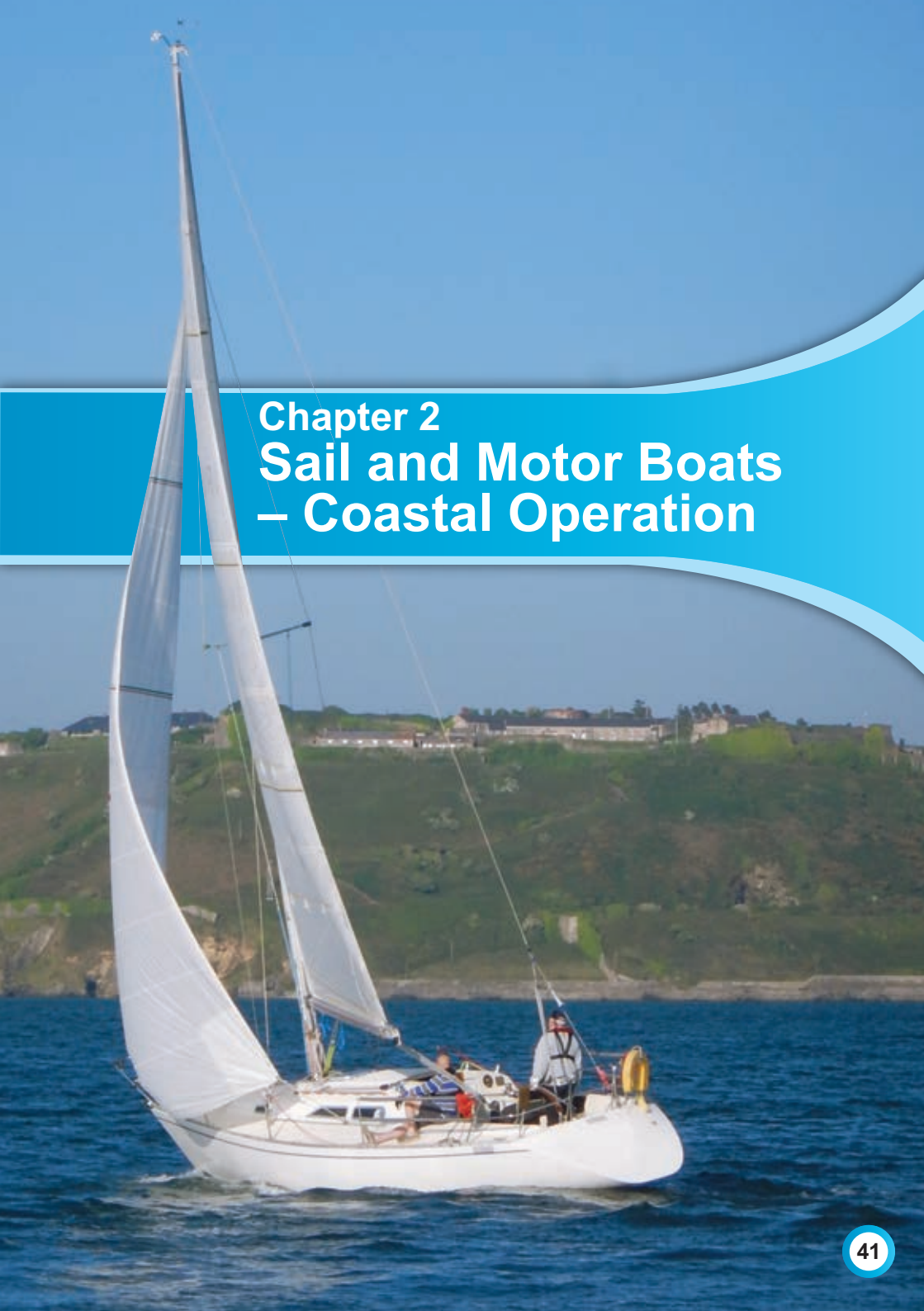
Part B contains recommendations rather than statutory requirements.

Note:
For the purpose of Part B, sailing craft are considered to be craft primarily propelled by harnessing the power of the wind. This covers all forms of day boats, inshore and offshore cruisers, regardless of size, and incorporates competitive and non-competitive boats.

Sailing Dinghies are dealt with in Chapter 4 due to their specific use, design and construction.

Motorboats form a significant section of the recreational craft market. For the purpose of this Code, they are considered as vessels primarily propelled by means of an internal combustion engine, regardless of the vessel size, and include petrol, diesel, inboard or outboard motorboats, but exclude personal watercraft (jet skis) which are covered in Chapter 5.

Sailboats while under power are classed as motorboats, as are lake boats fitted with outboard engines.



Chapter 2
Sail and Motor Boats – Coastal Operation

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).

2.2 Voyage Planning

All voyages, regardless of their purpose, duration or distance, require some element of voyage planning. SOLAS V (see Marine Notice No. 9 of 2003) requires that all users of recreational craft going to sea consider the following:

- Weather forecasts (see Appendix 6)
- Tidal information
- Capability of boat and crew on board
- Planned route utilising charts and pilotage information as required.

In addition, it is important to always ensure that a designated person ashore is aware of the intended voyage, departure and return times, and to have a procedure in place to raise the alarm if the need arises. See Appendix 8 for an example of a voyage/passage planning template.

2.3 Pre-departure Safety Checks and Briefing

- Be aware of the current weather forecast for the area.
- Engine checks should include oil levels, coolant and fuel reserves.
- 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, foul weather gear, lifebuoys and fire-fighting appliances
  - A simple plan of the boat showing the locations of such safety equipment and posted in a prominent manner is a useful aid
  - The nominated first aider should be introduced
  - Location and use of navigation equipment.

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:

- Location of liferafts and the method of launching
- Procedures for the recovery of a person from the water (see Chapter 11)
- Location and use of fire-fighting equipment
- Procedures and operation of communications equipment
- Location of navigation and other light switches
- Method of starting, stopping and controlling the main engine
- Method of navigating to a suitable place of safety.

Safety cards are an acceptable way of providing the above information.

2.4 Recommended safety equipment

On sailboats and motorboats less than 13.7 metres in length, the safety equipment carried should reflect the boat's function and area of operation.

For the purpose of this Code, sailboats and motorboats are classed in six categories, four of which refer to coastal waters and are covered in this Chapter. The remaining two categories are dealt with in Chapter 3.

The four categories in this Chapter cover a specific area of operation and are based on wind strength and significant wave heights. However, it should be noted that actual wave heights and wind strengths encountered by such design categories may at times be greater. Boat owners should be aware of the category that applies to their vessel, based on its intended

usage and area of operation, and ensure it is equipped with the required safety equipment. The following paragraphs provide a list and description of each of the vessel categories. Table E recommends the type and quantity of equipment that each category of craft should carry in the respective operating areas.

Appendices 4 and 6 provide information in relation to anchoring, stability and boat handling, and weather, sea states and tides respectively.

2.4.1 Category A – Ocean

Boats in this category would generally be expected to be greater than 10 metres in length and –

- Undertake ocean passages,
- Be capable of sustaining seas greater than 4 metres in height and wind force greater than Beaufort 8.

2.4.2 Category B – Offshore

Boats in this category would generally be expected to be in excess of 7 metres in length and –

- Cruise around the coasts of Ireland, U.K. and NW Europe,
- Undertake offshore passages of between 50 and 500 miles,
- Be capable of sustaining seas up to 4 metres in height and wind force up to Beaufort 8.

2.4.3 Category C – Inshore

Boats in this category would generally be expected to be in excess of 5 metres in length and –

- Operate within 10 miles of land, and always about four hours from a safe harbour that can be accessed at all times and under all tidal conditions,

- Be capable of operating in seas up to 2 metres in height and wind force up to Beaufort 6.

2.4.4 Category D – Sheltered waters

Boats in this category would generally be expected to:

- Operate on tidal estuaries or inshore coastal waters adjacent to a safe harbour;
- Only be used during the hours of daylight, unless equipped with necessary lights to comply with Collision Regulations (see Appendix 1) or local navigation bye-laws;
- 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.

2.5 Safety Equipment Checklist

Table E sets out the recommended type and quantity of equipment that should be carried for each category of craft. The levels of recommended equipment should be regarded as a minimum. Owners are encouraged to equip boats to a higher standard.

Mariners should stow fire extinguishers and a hand-held VHF in the cockpit, where possible, in order that they are readily accessible in the event of an emergency and in order to avoid having to go below to retrieve them.

Sail boat and motorboat – Offshore/Coastal

- Category A Craft – Ocean
- Category B Craft – Offshore
- Category C Craft – Inshore
- Category D Craft – Sheltered waters

Table E: Sail and Motor Boats – Coastal

Type of Equipment	Vessel Category and Quantity of Equipment			
1. Lifesaving and personal safety equipment	**A**	**B**	**C**	**D**
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)
1.2 Crew safety harness/lifelines for all crew that may have to work on deck at any time.	✓	✓	✓	
1.3 Appropriate clothing.	✓	✓	✓	
1.4 An immersion suit for each crew member if operating in northern latitudes.	✓	✓		
1.5 Jack Lines capable of being rigged port and starboard and extending from the aft of the cockpit to the foredeck for use with crew lifelines.	✓	✓	✓	
1.6 Life raft of sufficient capacity to cater for all crew carried.*	✓	✓	✓*	
1.7 Emergency Liferaft Grab Bag for abandoning ship.	✓	✓	✓	
1.8 A buoyant heaving line/throw bag.	✓	✓	✓	
1.9 Horseshoe type lifebelt with light. Danbuoy with flag fitted to one lifebelt.	✓	✓	✓	
1.10 Buoyancy sling with floating line – can be fitted in lieu of one horseshoe lifebelt.	✓	✓	✓	
1.11 Boarding Ladder.	✓	✓	✓	

*Category C craft engaged on overnight coastal passages.

2.	Flares (all to be within expiry date and manufacturer's instructions to be followed – see Chapter 11)	A	B	C	D
2.1	Hand held distress flares.	(6)	(4)	(4)	(2)
2.2	Hand held white flares.	(4)	(4)		
2.3	Parachute rocket red flares.	(12)	(4)	(4)	
2.4	Orange smoke signal canisters.	(2)	(2)	(2)	(2)

3.	Radios and Communications (see Appendix 2 for additional requirements for Sea Area A1, A2)	A	B	C	D
3.1	A suitable fixed Marine Band VHF radio transmitter, with DSC facility (Operators licence required from MSO).	✓	✓	✓	
3.2	Marine Band MF/HF/SSB and/or global satellite communication system.	✓			
3.3	EPIRB – type 406 – registered in the name of the vessel.	✓	✓		
3.4	Radio Transponder unit – SART.	✓			
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).	✓	✓	✓	✓
3.8	NAVTEX.	✓	✓	✓	

4. Fire Fighting	A	B	C	D
4.1 Fire blanket – CE marked.	✓	✓	✓	#
4.2 Fire extinguishers in addition to a suitable extinguisher to fight oil fires in engine spaces or fire bucket.*	(3)	(3)	(2)	
4.3 All cooker/heaters using Liquid Petroleum Gas (LPG) should be installed as outlined in Marine Notice No. 37 of 2017.	✓	✓	✓	✓

If carrying cooking equipment

*** Do not deploy the bucket overboard while the boat is moving.**

5. Navigation Equipment	A	B	C	D
5.1 Echo Sounder.	✓	✓	✓	
5.2 Steering Compass.	✓	✓	✓	
5.3 Hand Bearing Compass.	✓	✓	✓	
5.4 Speed Log.	✓	✓	✓	
5.5 GPS.	✓	✓	✓	
5.6 Radar Reflector.	✓	✓	✓	
5.7 Foghorn, powered or aerosol type.	✓	✓	✓	✓
5.8 Barometer.	✓	✓	✓	
5.9 Clock.	✓	✓	✓	
5.10 Binoculars.	✓	✓	✓	
5.11 Sextant and tables.	✓			
5.12 Navigation drawing instruments, parallel ruler, dividers or plotting instrument.	✓	✓		
5.13 Full set of fixed navigation lights including anchor lights.	✓	✓	✓	
5.14 Suitable up to date charts, nautical publications and tide tables for areas of cruising.	✓	✓	✓	

6. Bilge Pumping	A	B	C	D
6.1 Manual bilge pump capable of pumping from any hull watertight compartment and with all hatches closed.	(2)	(2)	✓	✓
6.2 At least one complete repair kit including spares should be carried.	✓	✓	✓	
6.3 An electric or engine driven pump can be substituted for a manual model.	✓	✓		
6.4 A bucket of capacity 8-12 litres, suitably fitted with a rope lanyard.*	✓	✓	✓	✓
6.5 Softwood tapered plugs, located adjacent to all through hull underwater fittings.	✓	✓	✓	
6.6 All through hull fittings to be fitted with isolation valves.	✓	✓	✓	

*** Do not deploy the bucket overboard while the boat is moving.**

7. Anchors and Warps	A	B	C	D
7.1 Anchor with chain/warp, as appropriate for a vessels size and operating area ground holding conditions.	(2)	(2)	✓	✓
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.	✓	✓	✓	✓
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	A	B	C	D
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.	✓	✓	✓	✓
8.4 Suitable secondary means of engine starting including battery, hand start or suitable jump leads.	✓	✓	✓	
8.5 Suitable First Aid Kit including a First Aid Manual.	✓	✓	✓	✓
8.6 Storm sails which can be quickly rigged, or the facility to deep reef sails on yachts.	✓	✓	✓	
8.7 Emergency repair kit including sail repair kit, spare wash boards and window blanks.	✓	✓		
8.8 Emergency water supply.	✓	✓		
8.9 Bosun's Chair.	✓	✓		
8.10 Instruction manuals for vessel's essential equipment.	✓	✓	✓	
8.11 Rigid or inflatable tender.	✓	✓	✓	

2.6 Competitive use – Yachts

The Irish Sailing Association (ISA) is the national authority for sailboat racing in Ireland. All vessel owners/skippers participating competitively must be members of the ISA and all such racing must comply with the World Sailing Racing Rules of Sailing, the rules of the National Authority and the rules of the particular Class Association, where applicable. When a vessel sailing under these Rules meets a vessel that is not, the vessel shall comply with the International Regulations for Preventing Collisions at Sea (see Appendix 1).

For information on safety guidelines and regulations governing sailing, please contact the Irish Sailing Association or visit their website www.sailing.ie. See Appendix 10 for contact details.

2.7 Dive Boat operations

2.7.1 Training

Dive boat operators are recommended to undertake appropriate training courses. Comhairle Fo-Thuinn (the Irish Underwater Council) recommend safety standards and a number of training courses for dive boat operators (see Appendix 9 for details of course providers).

2.7.2 Safety

Dive boat operators should be competent in the following:

- Be familiar with and experienced

in “picking up divers”, recovery of equipment procedure in the water, and relevant hand signals.
- Be aware of procedures for missing diver and missing pair of divers on the surface.
- Ability to initiate first aid and oxygen administration to an injured diver(s).

2.7.3 Pre-departure Checks and Briefing

Dive boat users should observe the following additional precautions:
- Be aware of weather forecast, tidal conditions and the bottom conditions for the dive site.
- Ensure that the diving group is briefed prior to departure.
- Contact the Irish Coast Guard with the dive plan before leaving (Traffic Route).
- Complete Dive Log Sheet for all divers (check in and out of the water).
- Wear a suitable PFD/lifejacket when travelling to and from dive site (S.I. No. 921 of 2005).
- Ensure all diving equipment is regularly tested and serviced.
- Ensure that an emergency plan is carried on board and all divers are familiar with its contents and location on board.
- Firmly secure all diving bottles and equipment prior to departure. Dedicated bottle stowage racks should be fitted to dive boats.
- Correct flag and signals must be displayed to indicate to other boat users that there are divers in the water.
- International Code of Signals Flag “A”. “I have a diver down, keep clear”.

- Dive boats should not obstruct channels or approaches to harbours.

2.7.4 Operation of RIBs as Dive Boats
- When underway in a RIB, occupants should wear a PFD/lifejacket in addition to a wet suit.
- Ensure the boat is suitable for the number of persons and gear carried – do not overload.
- Ensure all buoyancy tubes are at the correct pressure.
- Secure all bottles and equipment correctly.
- Coxswain to wear engine kill cord when under way.

2.8 National Association

Comhairle Fo-Thuinn (Irish Underwater Council) is the national association for diving and underwater sports in Ireland (see Appendix 10 for contact details).

2.9 Non-Commercial Pot Fishing

Commercial potting for lobster or crab requires a licence issued by the Licensing Authority for Sea Fishing Boats, Department of Agriculture, Food and the Marine, National Seafood Centre, Clonakilty, Co. Cork. Commercial potting vessels may typically shoot up to 80 pots in a single string.

Recreational boaters may also engage in non-commercial potting for lobster or crabs. Such activities are limited to a small number of pots and the catch is intended for the owner's table and not for commercial resale.

The **Non-Commercial Pot Fishing (Lobster and Crab) Regulations 2016 (S.I. No. 31 of 2016)**, introduced a range of management measures for non-commercial pot fishing for crab and lobster. The measures apply from 1 February 2016 to non-licenced recreational boats fishing within the internal waters or territorial seas of the State. The new measures include:

- Introducing a closed season during the months of October, November, December, January, February, March and April;
- Limiting the catch to no more than one lobster and five crab per boat in a 24-hour period;
- Requiring all lobsters containing a V notch and all mutilated lobsters taken by a boat to be returned alive to the sea without delay;
- A limit of no more than six pots per boat in the sea at any one time, and
- Prohibiting storing in the sea a crab or lobster that has a nicked or banded claw.

Operators of boats engaged in non-commercial potting should be aware of a number of associated dangers including:

- Adverse effects on a vessel's handling or stability characteristics due to incorrect stowage of potting equipment or retro-fitting or poor installation of non-design items such as hydraulic pot haulers;
- Risk of becoming trapped in potting lines when shooting;
- Snagging of propellers due to potting lines;
- Increased risk of falling overboard when hauling/shooting pots;
- Dangers of capsizing a boat when attempting to recover a pot snagged on the ocean floor.

Non-commercial potting activities should never be undertaken by a single boatman. Suitable PFDs should always be worn. Somebody ashore should be aware of where the boat is intending to operate and when it is expected to return.

Boats engaged in non-commercial potting should have a suitable means of re-boarding in the event of a crew member falling overboard. Attention is also drawn to Marine Notice No. 26 of 2016 and the annexed Good Practice Guide to Pot Marker Buoys.

2.10 Sea Angling Boats

Coastal sea angling varies from an individual fishing close inshore for mackerel to major international fishing competitions involving larger boats fishing up to 20 miles offshore for species such as blue shark, in often difficult or uncomfortable conditions.

While commercial angling boats are required to hold a passenger boat licence issued by the Department of Transport, Tourism and Sport and as such are regulated, there are a number of items that any angler going to sea or fishing from a boat should consider:

- Check the boat is fit for purpose. Ensure pre-departure checks are undertaken and a pre-departure safety briefing is given by the Master;
- Always wear a PFD when moving around the open deck;
- Recognise the dangers of moving about on the deck of a moving boat and always use suitable hand holds and the rails provided;

- Be aware of the dangers associated with fishing, particularly handling hooks, traces, gaffs and gutting operations;
- Be aware of the appropriate medical action to take in the event of an incident with the above. A suitable medical kit should always be carried on board;
- Dress appropriately for the day. Make sure warm clothes and oilskins are available;
- Be aware of the dangers of sunburn and use suitable sunblock on exposed skin;
- Be aware of the risks of sea sickness. Take precautions if prone and avoid alcohol.

Chapter 3

Sail and Motor Boats – Inland Waterways

Inland waterways comprise the navigable sections of the larger rivers, canal network and lakes. Conditions on inland waterways are generally not as severe as those experienced in coastal regions. However, they present their own unique set of hazards. Difficulties such as locks, open weirs, strong flows in confined spaces, narrow bridges, relatively shallow water and, in the case of the larger lakes, significant wave and wind forces, may present a danger to small craft. For the purposes of this Code, inland waterways refer to non-tidal and/or fresh water.

There are a number of different authorities with a role in managing navigable inland waterways in the State. Some of them are listed below:

Waterways Ireland is a North/South body with responsibility for the management, maintenance, development and restoration of over 1,000 km of inland navigable waterways, principally for recreational purposes. Special Marine Notice No. 1 of each year issued by Waterways Ireland gives an overview of general guidelines to the inland waterways under their remit.

Waterways Ireland has responsibility for the following:

- Barrow Navigation
- the Grand Canal
- the Royal Canal
- the Shannon-Erne Waterway
- the Shannon Navigation.

The Lough Corrib Navigation Trustees have responsibility for the following inland waterways:

- Corrib system
- Eglington Canal system

An Taisce is responsible for the Boyne Navigation.

Kerry County Council is responsible for the Tralee Ship Canal.

Other waterways may be under the administration of the relevant local authority/county council. Please check directly with them for further details.

3.1 Training

It is recommended that persons participating in sail and motorboat craft activities undertake appropriate training. A number of training schemes and approved courses are available and information can be obtained directly from course providers.

For the purpose of this Code, sailboats and motorboats are

classed in six categories, four of which refer to coastal water and are covered in Chapter 2. The remaining two categories are dealt with in this Chapter.

3.2 Recommended minimum safety equipment – Inland Waters

Boat owners should be aware of the category that applies to their vessel, based on its intended usage and area of operation, and ensure it is equipped with the required safety equipment. The following paragraphs provide a description of two vessel categories. Table F recommends the type and quantity of equipment that each category of craft should carry in the respective operating areas.

3.2.1 Category E

Craft that:

- Are capable of operating on the larger exposed lakes in extreme weather conditions;
- Have accommodation and can be used for overnight habitation;
- Are capable of extended voyages.

3.2.2 Category F

Craft that:

- Are open boats without shelter for occupants and generally less than 7 metres in length;
- Operate locally on rivers and sheltered sections of lakes.

3.3 Safety Equipment Checklist

Table F sets out the recommended type and quantity of equipment that craft should carry for their category of craft. The levels of recommended equipment should be regarded as a minimum. Owners are encouraged to equip boats to a higher standard.

Mariners should stow fire extinguishers and a hand-held VHF in the cockpit in order that they are readily accessible in the event of an emergency, and in order to avoid having to go below to retrieve them.

Table F: Sail and Motor Boat – Inland

Type of Equipment	Vessel Category and Quantity of Equipment	
1. Lifesaving and personal safety equipment	**E**	**F**
1.1 An approved PFD/Lifejacket for each person on board of at least 100 Newtons (see Appendix 5).	✓	✓
1.2 Appropriate clothing.	✓	✓
1.3 A buoyant heaving line/throw bag.	✓	
1.4 Horseshoe type lifebelt with light.	✓	
1.5 Boathook (telescopic/fixed long shaft).	✓	✓
1.6 Boarding Ladder.	✓	

2. Flares (all to be within expiry date and manufacturer's instructions to be followed – see Chapter 11)	**E**	**F**
2.1 Orange smoke signal canisters.	(3)	(3)
2.2 Hand held Distress Flares.	(3)	(3)
2.3 Red Distress rocket flares.	(3)	(3)

3. Fire Fighting	E	F
3.1 Fire blanket – CE marked.	✓	
3.2 Fire extinguishers, one of which is suitable to fight oil fires in engine spaces or fire bucket.*	(2)	
3.3 All cooker/heaters using LPG should be installed as outlined in Marine Notice No. 37 of 2017.	✓	

*** Do not deploy the bucket overboard while the boat is moving.**

4. Navigation Equipment	E	F
4.1 Steering Compass.	✓	
4.2 Foghorn, powered or aerosol type.	✓	✓
4.3 Binoculars.	✓	
4.4 Navigation drawing instruments, parallel ruler, dividers or plotting instrument.	✓	
4.5 Navigation lights as required by boat length.	✓	✓
4.6 Suitable up to date charts and/or navigation guides for cruising.	✓	

5. Bilge Pumping	E	F
5.1 Manual/Electric Bilge pump capable of pumping from any hull watertight compartment and with all hatches closed.	✓	✓
5.2 At least one complete repair kit including spares should be carried.	✓	
5.3 A bucket fitted with a rope lanyard (Do not use bucket overboard while the boat is moving).	✓	
5.4 All through hull fittings to be fitted with isolation valves.	✓	
5.5 Softwood tapered plugs located adjacent to each through hull underwater fitting.	✓	

6. Anchors and Warps	E	F
6.1 Anchor with chain/warp, as appropriate for a vessels size and operating area ground holding conditions.	✓	(folding anchor)
6.2 Boats should have a suitably reinforced deck cleat/Samson post on the foredeck, and a suitable bow roller or fairlead used when anchoring.	✓	✓
6.3 An adequate supply of warps and fenders. These should include suitable warps to allow the craft to be towed if necessary.	✓	✓

7. General Equipment	E	F
7.1 Emergency steering means, i.e. tiller for vessels fitted with wheel steering as their primary means of steering.	✓	
7.2 Waterproof torch.	✓	✓
7.3 An appropriate tool kit, and spare parts for the type of craft being used.	✓	✓
7.4 Suitable secondary means of engine starting including battery or hand start.	✓	
7.5 Appropriate First Aid Kit.	✓	✓
7.6 Storm Sail which can be quickly rigged, or the facility to deep reef existing sails (Yachts).	✓	
7.7 Set of Oars / Oarlocks / Paddles.	✓	✓
7.8 Suitable Knife.	✓	✓
7.9 Instruction manuals for vessel's essential equipment.	✓	
7.10 Rigid or inflatable tender.	✓	
7.11 Laminated cards for life-saving and distress signals.	✓	
7.12 International Code of Signals Flag V *I Require Assistance*.	✓	

8. Communications Equipment	E	F
8.1 VHF Radio (fixed unit or handheld).	✓	✓
8.2 AM/FM Radio.	✓	

3.4 Boat Angling – Inland Waters

While inland water conditions are different to those of coastal or sea areas, they can be equally as dangerous to small craft due to rapid local deterioration of weather and surface conditions that can occur. There have been multiple fatalities among users of small boats on our inland waters in recent years.

Fishing from small boats on larger rivers and inland lakes is a popular past time. Craft used are predominantly of a small, narrow beamed, low freeboard design, propelled by either oars or outboard engines. Historically these boats were wooden boats of clinker type construction. In latter years they have been replaced by fiberglass replicas.

Fibreglass boats constructed after 1998 must comply with the Recreational Craft Directive and each hull must have a CE marking and plate fitted.

It is essential that owners do not modify or alter boats from their original design. Doing so may compromise the stability, handling characteristics or sea keeping qualities of a boat. Examples of such modifications are:

- Modification of seating arrangements by fitting of swivel seating for anglers on thwarts or directly to gunwales;
- Fitting of permanent launching wheels to the transom;
- Using an outboard engine of a power rating in excess of the boats design rating. Maximum power ratings will be displayed on the boat's CE/RCD plate;
- Allowing repairs or alterations to be undertaken by unqualified persons using unsuitable or inappropriate materials.

Anglers and operators of boats should always be aware of their stability limitations. **Never overload or overpower such boats and always exercise the following best practice in their use:**

- Be aware of the area weather forecast in advance and check on it regularly throughout the day while on the water;
- Be aware of local conditions and dangers on the lake. If new to the area, always seek local advice before launching;
- Always wear a suitable PFD of a type that can be worn when fishing but which offers sufficient buoyancy to an individual in the water. Take into consideration clothing such as waders, boots, etc. that may be worn when fishing;
- Be aware of the contact details

for local rescue services;
- Always inform a person ashore of details of the persons on board, the areas of intended operation, and launching and return times;
- Do not overload the boat beyond its design rating;
- Never overpower the boat with an outboard engine in excess of the boat's maximum power design rating;
- Carry sufficient anchoring equipment and have it readily available to anchor the boat quickly in an emergency. Practice regularly!
- If operating single handed, make sure a means of quickly reboarding the boat is available in the event of a person overboard situation occurring;
- Pre-plan prior to departure, to deal with possible rapid deterioration of conditions on the water, for example:
  - Identify alternative safe landing points;
  - Check radio/phone coverage in the area of operation;
  - Be aware of other boats operating the area;
  - Check that all boat safety equipment is present and operating;
  - Carry sufficient fuel/spares to deal with emergencies;
  - Brief crew on the actions to take in emergency situations.

Appendix 4 provides information in relation to anchoring, stability and boat handling.

3.5 Communications

It is recommended that all vessels operating on inland lakes and waterways carry a VHF radio. Hand-held VHF batteries should be fully charged prior to departure. Vessels should also consider carrying an EPIRB or PLB on board. (See Radiocommunications section 1.2.11 for more information on EPIRBs and PLBs).

Vessel operators are reminded that a ship radio licence issued by the Department of Transport, Tourism and Sport and a suitably qualified operator are required for vessels carrying marine radio equipment.

It is recommended that all vessels operating on inland lakes and waterways carry a mobile phone, ideally stored in a waterproof pouch or container. The mobile phone should be fully charged prior to departure.

Vessels on inland lakes and waterways are recommended to carry a Global Positioning System (GPS) to allow the vessel to indicate its position accurately to the search and rescue services in the event of an emergency.

Users of inland lakes and waterways are reminded that Coast Guard VHF and mobile phone network coverage is not guaranteed on inland lakes and waterways, particularly in remote locations.

Regular testing of communications equipment should be carried out to confirm correct operation.

3.6 Spread of invasive species by boats on inland waters

In recent years a number of new invasive species of flora and fauna, such as the Zebra Mussel and Asian Clam, have been introduced into Irish lakes and rivers. These species impact in a negative manner on existing natural species, in many cases leading to their extinction.

Many lakes and waterways now require boats to be registered to operate and visitor boats are controlled. Measures have been put in place, which boat owners should follow, to limit the propagation of new species into our inland waters, including:

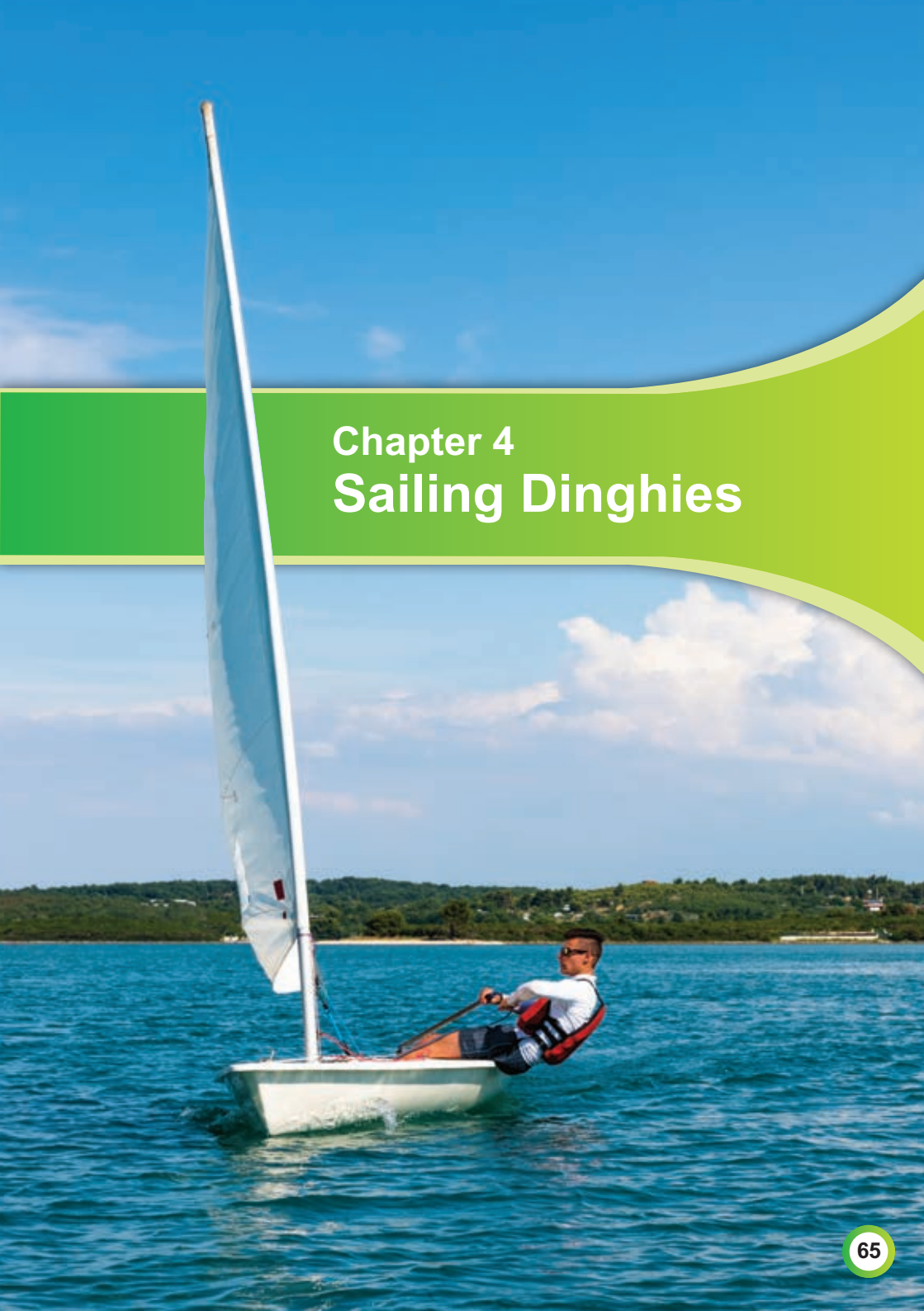
- If travelling to a new area, make prior enquiries regarding any control measures that may be applied by the relevant authorities. For example, the National Parks and Wildlife Service should be contacted where boats/water craft are being introduced into a National Park or Nature Reserve, as a licence or permission may be required;
- Always thoroughly clean/wash your boat, engine and trailer prior to launching;
- Angling equipment, including nets and waders, should be thoroughly washed and dried out before being used on a fishing trip;
- Anglers should use artificial lure in place of live bait;
- Avoid launching boats/engines on multiple waterways. Use locally hired boats if possible.

Further information is available from the National Parks and Wildlife Service:

National Parks & Wildlife Service
7 Ely Place
Dublin 2
D02 TW98

Telephone: +353 (0)1 888 3242
LoCall: 1890 383 000
Fax: +353 (0)1 888 3272
Email: nature.conservation@ahg.gov.ie
Website: www.npws.ie

Information regarding the spread of invasive species is also available at www.invasivespeciesireland.com.



Chapter 4
Sailing Dinghies

4.1 Training

It is recommended that dinghy sailors undertake appropriate training, including in capsize and recovery techniques. A number of training schemes and approved courses are available and information may be obtained directly from course providers (see Appendix 9 for details of course providers).

4.2 Safety Recommendations

If you are dinghy sailing, you should adhere to the following practices:

1. Always wear a suitable PFD/lifejacket when sailing. Buoyancy provided by a wet suit or dry suit is not sufficient (see Part A of this Code for statutory requirements).
2. Wear suitable clothes, wetsuits or drysuits, particularly if there is potential to capsize.
3. Your dinghy should have an effective means of bailing water.
4. Carry a paddle on board.
5. Carry a towing painter on board.
6. The crew in the dinghy should be familiar with capsize recovery techniques and towing techniques.
7. Ensure that the dinghy has sufficient buoyancy. Check all buoyancy tanks and plugs prior to departure.
8. Always ensure that a designated person ashore is aware of departure and return times and have a procedure in place to raise the alarm if necessary. Membership of a club will generally offer this facility in addition to providing safety boats for members engaged in club activities.
9. Check weather and sea conditions prior to departure.

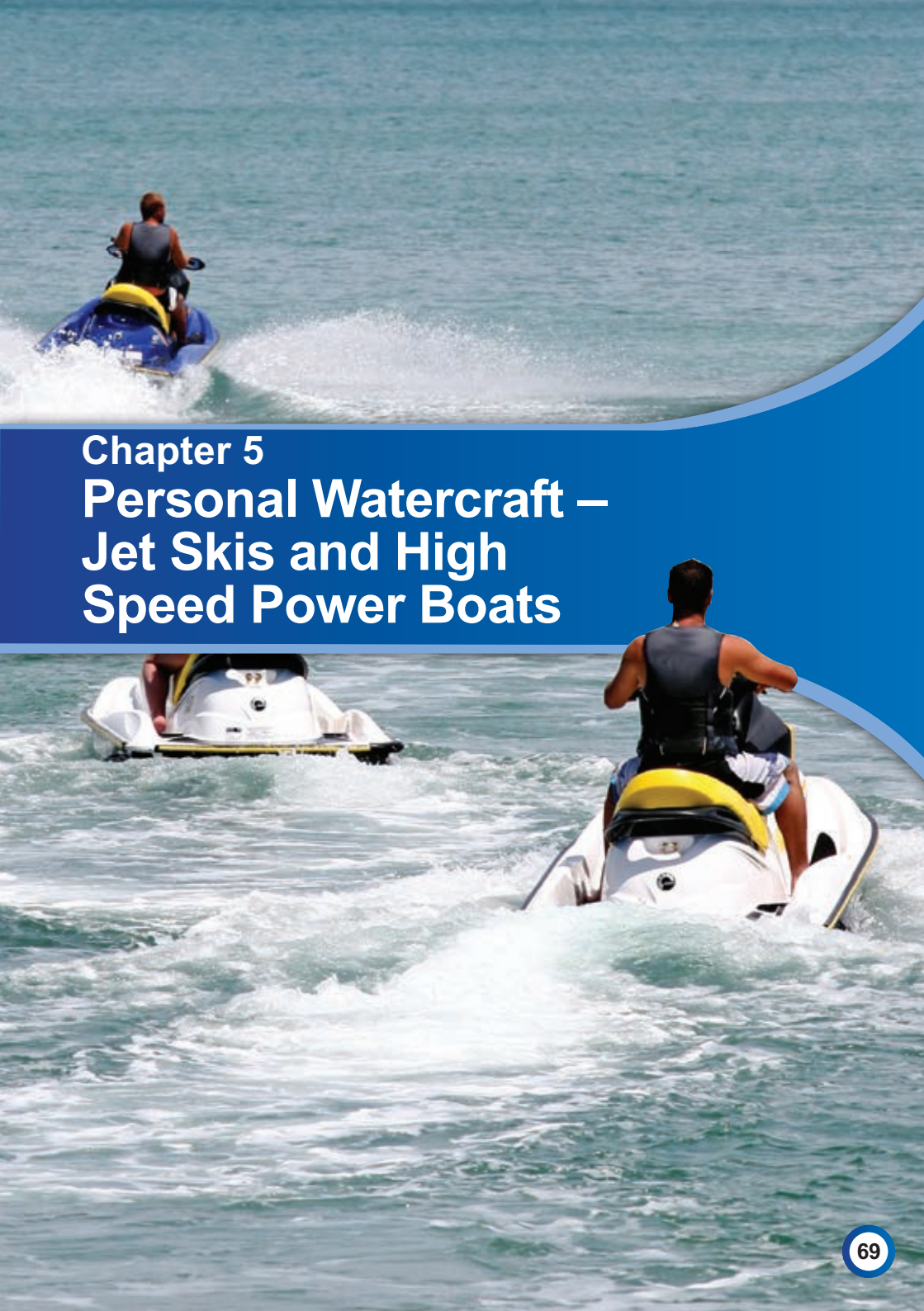
10. Avoid main shipping lanes (see Appendix 3).
11. Sail in company for safety.
12. Be aware of your own personal capabilities in handling a boat under various weather conditions.
13. If your dinghy is operating in a remote area, carry additional safety equipment, i.e. a hand-held VHF radio and additional pyrotechnics (parachute rocket red flares and hand-held flares).

4.3 National Association

The Irish Sailing Association is the national governing body for sailing in Ireland and can be contacted at:

Irish Sailing Association
3 Park Road
Dun Laoghaire
Co. Dublin
A96 K3C3

Telephone: +353 (0)1 280 0239
Email: info@sailing.ie
Website: www.sailing.ie



Chapter 5

Personal Watercraft – Jet Skis and High Speed Power Boats

Personal Watercraft (PWC) such as jet skis or water/wet bikes are a rapidly growing segment of the recreational craft market.

A PWC is a watercraft that is less than 4.88 metres (16 feet) long, propelled by a two stroke petrol engine directly powering a water jet pump and designed to be operated by a person who sits, stands or kneels on it. They are capable of speeds exceeding 100 km/hr and are highly manoeuvrable in competent hands.

5.1 Training

It is recommended that persons operating a PWC undertake appropriate training. There are a number of training schemes and approved courses available and information can be obtained directly from course providers (see Appendix 9 for details of course providers).

5.2 Recommended equipment for personal watercraft (PWC)

- Rope (5 m x 8 mm Nylon) for use in towing and mooring.

- A flare pack should be carried containing a minimum of 1 x pinpoint red, 2 x orange smoke in a watertight container.
- Carry a suitable folding anchor.

- A collapsible paddle, which can be stowed on board for use in the event of engine failure.
- Basic first aid kit.
- PWC should be equipped with a lanyard/kill cord to cut out the engine; the lanyard/kill cord must be attached to the operator's body, clothing, or PFD/lifejacket. A spare lanyard/kill cord should always be carried on board.

- Knife.
- Torch.
- Basic Tool Kit.
- Fire Extinguisher.

5.3 Personal equipment to be worn/carried by operator of the PWC

- Suitable PFD/lifejacket (see Appendix 5).
- A whistle, fitted to each PFD/lifejacket to attract attention in the event of an emergency or entering the water.
- Suitable clothing, including a wetsuit and hand/foot protection.
- A suitable helmet, preferably fitted with facial protection, if operating offshore or involved in wave jumping.
- Goggles are recommended, especially for salt water riding.

5.4 Personal watercraft operations

5.4.1 Prior to entering the water (Pre-Launch Checks)

- To protect other water users and due to high noise levels generated, PWC may be subject to specific local bye-laws issued by harbour or local authorities to restrict speed or the areas of operation. It is the responsibility of PWC operators to be familiar with the relevant bye-laws in force in the waters they use.
- Check the weather/sea condition forecast before starting out.
- Always complete a safety checklist (see section 5.7) prior to departure. A waterproof laminated copy of the checklist should be permanently attached to the PWC and located inside the door of the storage compartment.
- Ensure all engine access and storage doors are correctly secured and sealed.
- Be aware of correct procedures for launching and recovery of a PWC using a trailer.
- Operators should be familiar with and have practiced the procedure for righting a capsized boat. Rolling a craft over the wrong way may result in water entering into the engine, causing serious damage to it and rendering the PWC inoperative.

5.4.2 Emergency Procedures

- In the event of falling off the craft into cold water, re-board immediately. Immersion in cold water can result in a life-threatening drop in body temperature (hypothermia). Hypothermia can also be caused by wind chill, rain and perspiration. To avoid this danger, prepare by dressing correctly including wetsuit/drysuit, hand/foot protection. Wearing your PFD/lifejacket affords additional protection against the cold.
- If in difficulty, remain with your PWC. Do not try to swim to shore in cold water unless you are very close to safety and you have no expectation of speedy

assistance. Swimming and treading water use up valuable energy and produce rapid heat loss. If it is not possible to get out of the water, wearing your PFD/lifejacket will help increase your survival time by keeping your head out of the water.

5.4.3 On the water

- Do not drink alcohol or take drugs when riding a PWC: it is illegal to do so and your ability to make quick decisions is impaired. This is critical when operating a fast and manoeuvrable PWC.
- Study the manufacturer's manual. Practice the handling of your PWC under experienced supervision in open water and well away from other boaters.
- Be alert for the wave, wind, cloud changes that may signal weather changes.
- Avoid skiing alone, especially at sea.
- A high incidence of accidents with PWCs involve collisions with other craft. Operators should exercise the utmost caution when approaching or overtaking other boats and should never manoeuvre at speed in close proximity to other PWC, boats or swimmers (see Appendix 1).
- Where applicable, use buoyed channels and designated zones.
- If engaged in waterskiing or towing a float, it is essential to carry an observer. This should only be done on craft with a carrying capacity of 3 or more persons.
- Always ensure sufficient fuel is on board for any intended trip. Plan to return with the fuel tank one third full thereby allowing for any possible emergencies.
- Additional petrol should not be carried on board and no fuel transfer should be attempted once the vessel is afloat.

5.5 Offshore Cruising

Subject to suitable weather and sea conditions, these craft are capable of undertaking coastal or offshore passages.

- Such passages should be undertaken in company with other PWCs or suitable support boats.
- A nominated person ashore should be aware of departure times, destinations and expected arrival/return times.

It is recommended that the following are carried on board:

- Compass.
- Waterproof VHF Radio.
- Passage Plan.
- Chart of sea area.

The majority of PWCs are not fitted with navigation lights, which the law requires for operating at night.

Therefore the use of such PWCs is restricted to a period between sunrise and sunset.

5.6 National Association

The Irish Sailing Association (ISA) is the national governing body for PWCs in Ireland (see Appendix 10 for contact details).

5.7 Personal Watercraft Safety Checklist

Personal Gear	Tickbox
PFD/Lifejacket	
Whistle	
Wetsuit	
Gloves	
Helmet	
Goggles	
PWC Equipment	**Tickbox**
Tow Rope	
Flare Pack	
Anchor	
Collapsible Paddle	
First Aid Kit	
Engine Kill Cord	
Spare Engine Kill Cord	
Knife	
Torch	
Basic Tool Kit	
Fire Extinguisher	

Pre-Launch Checks	Tickbox
Local Bye-laws/speed restrictions	
Weather Forecast	
Tides	
Local Chart	
Fuel and oil tank full	
Seats/Hatches sealed	
External hull check	
Engine test run	
Engine Stops tested	
Offshore Cruising	**Tickbox**
Cruise in company	
Passage Plan	
Nominated Person Ashore	
VHF Radio	
Compass	

5.8 High Speed Power/Sports Boats – Operation and handling

A high-speed power/sports boat is generally regarded as one capable of achieving speeds in excess of 17 knots. There are a variety of craft designed as high speed power/sports boats, including rigid GRP Vee profile hulls, RIBs, Cathedral type dory hulls, etc. The high speeds that can be attained by these craft place specific demands on the skills and capabilities of their operators. These craft allow a much shorter reaction time to an incident than conventional motor craft.

It is recommended that persons participating in power/sports boat 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).

Persons under 16 years of age are not allowed to be in command of a fast power/sports craft, i.e. a craft that can attain a speed through or over water of 17 knots or more

5.8.1 Pre-departure Checks

- All persons on board any boat under 7 metres in length must wear a PFD/lifejacket – **it's the law**;
- Check engine oil levels, etc;
- Ensure all on board wear suitable clothing. Be aware of the effects of wind chill at speed;
- Carry sunscreen protection – factor 15+;
- If using an inflatable boat or RIB, ensure all tubes are correctly inflated;
- Engine kill cord – Always wear one, and test it prior to departing the berth;
- Competency and Skills – Ensure you have received adequate training in the operation and handling characteristics of the boat type you are using.

5.8.2 On the water

- Maintain a good all round lookout, particularly when in main shipping channels;
- Observe designated speed limits, particularly on passage through anchorages, marina approaches and areas used by swimmers;
- Be aware of the wash generated by your boat, in particular when close to or passing other boats;
- Know your limits – be aware of your ability and capability;
- Know the boat's limits;
- Check fuel reserves regularly;
- Do not overload the craft – these craft are designed for a maximum number of persons. If the boat is CE marked, this number will be indicated on the CE plate on the transom;
- Secure all boat equipment correctly;

- Ensure all occupants are secure and use the supplied seating and handgrips;
- If intending to swim from your boat, consider its freeboard. Check beforehand and make sure there is a suitable means to reboard from the water.

5.9 Waterskiing, Wakeboarding and towed rides

Persons involved in towed activities such as waterskiing, wakeboarding and the towing of inflatable doughnuts, etc., should be aware of the following:

- A suitable PFD/lifejacket must be worn.
- There should always be an observer in addition to the boat driver aboard the towing craft.
- Towing rides should only be undertaken in areas either specifically designated or in areas clear of other shipping and water users.
- Ensure your Insurance Company is aware of these activities.

When waterskiing, both observer and skier should be aware of the correct procedures and signals required. It is recommended that individuals undertake suitable training and coaching.

The Irish Waterski and Wakeboard Federation is the national body for waterskiing in Ireland (see Appendix 10 for contact details).

5.10 Competitive use – Power Boats

The Irish Sailing Association is the National Authority for powerboat racing in Ireland. Racing is organised by clubs affiliated to the Association. All racing is run in accordance with the rules and procedures of the Union Internationale Motonautique (UIM), which is the world governing body. The UIM set out requirements for vessel safety, skipper qualification, scrutiny requirements and safety management during a race.

Chapter 6
Windsurfing and Stand-Up Paddle Boards

6.1 Training

It is recommended that persons participating in windsurfing and stand-up paddle boarding activities undertake appropriate training. There are a number of windsurfer training schemes and approved courses available. Information can be obtained directly from course providers (see Appendix 9 for details of course providers).

6.2 Windsurfing Safety

6.2.1 Prior to entering the water

- Examine your rigging for worn ropes or loose fittings. Ensure all are correctly cleated and tied off.
- Check the condition of the board. Ensure there is a safety leash (where fitted) between the board and rig.
- Check all foot straps and fins are suitably attached. Examine the mast foot. Ensure the universal joint and mast track are in good condition.
- Advise someone ashore where you are going and when you will be back.
- Carry essential spares, spare rigging lines, a 4 metre towing line, a dayglo flag or miniflare and a whistle to attract attention. These items can be carried in a harness pocket or bum bag.
- Check the local weather and sea area forecast for the area you propose to sail in.

- Avoid sailing in offshore winds, and be aware of the influence of tidal streams, both of which may carry you offshore or away from your start point.
- Ensure that your name and contact number are marked on your board. Where possible, apply retro reflective tape to the board hull.

- Avoid sailing alone – there is safety in numbers.
- Choose a recognised boardsailing venue where you can learn from other sailors. Beginners should stick to enclosed waters.
- Be aware of local bye-laws. Never sail in designated restricted areas or areas crowded by swimmers.
- Avoid offshore winds until proficient, as sailing back upwind once tired or overpowered becomes much more difficult.
- Be sure of your self-rescue capabilities with any rig you may be using. If in doubt, do a practice drill.
- Dress correctly – a wetsuit is advised (unless the weather is very warm) plus hat, sunscreen and long sleeves to protect from the sun.
- It is recommended that persons participating in windsurfing activities should always wear a PFD/lifejacket.
- Be aware of your limitations. If in doubt, don't go out.
- Avoid dehydration. Drink plenty of water.

6.2.2 On the water

- Sail cautiously when leaving and returning to shore to avoid running aground or colliding with others.
- Never sail further from the shore than is necessary.

- Avoid collisions.
- Remain with your board no matter what happens, it is your largest buoyancy aid. Use the International hand distress signals if necessary (slowly and repeatedly raising and lowering arms outstretched to each side).
- Be aware of hypothermia and leave the water if symptoms occur (shivering, numb extremities and poor co-ordination).

6.3 National Association

The Irish Windsurfing Association (IWA) is an affiliated club of the Irish Sailing Association and as such is the governing body for competitive windsurfing. Windsurfing events are run in accordance with the safety guidelines of the IWA (see Appendix 10 for contact details).

6.4 Stand-Up Paddle Boards (SUPs)

A recent development of the traditional surfing long board has seen them equipped with paddles to navigate across the flat water of lakes, estuaries and coastal areas.

When used for the purposes of navigation (i.e. outside the activities of surfing and swimming), SUPs are regarded as a craft and are subject to the requirements of recreational craft.

If using a SUP for navigation on the flat waters of lakes, estuaries or coastal areas, the following safety precautions should be taken:

6.4.1 Prior to entering the water

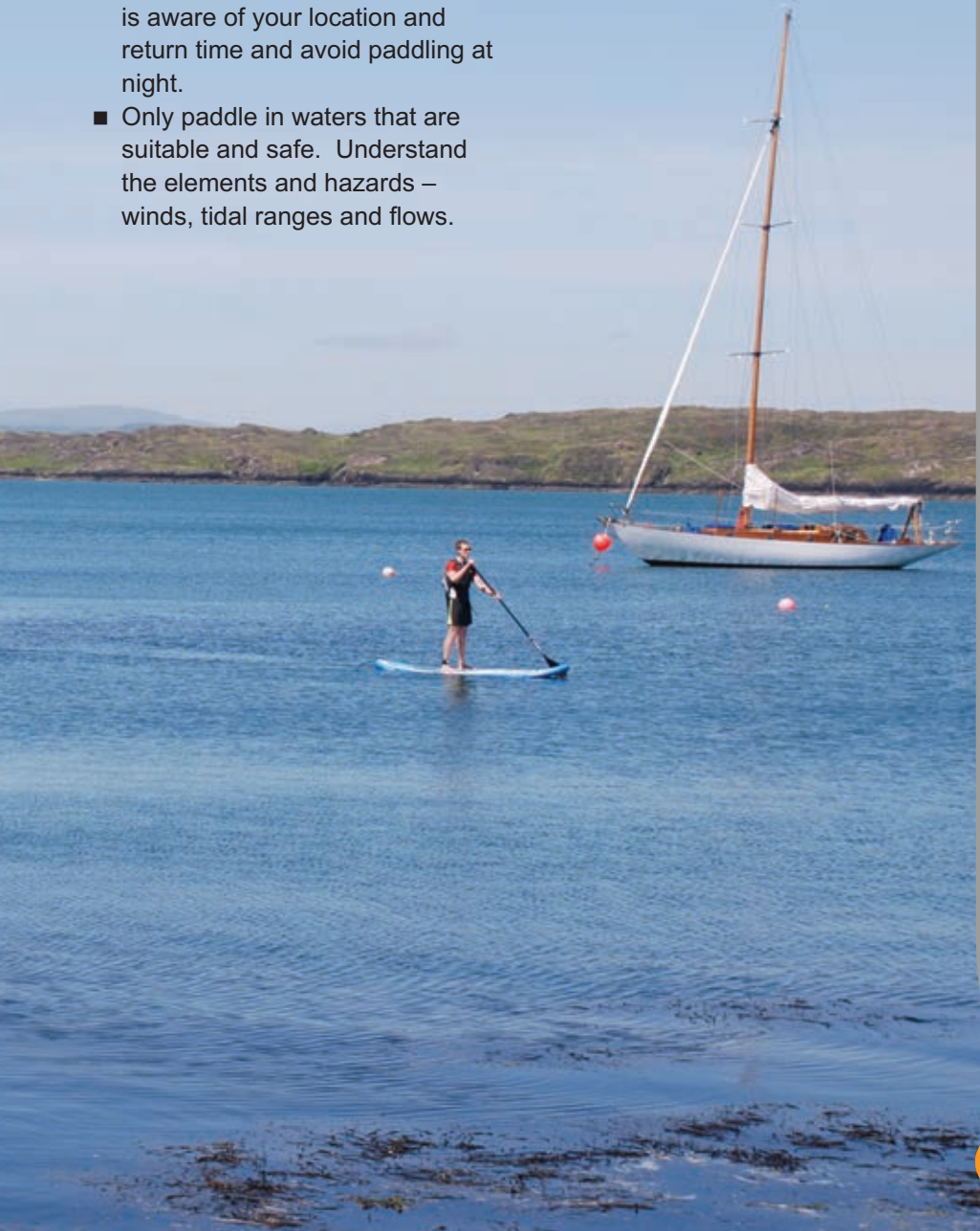
- Wear appropriate clothing, e.g. a wetsuit.
- Wear a suitable PFD with a whistle to attract attention.
- Undertake training with an approved course provider.
- Know how to tow another board.
- Be aware of any local bye-laws and rules of navigation.
- Carry a handheld VHF radio or mobile phone in a waterproof cover.

6.4.2 On the water

- Be a competent swimmer.
- Ensure the board is provided with a suitable leash, and use it.
- Do not paddle alone.
- Always ensure somebody ashore is aware of your location and return time and avoid paddling at night.
- Only paddle in waters that are suitable and safe. Understand the elements and hazards – winds, tidal ranges and flows.

6.5 National Association

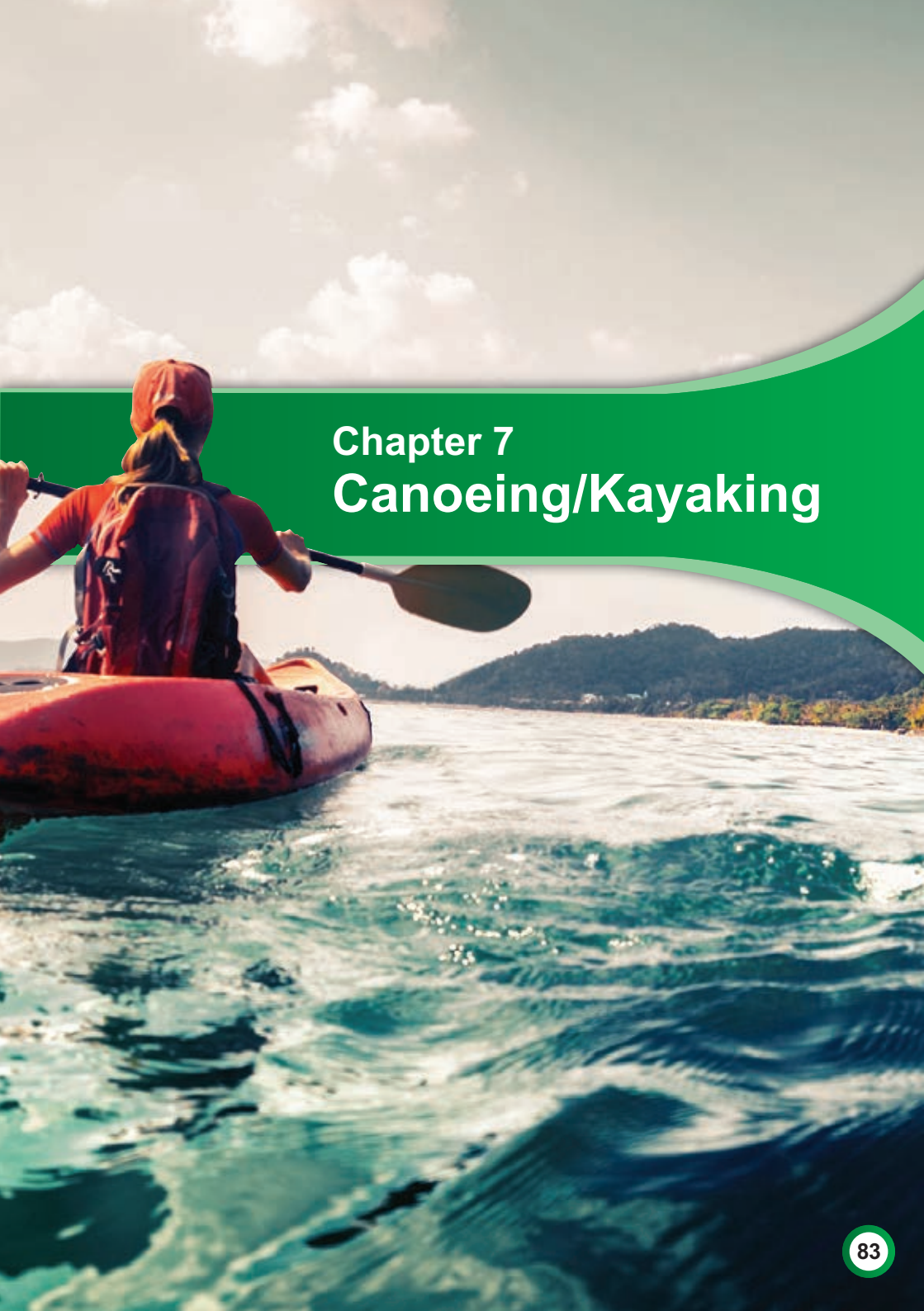
The Irish Surfing Association is the national governing body for Stand-Up Paddle Boarding activities in Ireland (see Appendix 10 for contact details).



6.6 Other water-based activities

While this Code of Practice is focused primarily on the safe operation of certain navigable recreational craft, there are many other water-based activities where appropriate training, knowledge and safety awareness are of similar importance.

With the increased popularity of activities such as surfing and kite surfing, attention is drawn to a range of safety information leaflets and guidelines that are available to view or download on the www.safetyonthewater.ie website and from bodies such as Irish Water Safety at www.iws.ie and the Irish Surfing Association at www.irishsurfing.ie.



Chapter 7
Canoeing/Kayaking

Canoeing covers a wide and diverse range of disciplines including sea kayaking, white water kayaking, surf kayaking, polo, slalom, marathon, sprint, freestyle and touring.

A **canoe** is a lightweight narrow **boat**, typically pointed at both ends and **open** on top, propelled by one or more seated or kneeling paddlers facing the direction of travel using a single-bladed paddle.

A **kayak** is a small, narrow boat which is propelled by means of a double-bladed paddle.

In this Code of Practice, the term **canoe** when used also refers to a kayak.

There are a number of basic safety precautions that should be applied to any canoeing activity, regardless of its speciality.

7.1 Training

Undertake a recognised training course in the correct use of the specific type of canoe you wish to use. Be completely familiar with relevant rescue/recovery drills, self-righting techniques, e.g. Eskimo roll, etc. Practice such drills with fellow members of your group. Canoeing Ireland have a comprehensive training and accreditation scheme, which covers river, sea kayaking and open canoes (see Appendix 9 for details of course providers).

7.2 Prior to entering the water

- Ensure you are a competent swimmer and capable of surviving in the water in the areas you operate in.
- Undertake a First Aid course and a life-saving course.
- Never operate alone, always canoe in company.
- Do not operate a canoe if under the influence of alcohol or drugs.
- Inspect your craft and equipment thoroughly. Check it is fitted with adequate buoyancy material and that such buoyancy is correctly distributed and secured within the hull.
- Ensure that the bung is fitted correctly.
- Do not use the canoe unless you are certain it is watertight. Boats with temporary repairs should not be used.
- If carrying additional equipment, ensure that the canoe is never overloaded.
- Use a spray deck, with quick release where relevant, and be completely familiar with its use.
- When using a spray deck, ensure that the grab loop is in good condition and is within reach.
- Always ensure that your name/contact address are permanently marked on the hull.

The addition of strips of retro-reflective tape to the hull is recommended.

- Check the hull is fitted with grab loops/towing lines. Kayaks over 270 cm in length should have decklines fitted fore and aft. Kayaks less than 270 cm in length should have cowtails fitted.
- Ensure that a responsible person is aware of your intended departure, locations and return details.
- Ensure that you carry a mobile phone or Marine VHF radio in a suitable watertight cover for use to summon assistance in emergency situations.
- Open canoes are not suitable for the sea.
- All kayaks should have suitable footrests.

7.3 Personal Safety Equipment

- PFD/lifejacket (see Appendix 5).
- The PFD should be fitted with a whistle to attract attention, be in a Hi-Visibility colour and fitted with retro-reflective strips.
- Ensure you are suitably attired for the type of activity, area of operation and time of the year.
- Be aware of the dangers of hypothermia when wet and exposed to the elements.
- If paddling where the risk of head injury exists, a suitable helmet should always be worn.
- When making descents on remote rivers of Grade 3 and

higher, and while sea-kayaking, you should carry a registered Personal Locator Beacon (PLB). This will enable early alerting of the rescue services in the event of an emergency.

7.4 Sea Kayaking

Sea kayakers should observe the following additional precautions:

- Be aware of the weather forecast and sea area forecast. Only operate within your limits and ability. Canoeing in a windforce 4 or above should only be considered for the very experienced.
- Be aware of the tidal conditions for the areas that you are operating in.
- Be aware of the effects of interaction between wind and tide on sea states.
- Carry a chart for the area of operation. These can be laminated and attached to the kayak deck.
- Carry a hand held compass.
- Ensure a nominated person ashore is aware of your itinerary, departure and return times.
- Have a passage plan and alternative emergency plans, e.g. safe landing area down wind, etc.
- Do not operate alone – kayak in company.
- If capsized and floating outside your craft, remain with it. It offers a better target to rescuers and has a high buoyancy factor. Do not attempt to swim for shore unless adjacent to the shore.

The following additional equipment should be considered:

- Flares
- Towrope/throw bag
- Torch
- Suitable knife
- Portable waterproof VHF radio
- Portable GPS unit
- Personal EPIRB
- First Aid Kit
- Spare food/drink
- Paddle float/leash
- Sun cream and sun hat.

Essential equipment should be carried on the person or in an easily recoverable buoyant grab bag.

7.5 River Kayaking/Canoeing

River kayaking ranges from touring on slow moving Grade 1 water in either open canoes or recreational kayaks, to the more extreme white water river running, which can include whitewater rapids, waterfalls and features such as

stoppers and undercuts. Freestyle kayaking is at the more extreme end of the canoeing spectrum. Trained and competent persons only should attempt this activity.

In addition to the basic safety precautions mentioned previously, operators should observe the following additional checks and advice:

- Hulls are examined for damage each time prior to entering the water;
- Potential courses should be studied for hidden dangers, snags, currents, etc., prior to putting boats in the water;
- Boats should never operate alone on a stretch of water;
- In extreme and difficult locations, shore based rescue/recovery personnel should be in attendance, trained and equipped in the rapid recovery of persons in distress;
- Contact numbers for medical assistance/rescue authorities/lockkeepers should be available on site;
- Kayaks should have adequate buoyancy;
- Get First Aid training and carry a First Aid Kit on river trips;
- If carrying a throwbag, also carry a knife;
- Depending on the difficulty of the river, consider carrying some of the following:
  - Split paddles;
  - Webbing slings and carabiners;
  - Duct tape;
  - Dry clothes;
  - Group shelter;
  - Food and money;
  - Matches/lighter.
- Be aware of the river's grading and of the water level before committing. The different grades are listed in the Table on the following page.

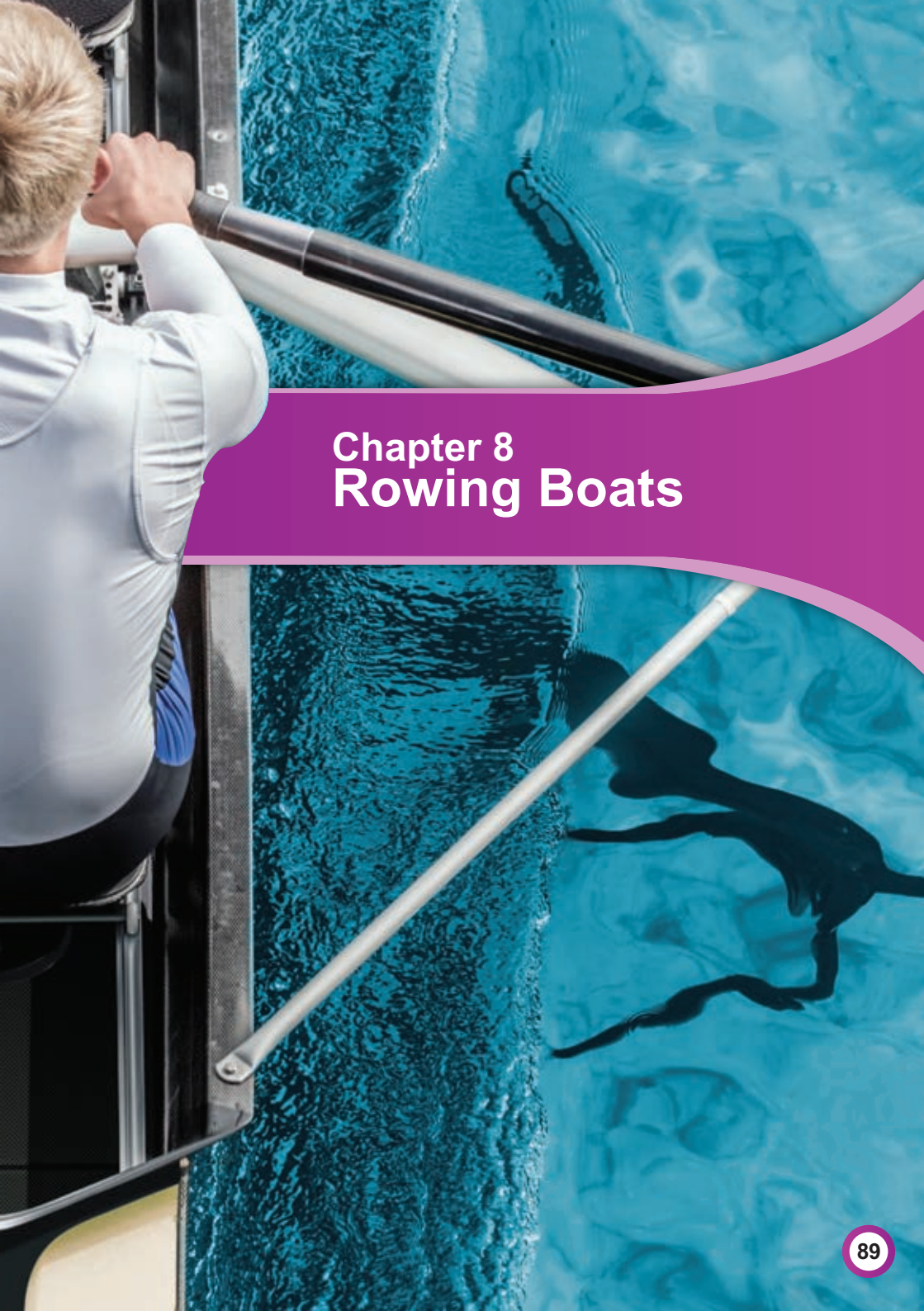
Grade I: Flat Water	Water is stationary or extremely slow moving and without any obstructions.
Grade II: Moderately Difficult	The way down a river is clear but simple obstructions do exist. Small stoppers and small drops can be present. There are places where the flow accelerates. There is a choice of routes.
Grade III: Difficult	There is a route that is easily recognisable from the water. Waves can be irregular. Boulders and obstructions can be numerous. Stoppers and small eddies exist. Inspection is advisable.
Grade IV: Very Difficult	The route is not always clear and inspection is advisable. Rapids are continuous and breakouts are few and small. Stoppers are powerful. Continual manoeuvring with precise control and good decision making is required.
Grade V: Extremely Difficult	Inspection is essential because serious dangers can exist. Large drops, narrow passages, very complex boulder fields, ever changing water and difficult holes are characteristic of this grade. Difficulties are continuous.

The Canoeing Ireland website has more detail on the levels of river grading (http://canoe.ie/river-grading-and-area-definitions).

- Be particularly cautious during flood water conditions.
- Inspect unknown drops before running them; be aware that drops may change or that new hazards may have formed (e.g. fallen trees, etc.). Set up bank based rescue, where appropriate.
- Consult Waterways Ireland Marine Notices and lockkeepers for local information.
- Kayaking groups making descents on remote rivers of Grade 3 and higher should carry registered Personal Locator Beacons (PLBs). This will enable early alerting of the rescue services in the event of an emergency.
- In rivers of a high flow rate, with extended periods of rapids, it is recommended that kayaking groups should consider using waterproof radios to allow communication between group members when line of sight is not possible.

7.6 National Association

Canoeing Ireland is the national association for canoe and kayak based activities in Ireland (see Appendix 10 for contact details).



Chapter 8
Rowing Boats

Rowing includes “Olympic Style” rowing boats, racing gigs/skiffs and traditional racing currachs.

8.1 Training

It is recommended that rowers undertake appropriate training. A number of training schemes and approved courses are available and information may be obtained directly from course providers including Rowing Ireland (see Appendix 9 for details of course providers).

8.2 Olympic style rowing boats

These boats are used in the rowing events in the Olympic Games and are governed in Ireland by Rowing Ireland. The following safety points should be adhered to at all times.

A coach and/or a safety boat should be in attendance at all times. Operators of such safety boats should be suitably qualified and boats should be suitably identified by markings or warning flags to alert other craft in the area that there are rowing boats on the water.

Coach/safety boats should carry the following items of equipment:

- Suitable bailer
- Suitable inflatable pump – if an inflatable is used as a rescue boat
- A throw bag with at least 10 m of buoyant line
- A sound signalling device – air or aerosol power klaxon
- Thermal exposure blankets
- Lifebuoys or additional PFD/lifejackets to assist persons in the water
- Suitable First Aid Kit
- Anchor and line
- Knife
- Engine Kill Cord to be used by the engine operator
- Paddle
- Suitable handholds fixed to the side of the boat – to assist persons being rescued.

All participants should be aware of the requirements set out in the Rowing Ireland Water Safety Code.

8.3 Boat construction and equipment

- All rowing equipment should be kept in good order and inspected regularly.
- Buoyancy compartments located in bow and stern must be checked to ensure they are in good order and will function as intended. Boats should be handled carefully and correctly at all times when out of water to avoid damage to hulls or injury to crews or spectators.
- Boats, when placed on water and prior to crew embarking, should be checked to confirm they are safe, free of leaks and all moving parts are functioning.
- Restraints and quick release

mechanisms must be in good working order on boats equipped with fitted shoes. The use of Velcro straps on fixed shoes, as opposed to lace-ups, is recommended.

- Check ventilation bungs are in position and that outriggers, swivels, seats, etc. are secure.
- Ensure all steering mechanisms are working.
- Sculls and oar buttons should be checked to ensure they are secure and properly set.
- Coaching launches should be on the water at all times when rowing craft are in use. Unescorted outings are not encouraged and, if undertaken, a designated person ashore should be aware of departure times, destinations and return times.
- All persons participating should be in good health and capable of swimming 100 m while wearing light clothing.
- All boat coxswains should wear an approved PFD/lifejacket at all times.

Boats should not be used at night unless they comply with the requirements of the International Collision Regulations regarding navigation lights. Boats should not be operated in weather or tide conditions that may compromise their low freeboard and stability.

Coaches, coxswains and crew should at all times be aware of local navigation rules, including any possible hazards or potential dangers arising from tidal, stream or wind that may prevail locally. When racing in competitions, the Water Safety Code of Rowing Ireland is to be adhered to fully.

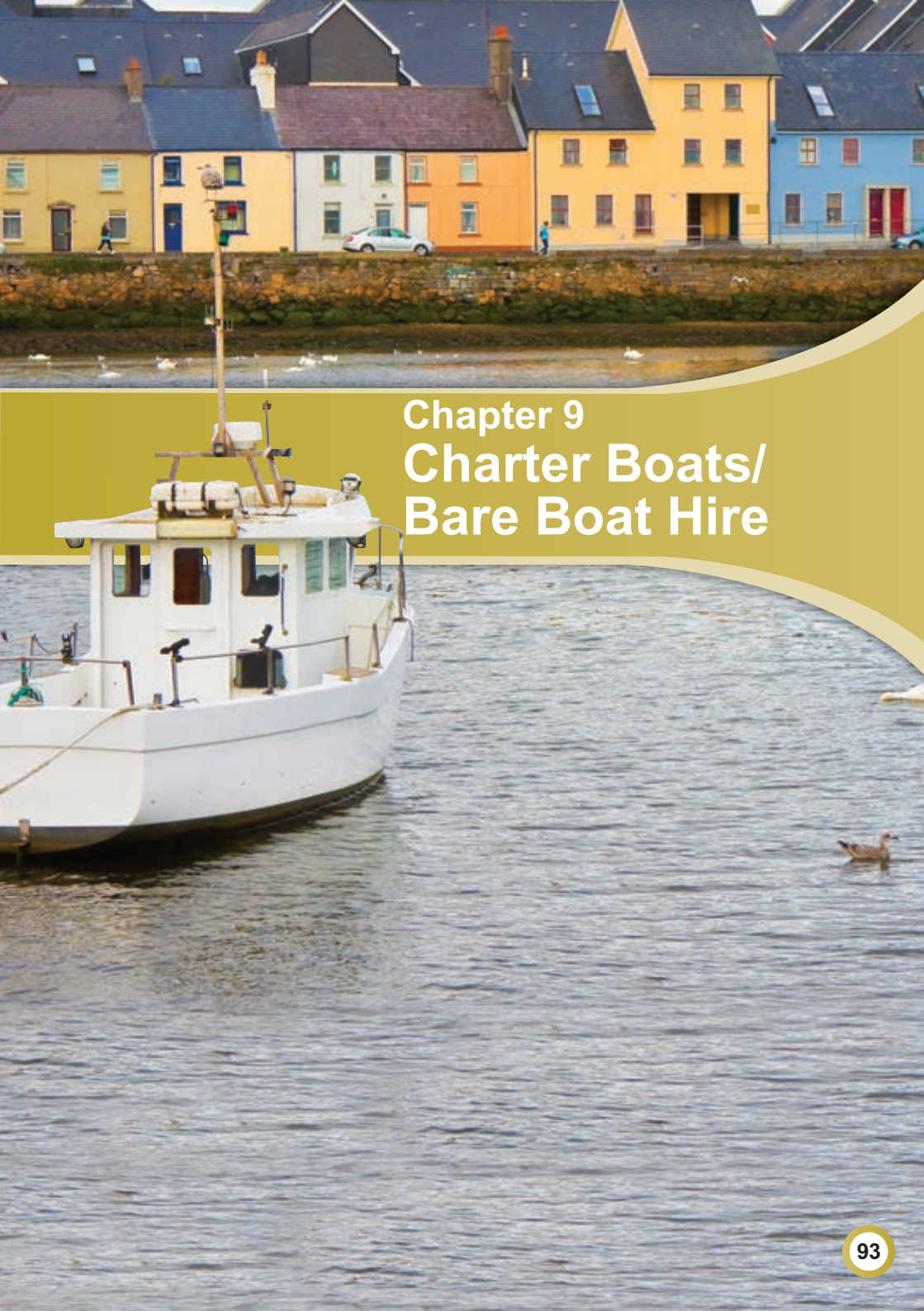
8.4 Coastal racing gigs/Traditional racing currachs

- Crew engaged in racing these boats should wear a suitable PFD/lifejacket at all times.
- Boats should be equipped with a means of attracting attention (Aerosol Klaxon).
- Coaches/Crews should not operate these boats in waters that are beyond the capabilities of the crew or boats.
- Coaching/Rescue boats that are in attendance should be suitably equipped and be operated by competent operators.

8.5 National Associations

Rowing Ireland is the governing body for rowing in Ireland and represents over 100 clubs across Ireland (See Appendix 10 for contact details).

The Irish Coastal Rowing Federation is a governing body for coastal rowing in Ireland (see Appendix 10 for contact details).



Chapter 9
Charter Boats/ Bare Boat Hire

Craft that are supplied with a skipper and crew as part of a hire are regarded as Passenger Boats and must be surveyed and licensed by the Marine Survey Office of the IMA. Boats that are offered for hire without crew and for operation by private individuals are classed as charter or bare boat hire.

There is a range of boats available for hire to the public. Examples include:

- Cabin Cruisers transiting the Shannon waterways.
- Sail boats for use on extended coastal trips.
- Boats used for angling on inland lakes.
- Day boats for short local trips (coastal or inland).
- Sailing Dinghies.
- Windsurfers.
- Barges.

There are a number of boat charter associations whose members adhere to an agreed code of operation which covers such items as:

- Safety equipment supplied.
- Operating limitations for boats.
- Training and familiarisation for customers in handling boats.
- Emergency backup and maintenance.

Depending on the type of boat being chartered and the proposed itinerary, some operators will require customers to prove levels of competency to the hiring company's satisfaction.

Members of the public intending to hire such craft should ask the boat company about the issues listed in sections 9.1 to 9.3.

9.1 Training

While some operators offer a comprehensive training scheme, including personal instruction and videos, some may not. Before departing on any boat, customers should request instruction by the owner/operator in the following items, specifically relating to the boat they are hiring:

- Engine operation, including operation of controls and basic engine checks.
- Emergency operation of boat equipment, e.g. emergency steering, alternative means of engine starting, anchoring.
- Location of all safety equipment (including PFD/lifejackets).
- Operation of safety equipment, including donning PFD/lifejacket, flares, radio, as applicable to boat type.
- Fire-fighting appliance location and use (if applicable to boat type).
- Means of pumping bilges.
- Actions in the event of running aground.
- Instruction in boat handling, including berthing alongside,

going astern, man overboard manoeuvres and recovery procedures (this should consist of a short practical demonstration).
- Details of area of operation, local weather conditions, maps/charts, Marine Notices as relevant.
- Maximum number of people/ luggage that a craft may carry.
- Contact points for rescue services, radio channels and relevant mobile phone numbers.

Training courses are provided by various organisations (see Appendix 9).

9.2 Insurance

- Is the boat covered by insurance?
- What is the extent of the insurance cover?
- Are there any restrictions or conditions (such as suitability for use on canals or permit compliance) that apply to the insurance cover?

Non-adherence to terms and conditions of insurance may cause difficulties and result in insurance being voided.

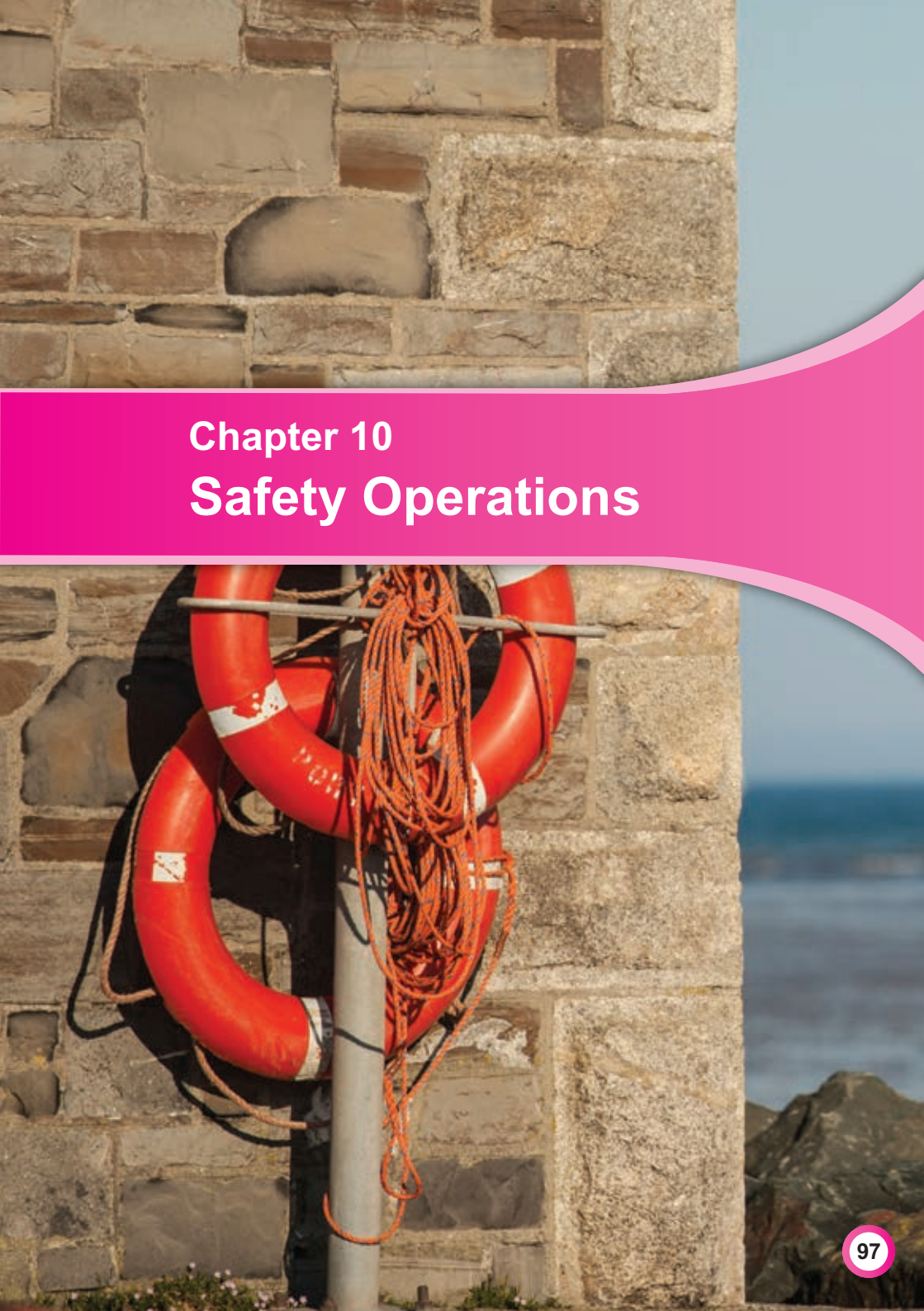
9.3 Minimum safety equipment on board

All boats offered for hire without a skipper should as a minimum be fitted with the safety equipment recommended in Table E in Chapter 2 and Table F in Chapter 3, which are relevant to the area of operation of the craft.

Recreational Craft are classed into 6 categories:

Category A – Ocean
Category B – Offshore
Category C – Coastal
Category D – Inshore/Estuary
Category E – Inland waterways including large open lakes
Category F – Inland Waterways – open boats less than 7 m in length operating in rivers and sheltered areas on lakes in moderate weather conditions.

Hire craft in Irish waters are generally confined to Categories C, D, E and F.



Chapter 10
Safety Operations

Chapter 10 provides basic guidance on safety on marinas and maintenance of equipment.

10.1 Tendering operations to moored craft

There are instances where boats are moored offshore due to tidal or draft restrictions and access to them is achieved by the use of a smaller tender launched from shore. In such instances, **where a tender is used to access and board a moored vessel, the following precautions should be taken:**

- Crew must wear a PFD/lifejacket at all times for the operation of boarding the tender, transit to and boarding of the moored craft.
- It is recommended that operators carry a waterproof handheld VHF radio.
- Persons under the influence of alcohol or drugs should not participate in tendering operations.
- Ensure the tender is in good condition and suitably equipped. If using an inflatable dinghy type, check the tubes are correctly inflated and the dinghy is a multi-tube type capable of remaining afloat in the event of failure of any single tube.
- Be aware of tidal and wind conditions prior to commencing any tendering operation.
- If launching directly from shore, ensure that the launch point is a safe departure point, can be safely accessed and is not subject to excessive surf.
- Tenders other than inflatable types should have additional buoyancy fitted. This may be in the form of dedicated buoyancy tubes, polyethylene foam block or integral buoyancy chambers built into the boat.
- All tenders should, if utilising an outboard engine, also carry a set of oars or paddles and be fitted with a suitable painter.
- The tender should not be overloaded by either personnel or equipment. Many tenders are fitted with a manufacturer's instruction plate on the transom identifying the maximum number of persons or equipment, or combinations of each, a tender may safely carry and the maximum power of any outboard engine that may be safely fitted to the boat – do not exceed these figures.
- Suitable means of boarding the moored vessel should be provided, e.g. boarding ladder, access gates on railings, etc.

10.2 Marina Safety

While the use of a marina facility offers benefits of increased convenience and comfort to boat operators, it should be noted that a marina is a potentially dangerous

location. Many marinas are located in deep water that is subject to strong tidal streams, are exposed to strong winds and are fitted with a minimum of protective barriers. Strong tidal streams can present a danger in the event of an accident.

Take note of speed limits and "no wake areas" in harbours, approaching marinas or near swimming areas.

Users are encouraged to observe the following precautions when using and moving about on marina installations:

- Wear suitable non-slip footwear.
- Be aware of the surface condition of decks, particularly if wet.
- Do not obstruct marina walkways or finger berths with gear/trolleys.
- Ensure that boat operations that involve coming alongside and departing marina berths are controlled, and do not jeopardise crew members in the process of berthing the boat. A short step and not a long jump is the required transit from boat to berth.
- Instruct all crew on deck to wear a PFD/lifejacket when bringing a boat on/off a marina berth.
- Do not leave children unattended on a marina facility.
- Ensure children are wearing a suitable PFD/lifejacket at all times when they are on a marina.
- Avoid wearing a knapsack, haversack, ruck sack or back pack while on a marina as these can prove dangerous in the event that you fall into the water.
- When using shore power electricity supplies, always

ensure trailing leads are in good condition, fitted with suitable plugs/sockets, are correctly supported and do not present a trip hazard.

- Only connect to power pedestals in accordance with the provider's instructions.
- Report any noted defects to the marina management.
- Observe all management safety instructions.
- Be aware of the dangers of moving about on a marina whilst under the influence of alcohol.
- Take note of lifebuoy locations and pontoon boarding ladders when entering or departing a marina.

10.3 Slipways

- Make visual inspection of the slipway surface to ensure it is free of material (e.g. reeds, seaweed/substances such as oil or grease) that may cause loss of traction for a towing vehicle or a slip hazard for personnel.
- Make sure there is sufficient water depth to float off the craft before the trailer reaches the end of the slipway.
- Be sure the vehicle in use has the traction and power to cope with launching from a slipway with a steep gradient. If in doubt, go elsewhere.
- The use of a four wheel drive vehicle is recommended if launching a boat trailer.
- Know where the life-saving appliances are located.
- Where possible, do not conduct a launching alone.

- Have a plan should the trailer and vehicle slip into the water adjacent to the slipway, i.e. windows open, buoyancy aid available but not worn.
- Do not allow any passengers to remain in the vehicle while launching or recovering a boat.
- Note and follow any warnings or safety instructions posted by the owner of the slipway.
- Report any safety concerns regarding the condition of the slipway to the owners.

10.4 Beach launching

Launching/recovering craft from any beach, particularly one subject to surf, can be a dangerous exercise and should always be approached with caution.

- Seek local advice on suitable and safe launching sites.
- Be aware that conditions may deteriorate dramatically between departure and return, dependent on tidal and weather conditions.
- Always be aware of the effects of wind versus tide in the area.
- Study the local weather forecast prior to any attempted departure.
- Be aware of the force of breaking waves on a boat and the potential damage by slamming into the surf.
- Do not launch if the surf height exceeds 0.5 m, unless using specialist craft and with suitable training.
- Always wear a suitable PFD/lifejacket and ensure all loose gear is correctly secured.
- Ensure sufficient experienced crew are available. Do not attempt to launch short-handed.
- Advise a responsible person ashore of your plans, including departure and return times, launch locations and intended destinations. Always inform them of your safe return.
- Check with the relevant local authority/local Beach Bye-Laws that there is no prohibition on beach launching.

10.5 Maintenance

10.5.1 Rigging

Rigging components on a sailing craft are subject to extreme loadings. If these are set up incorrectly in the beginning and adjusted subsequently, the fluctuations in load can result in fatigue failure of stays, spreaders or masts, despite the use of modern materials.

Rigging demands constant attention and inspection on an ongoing basis. While a boat is in service, it must be recognised that despite the use of materials such as stainless steel, components such as shrouds and terminals will not last indefinitely and must be replaced. On many boats greater than 6 metres in length, current practice is not to

remove the mast at the end of the season. Consequently, rigs remain in place for many years without proper inspection.

The following maintenance of a vessel's rigging should be undertaken:

- A competent person should inspect all elements of the rigging visually. This should be done annually. As this may involve undertaking a masthead inspection working at height, only individuals experienced in working aloft and using a suitable Bosun's Chair or equivalent should undertake this work.
- Shrouds should be examined for signs of damaged, distorted or kinked wire strands.
- Stay wire end terminals should be visually inspected – rolled or swaged ends are prone to splitting. Norseman or Staylock terminals can be opened and inspected internally if required. Ensure turnbuckles are not distorted or damaged.
- Be aware of the age of your vessel's shrouds. A regularly used craft should consider stay renewal every 7-10 years depending on usage. Keep a record of renewal dates. It is advisable to renew stays on a rolling basis, changing a section every year.
- Always renew with suitable material, size and terminals. It is recommended to have this work done professionally.
- Be aware of the correct procedure to tune rigging.

10.5.2 Inboard engine operation and maintenance

On craft fitted with inboard engines, prior to proceeding to sea the following procedures should be undertaken:

- Check oil and coolant levels.
- Inspect all bilges for leaks.
- Ensure all sea valves are open.
- Ensure adequate fuel is carried on board.
- While the engine is running, inspect for any fuel leaks.
- Prior to leaving the dock, ensure an adequate cooling overboard discharge is present.
- Check that the engine operates ahead and astern prior to departure from the berth or mooring.
- Battery electrolyte levels should be checked on a regular basis throughout the season.
- Propeller shaft systems, including regular greasing of bearings and inspection of leakage rate at glands, should also be included in an owner's maintenance routine.

10.5.3 Outboard engines

On craft fitted with outboard engines, the following procedures should be followed:

- The Engine Unit should be serviced at the start of each season by a qualified technician.
- Ensure the unit cooling system is flushed with fresh water prior to lay up at the end of the season.
- Prior to departure, check the condition of the propeller/shear pin assembly if fitted.
- Be aware of the correct starting procedures before departing, in particular how to avoid flooding the engine.
- If using a two-stroke engine, always ensure the correct oil/fuel mixture is used.
- Engines should be correctly mounted onto the boat's transom; in addition a safety lanyard should always be attached.
- The use of a "kill cord" with the unit is recommended at all times.

10.5.4 Annual engine maintenance

Prior to the start of each season, owners should undertake the following annual maintenance procedures:

- Oil and filter change.
- Fuel tanks drained of water (ensure they are filled with fuel prior to lay up) and fuel filters renewed.

- Inspect all cooling pipes, and check levels of anti-freeze fitted in cooling systems. Examine all exhaust lines for wastage or leaks.
- Inspect impellers on Sea Water Cooling systems (Jabsco pumps).
- Check condition of any starting battery systems.
- Examine condition of underwater anodes.
- Inspect condition of propeller shaft cutlass bearings.
- Check operation of all sea water hull shut-off valves.

10.5.5 Minimum spare parts

For Inboard Engine

- Fan belt set.
- Oil/fuel filter set.
- Spare Jabsco sea water pump impeller and gaskets.
- Spare change of engine oil.
- Spare jubilee clips to suit hoses on board.

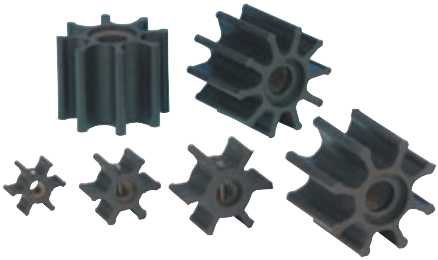
For Outboard Engine

- Spark plugs (in case of petrol engines).
- Spare Shear Pin (if relevant).

10.5.6 Tool Kit

Craft should carry a suitable and relevant tool kit comprising of the following suggested items:

- Screwdriver set.
- Spanner set applicable to each craft.
- Adjustable spanner.
- Torch.
- Spark plug spanner (in the case of petrol engines).
- Junior hacksaw and spare blades.
- Pliers and vise grips.
- Can of WD40 release oil, if relevant.



10.6 Liquefied/Liquid Petroleum Gas (LPG)

Many recreational craft are fitted with Liquid Petroleum Gas (LPG) installations and appliances, primarily in the form of cookers. LPG is supplied in pressurised cylinders and is usually propane, butane or a mixture of the two gases.

When handled incorrectly, the dangers associated with LPG

systems include fire, explosion, burns and asphyxiation, due to gas leakage from the system or accumulation of gas following flame failure in an appliance. Such incidents have caused loss of life and material damage on recreational craft.

It is essential that **all** installation and **any** planned maintenance or repair work is undertaken by a qualified technician to an approved standard – (ISO 10239:2014 Small Craft – Liquefied Petroleum Gas (LPG) Systems), and in accordance with the manufacturer's instructions.

Gas Cylinders should always:

- Be handled with care. Never lift a gas cylinder by the cylinder valve;
- Be stowed outside in order that any leakage may disperse quickly to the open atmosphere;
- Be stored upright and secured against movement;
- Where stowed in lockers on deck, have adequate drainage ports provided to allow the gas (which is heavier than air) dissipate safely.

The following safety devices should be fitted to any LPG system:

- Manual isolation valve on the cylinder;
- Fixed pressure regulator located within the storage locker to provide a fixed working pressure to the consuming device;
- A pressure relief device located on or adjacent to the cylinder;
- An automatic safety gas cut out device located on the cylinder or adjacent to it, to cut off the gas supply in the event of a loss of pressure due to a gas leak;
- A manual shut-off valve located adjacent to the appliance, but easily accessed for the purpose of operation;
- Gas detectors, located in the space appliances are situated. Detectors should be located in bilge areas or at floor level to detect accumulating gas leakage. Alarms should be audible and arranged to automatically cut off the gas supply from the bottle;
- Carbon Monoxide alarms and local fire alarms should also be fitted in spaces containing cookers;
- All gas safety isolation and safety devices should be clearly marked to indicate their function and the open and closed positions.

Only appliances designed for use in a marine environment should be installed on a vessel. The cooker should be fitted with a gas shut-off. Systems should be subject to annual maintenance by a qualified technician and all onboard alarms and shut-offs should be checked at least monthly when the vessel is in use.

Appliances should be securely fixed to the craft. Where a cooker is mounted on a gimball arrangement, its freedom to move should not be restricted.

A means of exhaust ventilation should be fitted to the space where a LPG appliance is fitted, with suction ducting located at floor level or in bilge areas. Extraction fans should be located external to the space.

Emergency Action

In the event of a gas leak being detected, the following actions should be taken:

- Isolate the gas supply at the bottle;
- Extinguish all flames and cigarettes. Do not operate any electrical equipment or switches;
- Ventilate the space, being aware that as the gas is heavier than air, it will sink into bilges;
- Be aware of the location of all fire extinguishing equipment;
- Do not operate the system until the fault has been corrected by a qualified technician.

Further information and advice is contained in Marine Notice No. 37 of 2017 (Use of liquefied petroleum gas (LPG) installations and systems on merchant vessels, fishing vessels, pleasure craft and other marine craft).

10.7 Commissioners of Irish Lights

The Commissioners of Irish Lights (CIL) perform an important role in safety at sea through their Aids to Navigation (AtoN) which include radio aids such as Differential GPS (DGPS), Radar Beacons (Racon) and Automatic Identification Systems (AIS), as well as more traditional visual aids such as lighthouses, buoys and beacons. Further information can be found at www.irishlights.ie.

10.7.1 Smart Weather Buoys

Smart Buoys currently provide the mariner with traditional visual navigational information as well as internet-accessible environmental information from around the coast of Ireland, including:

- Sea state (Wave Height, Wave Period)
- Weather conditions (Wind Speed, Wind Direction, Gust Speed, Gust Direction)
- Water Temperature.

Information and data feedback from the smart weather buoys around the coast are available at http://www.irishlights.ie/environment/smart-buoy-sensors.aspx.

Chapter 11
Emergency Procedures

The procedures described in this Chapter do not prevent the use, by any vessel, survival craft or person in distress of any means at their disposal to attract attention, make known their position and obtain help.

11.1 Procedure for making distress or urgency calls using VHF voice

11.1.1 Making a distress transmission using VHF voice broadcasting – MAYDAY

In cases where there is grave or imminent danger to either the vessel or persons on board, then a MAYDAY should be broadcast on Channel 16 with the VHF unit set to high power in the following format:

"MAYDAY, MAYDAY, MAYDAY,

This is 'NAME OF VESSEL', 'NAME OF VESSEL', 'NAME OF VESSEL'
(State the name of the vessel **three** times)

MAYDAY,

'NAME OF VESSEL',

STATE THE POSITION OF THE VESSEL
(If possible give the position from a GPS receiver or bearings from and distance to any known fixed points e.g. "Position one mile South of Fastnet Lighthouse")

STATE THE NATURE OF DISTRESS.
(e.g. sinking, man overboard, fire on board, …)

STATE THE NUMBER OF PERSONS ABOARD.

STATE ANY OTHER USEFUL INFORMATION.

OVER".

11.1.2 Making an urgency broadcast using VHF – PAN-PAN

In circumstances that are considered to be grave but do not require immediate assistance and where there is no imminent danger to the vessel or persons on board, e.g. mechanical failure, loss of propulsion, a "PAN-PAN" Urgency Broadcast should be made on VHF Channel 16 with the unit set to high power in the following format:

"PAN-PAN, PAN-PAN, PAN-PAN,

ALL STATIONS, ALL STATIONS, ALL STATIONS,

THIS IS 'NAME OF VESSEL', 'NAME OF VESSEL', 'NAME OF VESSEL'
(State the vessel's name **three** times)

STATE THE POSITION OF THE VESSEL
(If possible give the position from a GPS receiver or bearings from and distance to any known fixed points e.g. "Position one mile South of Fastnet Lighthouse")

STATE THE NATURE OF THE URGENCY.
(e.g. Vessel adrift, mechanical failure, …)

STATE THE NUMBER OF PERSONS ABOARD.

ASSISTANCE REQUIRED AND ANY FURTHER RELEVANT INFORMATION.

OVER".

11.2 Types of radio distress calls

The advent of the Global Maritime Distress and Safety System (GMDSS) has brought about a number of changes in the manner and procedure in which distress calls from craft are initiated.

Modern VHF radios are fitted with a Digital Selective Calling (DSC) facility whereby a distress call is activated by pressing a dedicated switch on the radio. This system transmits an all station call on Channel 70.

For non-DSC radios, Channel 16 remains the listening channel for distress calls.

Therefore there are two possible scenarios:

11.2.1 Automated Calling

This only works on DSC radio sets. The operator initiates an all station call by simply uncovering and pushing the red SOS switch on the radio's panel. This will transmit the Maritime Mobile Service Identity (MMSI) code – a series of 9 digits without any further action required by the crew.

In addition to the MMSI code, if interfaced with a GPS, it can also give a boat's position and possibly the type of emergency (depending on settings).

All information will be displayed on any receiving sets' display panel. Transmitting and receiving sets will switch to Channel 16 to allow further information to be transmitted, e.g. spoken MAYDAY message, nature of emergency, etc.

11.2.2 Non-Automated Calling

VHF sets without DSC must rely on the traditional format of broadcast on Channel 16 for making a MAYDAY call. Ensure the set is selected to Channel 16 and that it is transmitting at its full power.

The MAYDAY broadcast format as described above should be used.

11.2.3 Use of Handheld VHF Radios

Portable VHF radio equipment can be used on small boats particularly where it is impracticable to install a fixed VHF radio. This equipment should be licensed and issued with a radio call sign.

The portable VHF will only be licensed for use on a boat for communications with coast stations, harbour authorities, marinas and other boats – **It should not be used on land**.

11.3 Emergency Position Indicating Radio Beacons (EPIRBs)

There is one model of Distress Beacon - the '406 MHz'.

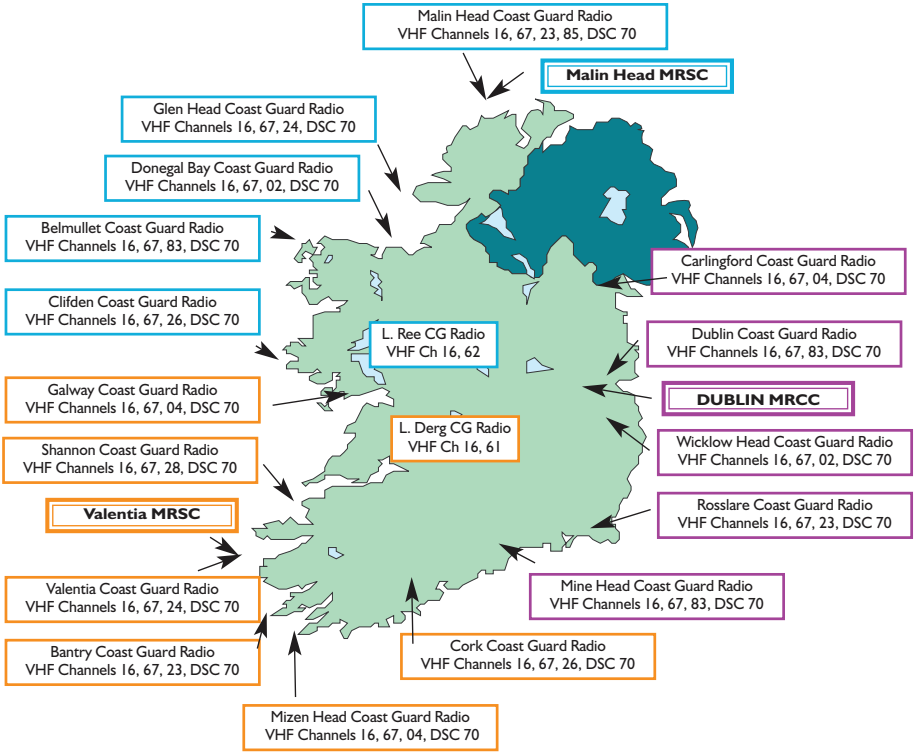
406 beacon

This is a digital signal and covers the entire globe. 406 beacons have a **unique identification code** which is part of its signal. When properly registered, the unique code provides information about the boat carrying the beacon. This includes the owner's emergency contact and the country of registration. The 406 signal may be received within seconds by geostationary satellites.

False alarms from digital 406 MHz beacons can be resolved with a phone call as these devices transmit an identity code that can be cross-referenced with an ownership database.

11.4 Marine VHF Communications Network

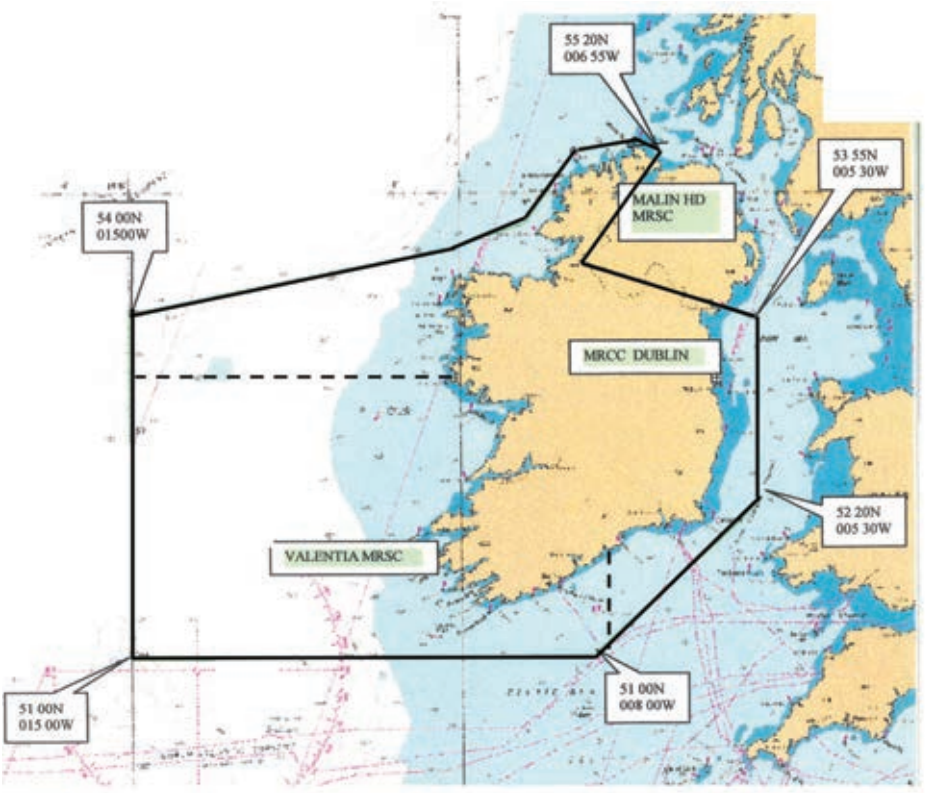
Irish Coast Guard
Marine VHF Communications Network



Weather Forecasts at 01:03, 04:03, 07:03, 10:03, 13:03, 16:03, 19:03 and 22:03 on working channels

Malin Head Controlled Radio Stations	**Valentia** Controlled Radio Stations	**Dublin** Controlled Radio Stations

Irish Search and Rescue Region



11.5 Automatic Identification System (AIS)

The Automatic Identification System (AIS) is an automatic tracking system used on ships and by vessel traffic services (VTS) for identifying and locating vessels by electronically exchanging data. AIS has been widely adopted and can be a useful tool on board recreational vessels. It can assist in identifying larger vessels as all passenger ships must have AIS. All ships of 300 gross tonnage and upwards engaged on international voyages, as well as cargo ships of 500 gross tonnage and upwards on domestic voyages, must also carry AIS. It is important to note that there may still be a large number of vessels not fitted with AIS. It is a useful identification tool but should not be used as a means of collision avoidance as not all vessels are required to carry AIS. Another useful AIS feature is that navigation aids such as buoys and lighthouses are increasingly being fitted with AIS transponders to assist with identification. AIS Search And Rescue Transponders (SART) are also available that can assist in locating a casualty in a Search and Rescue situation.

11.6 Survival at sea

Death by hypothermia or drowning presents the greatest risk to individuals who are forced to abandon their craft. The ambient

sea temperature can cause people to very quickly become cold and affect their ability to help themselves once in the water.

After boarding a liferaft it is still possible to succumb to hypothermia. Individuals should take the necessary survival precautions.

Survival at sea, even for relatively short periods of time, is dependent on suitable equipment, adequate preparation and knowledge of survival techniques.

A number of recognised course providers offer a **one day Basic Sea Survival Course** (see Appendix 9 for details of course providers) covering both the theoretical and practical aspects of sea survival techniques.

11.6.1 Choosing a Liferaft

When choosing a liferaft, examine what survival equipment is included.

ORC Pack

- Bailer
- Red Handheld Flares (3)
- Sponges (2)
- Torch (with spare batteries and bulb)
- Leak stoppers (set)
- Pump
- Repair kit
- Paddles (2)
- Safety knife
- Instruction leaflet
- Sea anchor
- Rescue quoit and line (30 m floating)

It is recommended that additional equipment is carried in a suitable grab bag.

World Sailing Pack

- Bailer
- Thermal protective aids (survival bags) (2)
- Seasickness pills (min of 6 per person)
- Seasickness bags (min of 1 per person)
- Sea survival instructions
- Red Handheld Flares (3)
- First Aid kit (including water to help take pills)
- Sponges (1 per person)
- Torches (2 sealed for life)
- Leak stoppers (set)
- Signal mirror
- Pump
- Repair kit
- Buoyant paddles (2)
- Signal card
- Whistle
- Safety knife
- Sea anchor
- 'Wet' notebook and pencil
- Rescue quoit and line (30 m floating)

SOLAS B Pack

- Bailer
- Sponges (2)
- Leak stoppers (set)
- Pump
- Repair kit
- Buoyant paddles (2)
- Signal card
- Instruction leaflets
- Torch (with spare batteries and bulb)
- Seasickness tablets (6 per person)
- Rescue line and quoit
- Safety knife
- Sea anchor (2)
- First Aid kit
- Sick bag (1 per person)
- Whistle
- Red parachute flares (2)
- Red handheld flares (3)
- Buoyant orange smoke
- Heliograph
- Radar reflector
- Thermal Protective Aids (survival bags) (2)

SOLAS A Pack

As SOLAS B Pack plus:

- Fishing kit
- Additional red parachute flares (2)
- Additional red handheld flares (3)

- Additional buoyant orange smoke
- Water (0.5 litre per person)
- Graduated drinking vessel
- Rations (10,000 kilojoules per person; non thirst provoking)
- Tin-opener

There are a number of essential points to consider when selecting a liferaft:

- **Two Compartment Buoyancy Chambers** – allows one chamber to be damaged without compromising the buoyancy of the raft.
- **Canopy** – protects the crew from the elements, reduces risk of exposure and improves the chances of the raft avoiding total inversion if capsized by a wave or inflating upside down.
- **Inflatable Floor** – offers improved insulation against the cold.
- **Sea Anchor** – offers relative stability to the raft in the sea.
- **Boarding Aid** – offers essential assistance to a fully clothed person attempting to enter a liferaft from the water.

Liferafts require regular servicing by trained personnel and at intervals laid down by their manufacturer, which should always be adhered to.

Liferafts should be stowed on board in a location where they can be rapidly deployed. They can be stowed either on deck or in a locker opening directly onto the deck. If stowed on deck, the storage should be able to withstand heavy weather. All liferafts rely on the attachment of their painter to a suitable strong point on board in order to initiate the inflation procedure.

11.6.2 Abandoning Ship

The decision to abandon a ship should only be taken if absolutely necessary. Often a damaged or incapacitated boat will, even in adverse weather conditions, offer greater protection to a crew than entering the water or deploying a liferaft.

The decision to abandon a ship must be made taking into consideration a number of factors:

- Condition of the boat, propulsion and power capabilities.
- Internal flooding.

- Bilge Pumping capacities and capabilities.
- Weather conditions.
- Communications with rescue facilities.
- Physical condition of crew.

If abandoning a craft to a liferaft, the following points should be adhered to:

- Be familiar with the correct method of launching. Read the instructions before departure and ensure other crew are familiar with the location of the liferaft and the means of deployment.
- For offshore cruising: Category A and B should have a suitably equipped grab bag which can be transferred to the liferaft.
- Before launching the liferaft, check the water in the launching area is clear of people and obstructions.
- Wait until the liferaft is fully inflated before attempting to board. Do not jump onto the canopy. Avoid the raft chafing against the craft that is being abandoned.
- If at all possible, board the raft without entering the water in order to reduce the effects of the cold.
- If it is not possible to board the liferaft without entering the water, choose a suitable place to leave the boat while taking account of the sea state and drift of the boat. Remember, liferafts can drift much faster than most people can swim.
- Wear additional layers of clothing, including head gear, as this prevents heat loss from the body. A suitable PFD/lifejacket should be worn at all times.
- Do not remain in the water longer than is necessary.

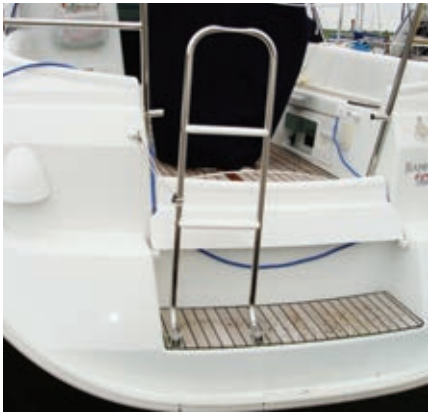
Once all crew are in the liferaft:

- The craft should be cut free.
- Manoeuvre clear of the craft or any obstructions.
- Deploy the sea anchor.
- Close all entrances to conserve heat.
- Issue sea sickness tablets.
- Post a lookout.
- Maintain the liferaft – inflate the floor, bale out any water, check for leaks, ventilate by maintaining a small opening.
- Remain in the vicinity of the last position given prior to abandoning ship.

11.6.3 Survival in the water

In the event of a liferaft not being available, the following applies:

- Ensure additional layers of clothing are worn prior to entering the water.
- Wear a hat and if possible cover the extremities of the body, e.g. fingers, toes and face.
- Do not jump into the sea. Use an overside ladder if available. Avoid obstructions in the water adjacent to the hull. It may be



preferable to abandon from either the bow or stern rather than amidships.

- Avoid unnecessary swimming in order to conserve energy and body heat.
- If possible, form a group with other survivors to increase visibility for rescuers.
- Activate the PFD/lifejacket light and use the whistle attached to attract attention.

11.7 Man overboard and recovery procedures

11.7.1 Recovery of man overboard

The loss of a person overboard presents a serious challenge to those remaining on board who have to safely position the vessel adjacent to the individual in the water and recover the person back on board.

The situation can be even more traumatic if the skipper is lost and an inexperienced crew are on board.

On losing a crew member overboard, other crew should undertake the following actions:

- Deploy a lifebuoy, throw bag, rescue quoit, etc.
- Appoint a crewmember to maintain visual contact with the individual in the water at all times regardless of the boat's manoeuvres.
- Depending on the type of craft, exercise the required manoeuvre as described in the following section.
- Issue MAYDAY.

Position the person adjacent to the boat and, if the person is physically capable, re-board by means of a suitable boarding ladder or swimming platform.

For an exhausted or injured crewmember, external means of recovery will be required, such as:

- Dedicated recovery sling under the arms of the individual, using halyards/winches, boom, etc. to provide leverage.
- Use of victim's safety harness or PFD/lifejacket fitted with integral harness.
- Use of a sail deployed over the side as a scoop and recovered using the boats running rigging.
- Use of an inflatable tender, partially deflated to recover the individual from the sea.
- Launch the liferaft and have the victim recovered into it.
- On inflatables, one tube may be partially deflated to aid recovery of an injured or unconscious person.

Many boats are equipped with a bathing platform at the stern which facilitates recovery of persons from the water.

On boats with outboard engines, the engine may be used as an impromptu ladder to re-board, provided the engine is shut down.

Falling into cold water will result in a gasp reflex causing uncontrolled breathing, panic and cardiac stress. A lifejacket will keep your head above water, ensuring you breathe in air.

Be aware of the dangers of hypothermia affecting persons who have been immersed in the sea for a period of time. Ensure the casualty is kept dry and warm. Alcohol should not be given to the person.

Treatment for hypothermia consists of drying, sheltering, and gradually warming. Do not rub the patient's body. Warm with blankets and if possible, your own body heat. While blankets help a person retain body heat, they are not sufficient to treat hypothermia. It is vital that you warm the core of the body first or the cold blood will be forced towards the heart and may cause death.

11.7.2 Manoeuvring boat to aid recovery of man overboard

11.7.2.1 Craft without an engine

A simple way to recover is to:

1. Put the craft into an "apparent"


First Gasp or Last Breath?
SAFETY ON THE WATER
Cold water shock kills
Facts
• Falling into cold water will result in a gasp reflex causing uncontrolled breathing, panic and cardiac stress.
• One gasp of water could kill you in seconds.
• Irish waters are cold enough to cause cold shock.
• Being a strong swimmer will not save you.
• A lifejacket keeps your head safely above water ensuring you gasp air.
• To work correctly, a lifejacket must be worn correctly.
Wear a properly fitted lifejacket and ensure that your first gasp is not your last breath.
Lifejackets
www.safetyonthewater.ie

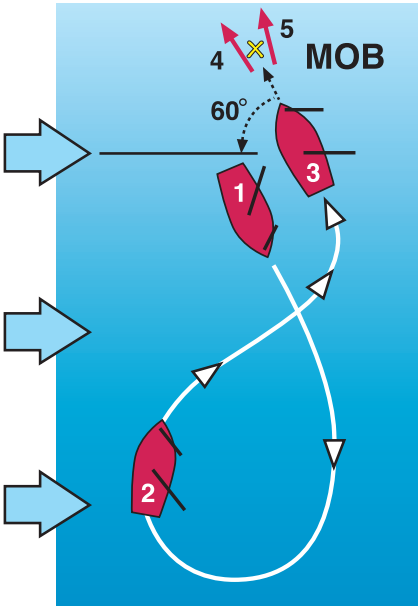
beam reach (burgee across the craft). Allow yourself some sea room to manoeuvre and get yourself organised to recover the person from the water.
2. Tack and sail on the opposite beam reach (person in water now on weather bow).
3. Approach on a close reach, easing the sheets in the final stages. Leeway will increase as you slow down – allow for this.
4. In a larger craft, it is easier to come alongside to windward of the person in the water and make the recovery over the leeward side.
5. In a dinghy, come alongside to the leeward of the person in the water and make the recovery by the weather shroud.

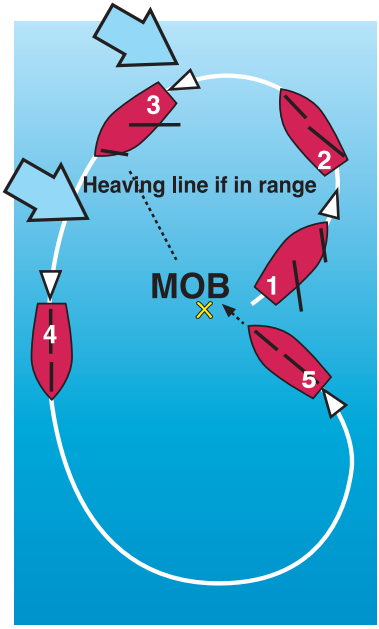
11.7.2.2 Craft with an engine

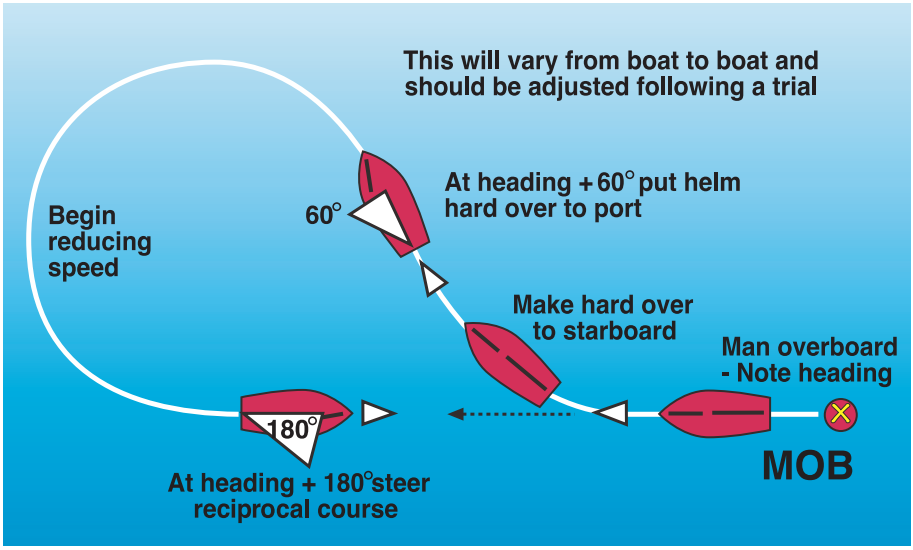
To stay as close to the person in the water as possible:

1. Come up to wind and tack, leaving headsail cleated so that boat stops hove to (yachts).
2. Throw a heaving line to the person in the water if in range, and haul alongside.
3. If not within heaving line range:
   - start the engine
   - lower or furl the headsail
   - sheet the main sail amidships.

   Ensure there are no lines or sheets lying loose on deck or overside that could foul the propeller.
4. Motor to leeway of the person in the water and approach the person head to wind.







Other turning manoeuvres

1. If you can see the person in the water clearly, a simple sight 180 degree turn is the quickest.
2. If you lose sight of the casualty, due to poor visibility or heavy weather and sea state, the "Williamson Turn" is a good way to get to a reciprocal course which will take you back down your track. From the moment the skipper is aware of a "man overboard" situation, put the helm to starboard and adopt a course of "original course + 60 degrees". Then put the helm immediately to port until the vessel has completed a turn which brings the compass reading to "original course plus or minus 180 degrees". This will put you on a reciprocal course where you should proceed slowly with a good lookout as the casualty will be directly ahead of you.
3. In heavy weather, the reciprocal course may bring the sea astern, in which case a short approach head to sea may be more appropriate once the turn has been completed.
4. Do not waste time while the craft is turning to approach the person in the water. Prepare for the recovery as it is too late when the person is alongside.
   - Which side will you approach?
   - Have a heaving line ready.
   - Wear a PFD/lifejacket and lifeline; if you don't, you may get pulled on top of the person in the water.
5. The initial approach to the person in the water will vary

depending on weather/sea conditions and the type of boat. Let the weather help rather than hinder. Stop upwind and drift down.

6. If you are concerned about drifting onto the person in the water, bring your stern into the wind. If you are not confident with your boat handling skills or if it looks likely that the boat could come down on top of the person in the water, throw them the heaving line and pull them alongside to a position that is a safe place for recovery.
7. **Ensure the propeller is not turning when you are alongside the person in the water.**

11.8 Emergency towing – receiving or giving a tow

Towing should be undertaken with preparation and care by all parties involved in the operation. If assistance is being offered by the RNLI lifeboat, always follow the instructions of the coxswain as to how to take the line and secure it on board.

In all other circumstances, the following should be observed:

- All crew working on deck must wear a suitable PFD/lifejacket.
- Consider the use of lifelines and safety harnesses if weather and sea state require them.
- Use the most substantial and longest line available to you. Join several together using a bowline if necessary.
- Use a light heaving line as the first line to be transferred between boats. The heavier towline can be passed across using this line.
- The boat offering the tow must take care not to foul its own propeller when transferring a tow line, or come in contact with the disabled boat.
- A towline can be floated downstream to a disabled craft using a fender.
- Both craft should use a towing bridle to secure the towline. Ensure the load is spread over several cleats or strong points on deck such as winches to distribute the load and allow for efficient steering. Please note that some cleats are not designed for towing and may present a projectile hazard when they come under load, hence the use of several cleats is recommended as shown in picture.
- Ensure an agreed means of communications is established, either by VHF or hand signals.
- The towing boat should slowly commence to get underway. Speed should be adjusted to suit the vessel being towed and local sea conditions.
- In open water, it is generally best to tow in line astern. However in sheltered waters and approaching channels and berths, it is possibly beneficial to change to an

alongside tow to allow ease of berthing etc.

- The towed craft should be positioned slightly forward of amidships of the towing craft and adjusted by means of springs and breast ropes. This allows the towing craft better positioning through the paddlewheel effect of its own propeller, and controllability through its rudder, which is prevented if the towed boat is positioned aft of the tugs rudder position. If the towed boat is too far aft, the combination of tug and tow can become quite un-manoeuvrable with the two only wishing to alter course in the direction upon which the towed vessel is made fast.

11.9 Helicopter rescue procedures

In the event of a helicopter rescue situation, the following points should be noted and followed:

- Prepare well in advance of the arrival of the helicopter; ensure crew are well briefed on correct procedures.
- Clear all obstructions on deck prior to the arrival of the helicopter. Ensure there are no items of loose or moveable gear on deck.
- All operations will be directed by the crew of the helicopter – follow all instructions.
- Do not be distracted by the noise of the helicopter overhead. It may be necessary to have a crewmember positioned inside the boat to maintain radio communications with the helicopter due to the excessive noise on the outside decks.
- The pilot will give specific instructions regarding the course and direction he/she may wish you to steer. Generally boats will maintain a course to give the wind at 30 degree to the Port Bow. The preferred area to conduct winching operations is normally the port quarter. This affords the pilot visual contact with both the boat and the winchman.
- Due to the risk of static build-up from a hovering helicopter, follow the pilot's instructions exactly with regard to the earthing of a static discharge wire prior to placing the winchman on board. The wire is usually dropped into the sea to discharge static prior to commencing the operation.
- Under no circumstances should the winch line be made fast at any time to the boat.
- On arrival of the winchman on board, that person will assume command of all subsequent operations. Follow the instruction given at all times.
- **Do not fire parachute flares when a helicopter is operating in the vicinity.**

11.10 Flares

Flares are an effective way to signal passing aircraft and nearby boats that a vessel is in trouble and requires assistance.

There are three types of flares used as distress signals:

- Red handheld flares are for night-time use and can be seen up to 10 km away.

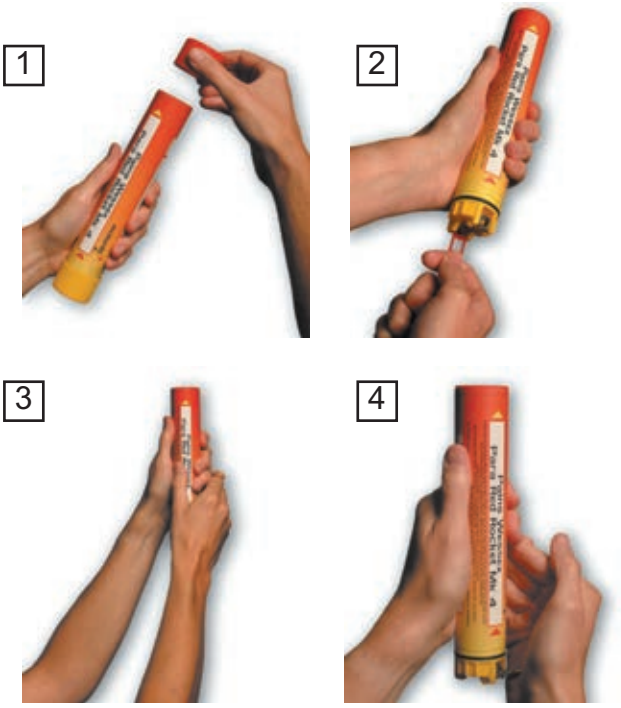
- Orange smoke flares are for day use only and can be seen up to 4 km away on a clear day. They can be either handheld or buoyant cartridge type.

- Rocket parachute flares can reach a height of 300 metres and are used for longer range attention seeking.

Flares will burn for about one minute, so only use when other boats and planes are in the area.

White flares are available for the purpose of attracting attention or marking a position by a boat.

Flares are explosives and should be treated with care. Store in a waterproof container. They should always be within their expiry date.



Everyone on board should know where the flares are stored and how to use them.

Operating Instructions are printed on all flares – always read them prior to firing!

Do not operate flares when a Rescue Helicopter is in the immediate vicinity – always follow the pilot's instructions.

11.10.1 Disposal of expired pyrotechnics

Pyrotechnic expiry dates
Flares have clearly marked instructions for use and expiry dates printed on the packaging. The expiry dates printed on pyrotechnics (flares) are determined by the required performance of the distress signals as set by marine approval bodies.

SOLAS standards are used to regulate the quality and performance of distress signals for use on commercial vessels. Recreational craft are not required by law to carry SOLAS approved flares. However, most products supplied for the leisure market in this country are of SOLAS standard.

Expiry dates are generally 3 years from the date of manufacture. Flares should be replaced prior to the expiry date as the chemical components used in flares degrade over time and variations in temperature and humidity can accelerate this process.

Out of date flares may look acceptable to the naked eye. However:

- they can burn at a lower brightness (candela),
- the colour of the flare can fade,
- the burn time can lengthen which could be a fire hazard,
- for rockets, the ejection height and flight stability may be affected,
- red flares can fade and therefore may not be recognised as a distress signal.

Expiry dates are set to ensure that pyrotechnics will still perform to the stringent specified quality standards at the end of their official lifetime. The life of the product allows for a performance safety margin so that even if storage conditions are not optimum, the distress signals will still meet the approval bodies' performance specifications.

In date flares should be stored on board in a waterproof, buoyant container.

Out of date flares must be disposed of carefully. Marine Notices are issued from time to time in relation to the safe disposal of time expired pyrotechnics.

11.11 Mobile Devices

A mobile phone should not be relied on as the primary method of contacting the emergency services. Having said that, it is recommended that all vessels operating on inland lakes and waterways as well as in coastal waters carry a fully charged mobile phone contained in a watertight storage bag or casing. The mobile phone should at all times be fully charged and the signal strength and the charge indicator of the mobile phone should be regularly checked while the vessel is under way.

Appendices

Appendix 1

The International Regulations for Preventing Collisions at Sea (COLREGs)

- Collision avoidance rules
- Navigation lights
- Sound signals
- Distress signals
- Life Saving signals

The International Regulations for Preventing Collisions at Sea, COLREGs, govern the interaction of vessels on the water, and apply to all recreational craft at sea and on waters navigable by sea-going vessels. The Regulations also apply to sections of our inland waterways.

The Regulations govern the following:

- Response of vessel in any condition of visibility.
- Response of vessels in sight of one another.
- Conduct of vessels in restricted visibility.
- Light and shapes to be carried by various craft.
- Sound and light signals between craft.
- Positioning of lights and shapes on board.
- Frequencies of sound signals.
- Distress signals.

While the complete rulebook forms a large and detailed publication, there are a number of condensed versions available specifically tailored for the recreational boat user. Recreational craft operators should familiarise themselves with some of the rules and regulations so there will be no hesitation on their part, when a possible risk of collision arises.

- As a general rule, power gives way to sail. But sailors must be reasonable – don't expect large, less manoeuvrable vessels under power to give way.
- All small craft should give large vessels a wide berth.
- In narrow channels, keep to the right (starboard). If plenty of distance separates two passing boats, there is no need to deliberately alter course to pass to the right of the other boat.
- In a head-on approach to another boat, always alter course to the right (starboard) and never to the left (port).
- When two boats are crossing, the boat on your right (starboard) has the right of way – you should keep clear, by either altering course or slowing down, to pass astern of the other vessel.
- If you have the right of way, be predictable – keep your course and speed consistent.

- Don't push your luck by forcing your 'right of way'. You should do whatever is necessary to avoid a collision.
- In crowded areas such as approaches to jetties, marinas and moorings, be aware of other vessels manoeuvring as very often their movements can be unpredictable.
- Maintain a proper lookout at all times and in all directions. Craft under sail should regularly check the area "below" or to lee of them where visibility is obstructed by the vessels sails.
- Craft should at all times proceed at a safe speed, considering weather conditions, traffic density, visibility, depth of available water and the craft's manoeuvring qualities.

Collision Prevention

A number of the collision prevention rules are included below.

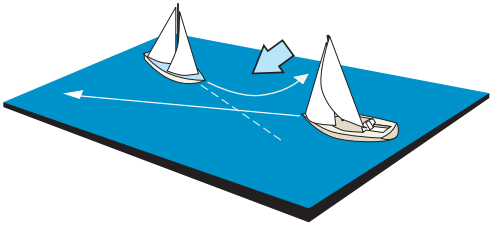
Narrow channels – Rule 9

Rule 9 sets out requirements in relation to the navigation of narrow channels. This is particularly important in river estuaries and narrow buoyed channels that are frequented by both large commercial vessels and recreational craft. Among the requirements are the following:

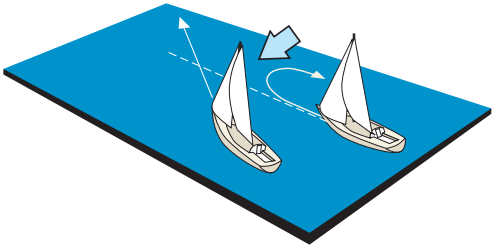
- a vessel proceeding along the course of a narrow channel or fairway shall keep as near to the outer limit of the channel or fairway which lies on her starboard side as is safe and practicable;
- a vessel of less than 20 metres in length or a sailing vessel shall not impede the passage of a vessel which can safely navigate only within a narrow channel or fairway;
- a vessel engaged in fishing shall not impede the passage of any other vessel navigating within a narrow channel or fairway;
- a vessel shall not cross a narrow channel or fairway if such crossing impedes the passage of a vessel that can safely navigate only within such channel or fairway;
- in a narrow channel or fairway when overtaking can take place only if the vessel to be overtaken has to take action to permit safe passing, the vessel intending to overtake shall indicate her intention by sounding the appropriate signal prescribed in the Rules;
- a vessel nearing a bend or an area of a narrow channel or fairway where other vessels may be obscured by an intervening obstruction shall navigate with particular alertness and caution and shall sound the appropriate prescribed signal;
- a vessel shall avoid anchoring in a narrow channel.

Sailing Vessels – Rule 12

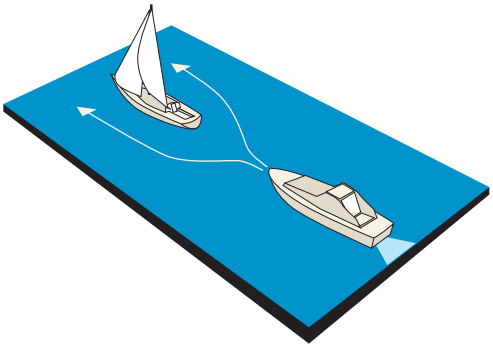
When two sailing vessels are approaching one another, and at risk of collision, one of them shall keep out of the way of the other as follows:



i. When each has the wind on a different side, the vessel that has the wind on the port side shall keep out of the way of the other. This is commonly known as the starboard rule.



ii. When both vessels have the wind on the same side, the vessel that is to windward shall keep out of the way of the vessel that is to leeward. That is the boat closest to the wind keeps out of the way of the other.



iii. If a vessel with the wind on the port side sees a vessel to windward and cannot determine with certainty whether the other vessel has the wind on the port or the starboard side, it shall keep out of the way of the other.

For the purpose of this Rule, the windward side shall be deemed to be the side opposite to that on which the mainsail is carried.

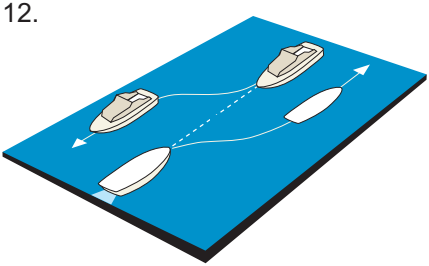
Head-on Situations – Rule 14

(a) When two power-driven vessels are meeting on reciprocal or nearly reciprocal courses and at risk of collision, each shall alter its course to starboard and pass on the port side of the other.

(b) Such a situation shall be deemed to exist when a vessel sees the other ahead or nearly ahead, and by night can see the masthead lights of the other in line or nearly in line and/or both sidelights, and by day can observe the corresponding aspect of the other vessel.

(c) When a vessel is in any doubt as to whether such a situation exists, it shall assume that it does exist and act accordingly.

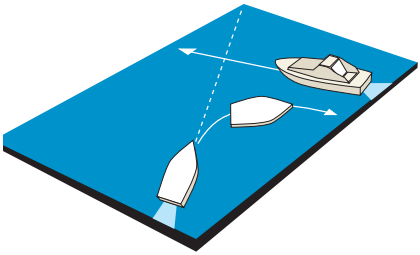
Note: For sailing vessels, see Rule 12.



Crossing Situations – Rule 15

When two power-driven vessels are crossing and at risk of collision, the vessel that has the other on its starboard side shall keep out of the way and shall, if circumstances permit, avoid crossing ahead of the other vessel.

Rules 16 and 17 concern actions by **give-way and stand-on vessels** respectively. In summary, the give-way vessel shall take early and substantial action to keep well clear; the stand-on vessel shall keep its course and speed but may take action to avoid collision if the give way vessel is not acting correctly.



Navigation Lights

Navigation lights must be displayed on boats operating between sunset and sunrise and must also be used in daylight hours during periods of restricted visibility. The types of light required are determined by the boat type and their activity. They indicate the length of boat, the direction of travel or if they are anchored.

Rule 20 of the Collision Regulations requires that lights prescribed shall, if carried, be exhibited from sunset to sunrise and from sunrise to sunset in restricted visibility, and may be exhibited in all other circumstances when it is deemed necessary.

Rule 21 provides definitions of different lights.

Rule 22 provides for lights to be visible at minimum ranges on a dark night with a clear atmosphere. These are summarised in the following Table.

Table – Visibility of Vessel Lights

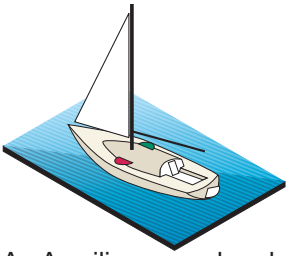
Minimum light visibility (nm) for vessel length (m) (White, red, yellow, green).

	50 m and greater	**Between 12 m and 50 m**	**Less than 12 m**
Masthead	6 nm	5 nm*	2 nm
Sidelight	3 nm	2 nm	1 nm
Stern light	3 nm	2 nm	2 nm
Towing light	3 nm	2 nm	2 nm
All round light	3 nm	2 nm	2 nm

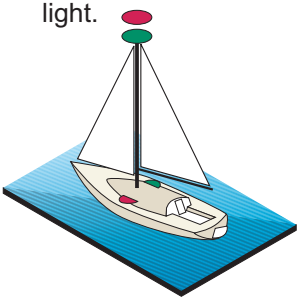
*Where the length of the ship is 12 m or greater, but less than 20 m, the masthead light visibility is 3 nm.

Light Combinations

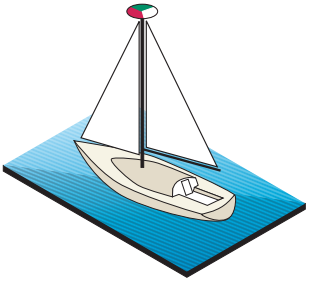
The term “under way” in relation to a vessel is used to describe a vessel that is not at anchor or made fast to the shore or aground.



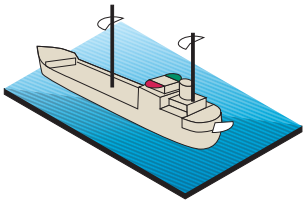
A. A sailing vessel under way shall exhibit sidelights and a stern light.



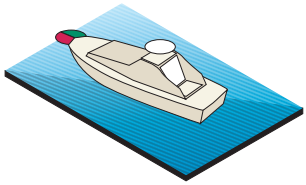
B. Sailing vessels may, in addition, carry an all-round red light above a green light.



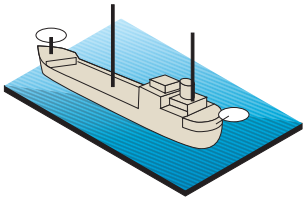
C. A sailing vessel of less than 20 metres in length may combine sidelights and stern lights in a tricolour masthead light (but not with vertical lights as in B above).



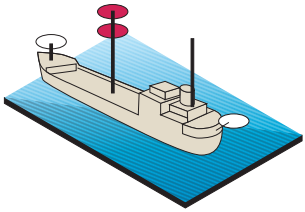
D. Power-driven vessels under way shall carry a masthead light forward and a second masthead light abaft of and higher than the forward one; except that a vessel of less than 50 metres in length may carry the second light, but is not obliged to do so. Vessels underway shall carry sidelights and a stern light. (From a big ship mariner’s point of view on the high seas, the vertical configuration for smaller craft needs to be considered as it lessens the possibility of obstruction by sails or the sea when the vessel is heeled. In harbours or off the coast with background lights, this configuration can sometimes lead to confusion).



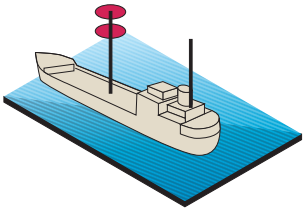
E. Power-driven vessels of less than 12 metres in length may, in lieu of lights as in A above, carry an all-round white light and sidelights; the latter may be combined in one lantern.



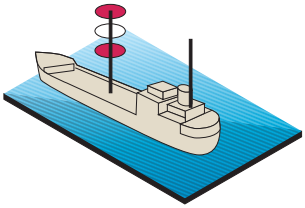
F. A vessel at anchor shall carry one all-round white light in the fore part of the vessel and a second light at or near the stern and at a lower level than the forward light, except that a vessel of less than 50 metres in length is not required to carry the second light. A vessel of less than 7 metres in length is not required to show anchor lights unless in or near a narrow channel, fairway or anchorage.



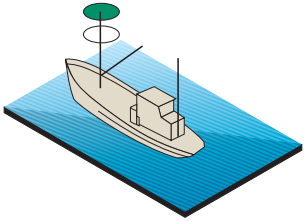
G. A vessel aground shall show two all-round red lights in a vertical line and three balls in a vertical line in addition to anchor lights.



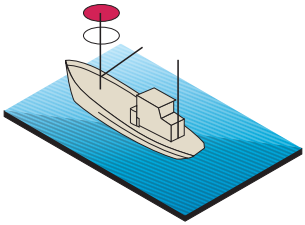
H. A vessel not under command shall exhibit two all-round red lights and two balls or similar shapes in a vertical line and, if making way through the water, sidelights and/or stern light.



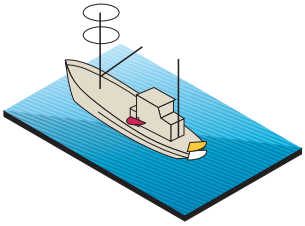
I. A vessel restricted in its ability to manoeuvre shall exhibit three all-round lights in a vertical line. The highest and lowest lights shall be red and the middle light shall be white. If making way through the water, sidelights, masthead lights and a stern light shall also be shown.



J. A vessel trawling for fish shall exhibit two all-round lights in a vertical line, the upper being green, the lower white and in addition, when making way through the water, side lights and a stern light.

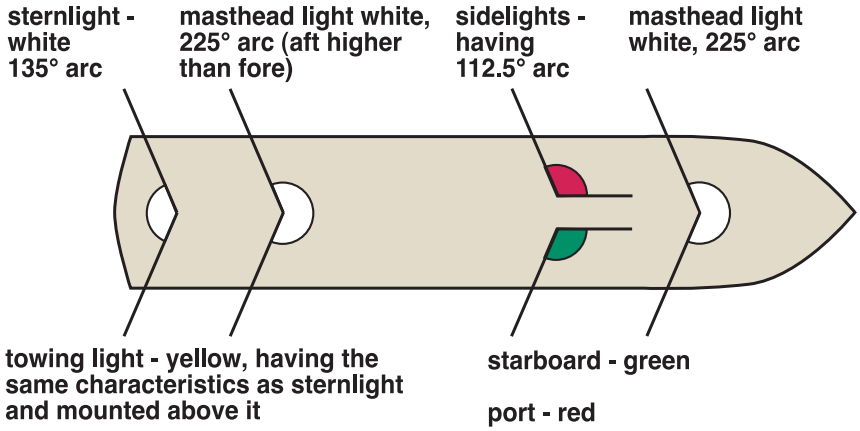


K. A vessel, when fishing other than trawling, shall exhibit two all-round lights in a vertical line, the upper being red, the lower white and, when making way through the water, sidelights and a stern light.



L. A vessel, when towing, shall exhibit two masthead lights in a vertical line (three if the tow exceeds 200 m), sidelights, a stern light and a towing light in a vertical line above the stern light.

Rule 28 A vessel constrained by draught may exhibit three vertical all-round red lights in a vertical line or a cylinder in addition to the navigation lights prescribed for power-driven vessels in Rule 23.



Sound Signals

Sound signals may be used to indicate a vessel's position or movement at night or in restricted visibility by day. You may never need to use sound signals but you should be able to recognise their meanings. There are a number of definitions that operators should be familiar with as follows:

Whistle – Any sound signalling appliance capable of making 'short' or 'prolonged' blasts.

Short blast – a sound blast of about 1 second duration.

Prolonged blast – a sound blast of 4 to 6 seconds duration.

Manoeuvring and warning signals – Rule 34

Craft that are within sight of each other may signal their manoeuvring intentions by the following sound signals (Whistle signals may also be supplemented by light signals using the same code):

'I am altering my course to starboard.'

(Single short blast)

'I am altering my course to port.'

(Two short blasts)

'I am operating astern propulsion.'

(Three short blasts)

'Make your intentions clear.'

(Five short blasts)

Vessels in a narrow Channel should signal their intentions using the following:

'I intend to overtake you on your starboard side.'

(Two prolonged and one short blast).

'I intend to overtake you on your port side.'

(Two prolonged and two short blasts)

Response of vessel about to be overtaken indicating its agreement.

(One prolonged, one short, one prolonged and one short blast).

Table: Sound signals for vessels in restricted visibility, day and night – Rule 35

Category of vessel	Interval	Signal
Power-driven under way, making way	Not more than 2 minutes	
Power-driven under way, stopped and making no way through water	Not more than 2 minutes	
Not under command	Not more than 2 minutes	
Restricted manoeuvring, constrained by draught	Not more than 2 minutes	
Sailing vessel (**not** using power)	Not more than 2 minutes	
Vessel engaged in fishing	Not more than 2 minutes	
Vessel towing or pushing another vessel	Not more than 2 minutes	
Vessel towing – if manned	Not more than 2 minutes	
Pilot vessel on duty – gives appropriate signals as above and may sound an identity signal H, i.e. 4 short blasts		
Vessel at anchor (under 100 m length) bell	5 seconds at intervals of not more than one minute	
Vessel at anchor (length of 100 m or more) bell, 5 secs/min followed by gong from aft, 5 secs/min		

Table: Sound signals for vessels in restricted visibility, day and night – Rule 35 – continued

Category of vessel	Interval	Signal
Vessel at anchor may give warning to approaching vessel, if possibility of collision		
Vessel aground: as at anchor preceded and followed by 3 distinct **bell** strokes		
Vessel less than 12 metres in length may make the appropriate signals given above but, if it does not, must make some other efficient sound signal at intervals of not more than 2 minutes		

When vessels are in sight of each other and there is some doubt as to the intentions or actions of the other, or there is some doubt as to whether sufficient action is being taken to avoid collision, the vessel in doubt should indicate by giving at least 5 short and rapid blasts on the whistle. This may be supplemented by a light signal of at least five short and rapid flashes.

A vessel nearing a blind bend in a channel or fairway shall sound one prolonged blast. A vessel on the other side of the bend answers with a similar prolonged blast.

Signals to Attract Attention – Rule 36

If necessary to attract the attention of another vessel, any vessel may make light or sound signals that cannot be mistaken for any signal authorised elsewhere in the Collision Regulations, or may direct the beam of its searchlight in the direction of the danger, in such a way as not to embarrass any vessel. Any light to attract the attention of another vessel shall be such that it cannot be mistaken for any aid to navigation. For the purpose of this Rule, the use of high intensity intermittent or revolving lights, such as strobe lights, shall be avoided.

Note: In the context of Rule 36,

acceptance of the use of a white hand-held flare is implied.

Distress Signals – Rule 37
Rule 37 refers to distress signals. The following are internationally recognised signals to indicate distress and the need for assistance:

- Red Rocket Parachute or hand-held flare.
- Signals sent by radio telephony consisting of the spoken word MAYDAY said 3 times.
- The continuous sounding of any fog signalling apparatus.
- Signals transmitted by a distress beacon (an Emergency Position Indicating Radio Beacon – EPIRB).
- Orange coloured smoke signal.
- Slowly and repeatedly raising and lowering outstretched arms to each side.
- A ship-to-shore distress alert transmitted by the ship's INMARSAT or other mobile satellite service provider ship earth station.
- Signals transmitted by SART.
- A distress alert by means of selective calling (DSC) transmitted on:
  (i) VHF Channel 70, or
  (ii) MF/HF on the frequencies 2187.5 kHz, 8414.5 kHz, 4207.5 kHz, 6312 kHz, 12577 kHz or 16804.5 kHz.
- The International Code Signal of Distress indicated by N.C. (November, Charlie).
- Radiotelephone alarm signal.
- Signalling by radio telegraphy or by any other method consisting of the group SOS (●●● . . . ●●●) in the Morse Code.
- A signal consisting of a square flag having above or below it a ball or anything resembling a ball.
- A gun or other explosive signal fired at intervals of about a minute.
- Rockets or shells, throwing red stars fired one at a time at short intervals.
- Flames on a vessel – e.g. from a burning tar or oil barrel.
- Approved signals transmitted by radio communication systems, including survival craft radar transponders.

Attention is drawn to the relevant sections of the International Code of Signals, the International Aeronautical and Maritime Search and Rescue Manual, Volume III and the following signals:

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

(b) a dye marker.

LIFE SAVING SIGNALS

To be used by Ships, Aircraft or Persons in Distress, when communicating with life-saving stations, maritime rescue units and aircraft engaged in search and rescue operations.

mca
Maritime and Coastguard Agency

Search and Rescue Unit Replies

You have been seen, assistance will be given as soon as possible.

Orange smoke flare.

OR

Three white star signals or three light and sound rockets fired at approximately 1 minute intervals.

Shore to Ship Signals

Safe to land here.

Vertical waving of both arms, white flag, light or flare.

OR

Morse code signal by light or sound.

Landing here is dangerous. Additional signals mean safer landing in direction indicated.

Horizontal waving of white flag, light or flare. Putting one flag, light or flare on ground and moving off with a second indicates direction of safer landing.

OR

S: •••
Morse code signals by light or sound.
R: •—•
Land to the right of your current heading.
L: •—••
Land to the left of your current heading.

Surface to Air Signals

Message	ICAO/IMO Visual Signals
Require assistance	V
Require medical assistance	X
No or negative	N
Yes or affirmative	Y
Proceeding in this direction	↑

Note: Use International Code of Signals by means of lights on flags or by laying out the symbol on the deck or ground with items which have a high contrast to the background.

Air to Surface Replies

Message Understood.

Drop a message.

OR

Rocking wings.

OR

Flashing landing or navigation lights on and off twice.

OR

Morse code signal by light.

Message Not Understood – Repeat.

Straight and level flight.

OR

Circling.

OR

Morse code signal by light.

Air to Surface Direction Signals

Sequence of 3 manoeuvres meaning proceed to this direction.

1

Circle vessel at least once.

2

Cross low, ahead a vessel rocking wings.

3

Overfly vessel and head in required direction.

Your assistance is no longer required.

Cross low, astern of vessel rocking wings.

Note: As a non preferred alternative to rocking wings, varying engine tone or volume may be used.

Surface to Air Replies

Message Understood – I will comply.

Change course to required direction.

OR

Morse code signal by light.

OR

Code & answering pendant "Close Up".

I am unable to comply.

Note: Use the signal most appropriate to prevailing conditions.

OR

Morse code signal by light.

OR

International flag "N".

Appendix 2

Guidance notes on Radiocommunications

Category A Craft – Ocean voyages

The following radiocommunications equipment should be installed on Category A craft when it is operating in GMDSS Sea Area A1 (approx. 30 nm from a coast radio station):

(a) A fixed type approved VHF installation capable of:
  (i) Transmitting Digital Selective Calling (DSC) on Channel 70 and,
  (ii) Transmitting radiotelephony on at least Channels 16, 13 and 6;

(b) A VHF Digital Selective Calling (DSC) watch-keeping receiver on Channel 70 which may be integrated with the VHF DSC unit in (a) above;

(c) A type-approved Satellite EPIRB, which must be:
  (i) readily accessible
  (ii) installed in a float-free location, and
  (iii) capable of manual and automatic operation;

(d) One hand-held type-approved waterproof VHF unit should be carried with either:
  (i) a suitable charging facility on board the vessel which is capable of maintaining the battery fully charged at all times

  or

  (ii) a spare fully charged battery, which can be easily affixed to the unit in the event of an emergency and stored in the watertight container on board;

(e) One type-approved Search and Rescue Transponder (SART), which should be installed in a readily accessible location;

(f) A NAVTEX receiver;

(g) In addition to the equipment required for Sea Area A1 above, the following equipment should be fitted on the craft when it is operating in Sea Area A2 (approx. 150 nm from a coast radio station):
  (i) A MF radiotelephone installation capable of transmitting DSC on 2187.5 kHz,
  (ii) A MF watchkeeping receiver capable of receiving DSC on 2187.5 kHz, which may be integrated with the unit in (i) above

  or

  (iii) An INMARSAT ship earth station that is capable of transmitting and receiving

telephony or telex, e.g. Satcom C, Satcom M or Mini-M (see specification below);

(h) Craft operating in Sea Area A3 should install an INMARSAT ship earth station capable of transmitting and receiving telephony or telex, in addition to the equipment specified for Sea Areas A1 and A2 above;

(i) A position fixing system capable of providing continuously updated positional data to the DSC and Satcom equipment, e.g. GPS.

Category B Craft – Offshore

The following radiocommunications equipment should be installed on Category B craft when it is operating in GMDSS Sea Area A1 (approx. 30 nm from a coast radio station):

(a) A fixed type approved VHF installation capable of –
  (i) transmitting Digital Selective Calling (DSC) on Channel 70, and
  (ii) transmitting radiotelephony on at least Channels 16, 13 and 6;

(b) A VHF Digital Selective Calling (DSC) watch-keeping receiver on Channel 70 which may be integrated with the VHF DSC unit in (a) above;

(c) A type approved Satellite EPIRB, which must be –
  (i) readily accessible,
  (ii) installed in a float-free location and/or
  (iii) capable of manual and automatic operation;

(d) One hand-held type-approved waterproof VHF unit should be carried with either –
  (i) a suitable charging facility on board the vessel, which is capable of maintaining the battery fully charged at all times

  or

  (ii) a spare fully charged battery, which can be easily affixed to the unit in the event of an emergency and stored in the watertight container on board;

(e) One type approved Search and Rescue Transponder (SART), which should be installed in a readily accessible location;

(f) A NAVTEX receiver;

(g) In addition to the equipment required for Sea Area A1, the following equipment should also be fitted on the craft when it is operating in Sea Area A2 (approx. 150 nm from a coast radio station):
  (i) a MF radiotelephone installation capable of transmitting DSC on 2187.5 kHz

  and

  (ii) a MF watch keeping receiver capable of receiving DSC on 2187.5

kHz, which may be integrated with the unit in (i) above,

or

(iii) an INMARSAT ship earth station that is capable of transmitting and receiving telephony or telex, e.g. Satcom C, Satcom M or Mini-M (see specification below);

(h) Craft operating in Sea Area A3 should install an INMARSAT ship earth station, which is capable of transmitting and receiving telephony or telex, in addition to the equipment specified for Sea Areas A1 and A2 above;

(i) A position fixing system capable of providing continuously updated positional data to the DSC and Satcom equipment, e.g. GPS.

Category C Craft – Inshore

The following radiocommunications equipment should be installed on Category C craft when it is operating in GMDSS Sea Area A1 (approx. 30 nm from a coast radio station):

(a) A fixed type-approved VHF installation capable of –

(i) transmitting Digital Selective Calling (DSC) on Channel 70

and

(ii) transmitting radiotelephony on at least Channels 16, 13, and 6;

(b) A VHF Digital Selective Calling (DSC) watch-keeping receiver on Channel 70 which may be integrated with the VHF DSC unit in (a) above;

(c) A type-approved Satellite EPIRB or PLB, which must be similar to that used for Category B Craft – Offshore;

(d) One hand-held type-approved waterproof VHF unit should be carried with either:

(i) a suitable charging facility on board the vessel which is capable of maintaining the battery fully charged at all times,

or

(ii) a spare fully charged battery, which can be easily affixed to the unit in the event of an emergency, and stored in the watertight container on board.

Category D Craft – Sheltered Waters

A fixed or portable type approved VHF unit capable of transmitting radiotelephony on at least Channels 16, 13 and 6 should be installed on Category D craft.

Calculation of VHF Range

VHF range is generally regarded as line of sight. The key factors in determining VHF range are:

(a) Height of antennas,

(b) Power output,

(c) Propagation conditions.

Approximate VHF range (A) can be calculated from the following formula:

$A = 2.25(\sqrt{H} + \sqrt{h})$

H = height of the coast radio station VHF receiving antennae.
h = height of the base of the boat's VHF transmitting antennae above the water.

Example 1: If "H" is 50 metres and "h" is 4 metres, the range will be approximately 20 nautical miles.

Example 2: If "H" is 100 metres and "h" is 4 metres, the range will be approximately 27 nautical miles.

Example 3: Boat to boat with 4 metre antennas will be approximately 9 nautical miles.

When hand-held VHF radiotelephones are being used, the range will be reduced to approximately one quarter of the above figures. When using low power, i.e. 1 watt, the range will be further reduced.

Power Supplies (Batteries)

(a) The radiocommunications equipment should not be connected to the boat's starting batteries.

(b) A separate battery should be installed to provide power for all the radio equipment on board. The capacity (AHC) of the battery should be sufficient to operate all the radiocommunications equipment for a period of at least 6 hours.

(c) The boat's service battery may be used to meet the requirements in (b) above provided that:
  (i) it has sufficient capacity to operate all the radiocommunications equipment for a period of at least 6 hours, and
  (ii) it is installed in the upper part of the boat.

(d) Only approved marine-type deep cycle batteries should be installed.

(e) A suitable method of indicating the radio battery voltage is recommended.

(f) Radio equipment must never be connected directly to the battery. A suitable distribution board, with correct breakers and fuses should be installed.

(g) A suitable method of charging the radio battery must be provided and the battery should be maintained fully charged at all times.

Installation and Location of Radio Batteries

(a) Radio batteries should be located in the upper part of the boat and as close to the radio equipment as possible.

(b) Where an outside battery box is used to store the radio batteries, it should be properly ventilated, corrosion proof and protected against the ingress of seawater.
(c) All battery units should be securely braced so that the movement of the boat will not dislocate them.
(d) All battery boxes should be properly ventilated.
(e) Battery boxes should not be located in the accommodation or navigation areas of the boat.

Ship Radio Licence
In accordance with the Wireless Telegraphy Act 1926, all vessels on which radiocommunications equipment of any type is installed, including hand-held VHFs and EPIRBs, must have a Radio Licence on board.

The application form for a Radio Licence may be obtained from the MMO (see Appendix 10 for contact details).

When the Radio Licence application has been approved, a Radio Call Sign and Maritime Mobile Service Identity (MMSI) number will be issued to the applicant with the licence. The MMSI number must be programmed into the DSC equipment by the installation engineer.

The EPIRB or PLB must be programmed as follows:

250 + Radio Call Sign

It is absolutely essential that the EPIRB registration card be completed and forwarded immediately to the EPIRB Registration Centre at the address shown on the form.

The details on the registration card will then become immediately available to the rescue services in the event of an emergency.

Radio Operator Qualification
Radio operators should be certified to operate the radio equipment fitted on their craft. The minimum radio operator qualifications required are as follows:

Craft Category A, B and C – Radio Operator's Short Range Certificate (SRC) or Long Range Certificate (LRC) as appropriate.

Craft D – Radio Operator's Short Range Certificate (SRC) Module 1.

Radio equipment specifications
All radiocommunications equipment installed on yachts must meet the technical and legislative standards as set out in the Radio Equipment (RED) and Electromagnetic Compatibility (EMC) EU Directives.

Equipment must have the CE mark to show compliance with the Directives and must also meet the specifications set out in the Table below.

Equipment manufactured to the higher Marine Equipment Directive standards is also acceptable.

Note: Radiocommunications equipment manufactured in the US, which does not meet these standards, will not be accepted and will not be licensed in Ireland.

Item	Standard
Hand-held waterproof VHF (non-GMDSS)	EN 301 178
VHF Class "D" DSC equipment	EN 301 025
VHF only	EN 300 162
MF/HF Class "E" DSC equipment	DEN/ERM-RP01-054
406 MHz EPIRB and PLB	EN 300 066
INMARSAT Satcom C	ETS 300 460
Satcom M or Mini-M	DEN/ERM RP01-34

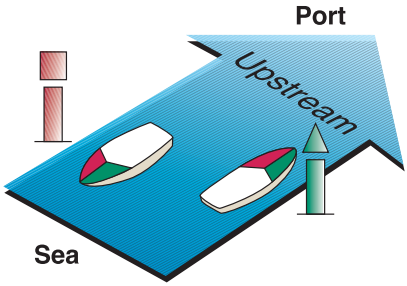
Appendix 3

Buoyage

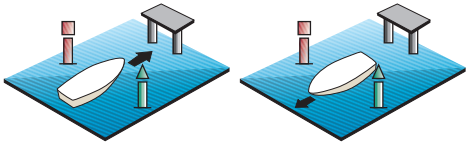
Coastal Water Schemes

Buoyage Types
Buoyage used in Irish Coastal Waters is International Association of Marine Aids to Navigation and Lighthouse Authorities (IALA) Region A. Under this system, boats proceeding up a marked or buoyed channel from sea must always have their starboard side to the green buoys.

Direction of Buoyage



On entering Port the starboard-hand mark (green) should be passed on the vessels starboard (right) side. When leaving Port the port-hand mark (red) should be passed on the vessels starboard (right) side.



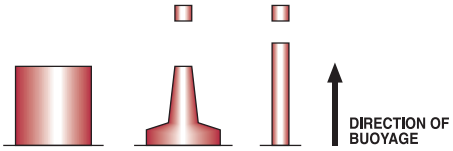
Entering Port Leaving Port

There are six types of marks under the IALA System A:
1. Lateral.
2. Cardinal.
3. Isolated Danger.
4. Special.
5. Safe Water.
6. Emergency Wreck Marking.

1. Lateral Marks

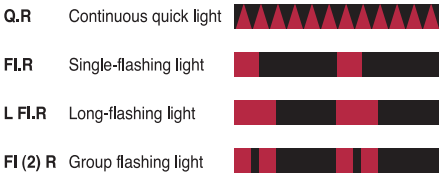
These are used to indicate the port (left) and the starboard (right) sides of the channels when travelling in the Direction of Buoyage, that is into port from seaward.

Port-hand marks are coloured red and the basic shape is cylindrical (can) for buoy (and topmark when fitted). If lit, the light will be red and may have a rhythm. Such a mark would be on the port side of a vessel when travelling in the direction of buoyage.

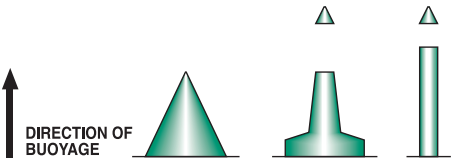


Colour:	Red
Shape (buoys):	Cylindrical (can), pillar or spar
Topmark (if any):	Single red cylinder (can)

Lights: red when fitted may have any rhythm other than composite group-flashing (2+1) used on modified lateral marks indicating a preferred channel. Examples are:

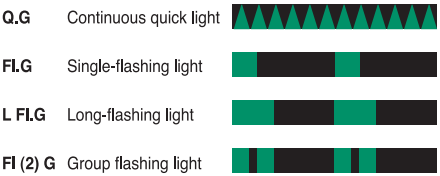


Starboard-hand marks are coloured green and the basic shape is conical (and topmark when fitted). If lit, the light will be green on any rhythm. This mark would be on the starboard side of a vessel when travelling in the Direction of Buoyage. Examples are:



Colour:	Green
Shape (buoys):	Conical (cone), pillar or spar
Topmark (if any):	Single green cone point upwards

Lights: green when fitted, may have any rhythm other than composite group-flashing (2+1) used on modified lateral marks indicating a preferred channel. Examples are:

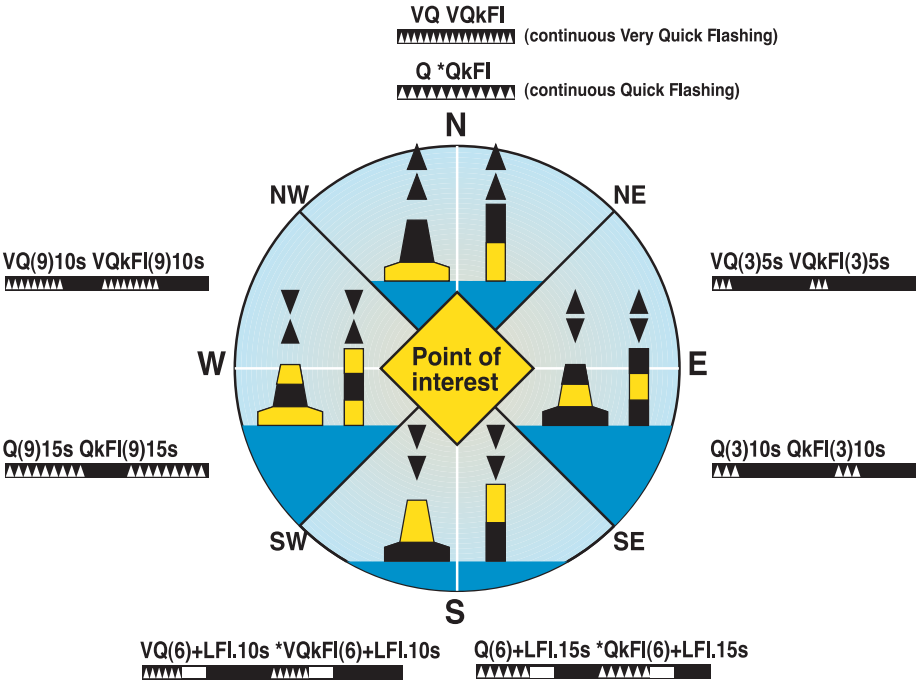


When marks are numbered, the odd numbers will lie on the starboard side and the even numbers will lie on the port, when travelling in the Direction of Buoyage. They are numbered from seaward.

2. Cardinal Marks

These are used to indicate the location of the best navigable water; to show the safe side on which to pass danger (rocks, wrecks, shoals, etc.) and to draw attention to a feature in a channel.

To understand the meaning of a particular cardinal mark, the navigator must be aware of his or her geographical directions and, therefore, needs a compass to indicate where the best navigable water lies. The mark is placed in one of the four quadrants: north, south, east or west. If in doubt, consult the navigation chart for the waterway you are using.



The shape of a cardinal mark is not significant but, in the case of a buoy, it will be a pillar or spar. The most important daylight feature of the cardinal mark is the black double cone topmark and the four different arrangements that indicate the relevant direction from the mark.

Black and yellow horizontal bands are used to colour the cardinal marks. If lit, the mark will exhibit a white light of Quick Flash (= about 1 per second) or Very Quick Flash (= about 2 per second) characteristic. The rhythm of the light will indicate the particular quadrant of the mark.

North Cardinal Mark
This has two cones pointing up. If lit, a north marker exhibits a continuous quick or very quick flashing white light.

Pass on the northern side of this mark.

East Cardinal Mark
This has two cones pointing away from each other. When lit, an east mark exhibits a white light flashing in groups of three (3) quick or very quick flashes.

Pass on the eastern side of this mark.

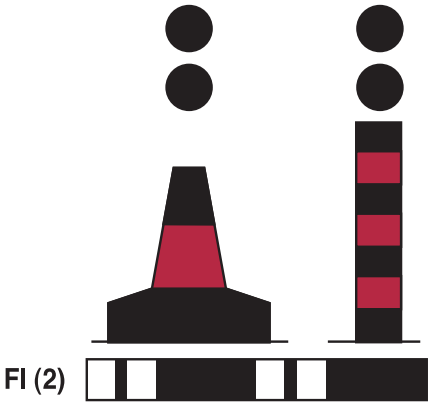
South Cardinal Mark
This has two cones pointing down. When lit, a south mark exhibits a white light flashing in groups of six (6) quick or very quick flashes followed by a long flash.

Pass on the southern side of this mark.

West Cardinal Mark
This has two cones point to point. When lit, a west mark exhibits a white light flashing in groups of nine (9) quick or very quick flashes.

Pass on the western side of this mark.

3. Isolated Danger Marks



These are on, or moored above, an isolated danger of limited extent that has navigable water all around it. The colours are red and black horizontal stripes and the mark is, when practicable, fitted with a double sphere, vertically disposed, black topmark. If lit, the light will be white showing a group of two flashes.

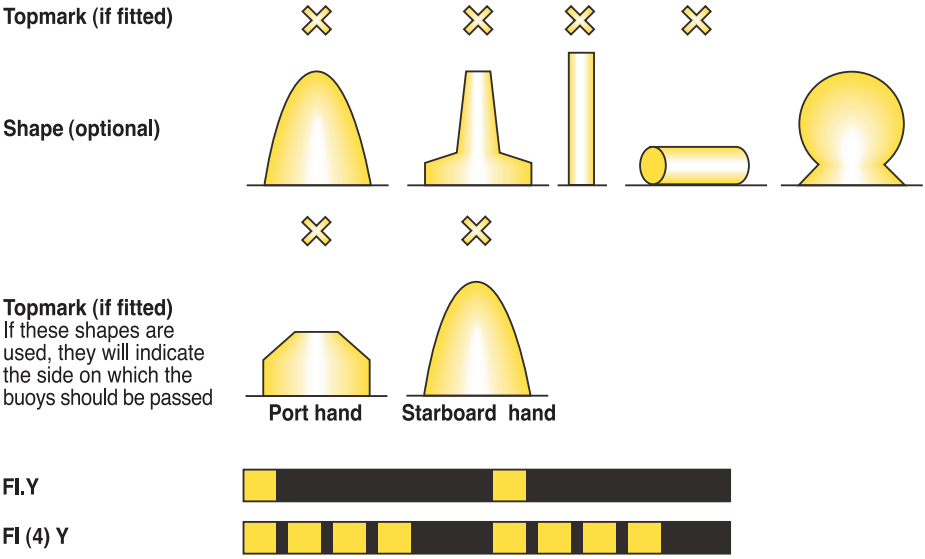
The association of two flashes = two spheres, may assist the memory with this one.

Isolated Danger Marks are not always positioned centrally over a danger and it is therefore advisable not to pass too close.

4. Special Marks

These are used to indicate a special area or feature, the nature of which may be found by consulting a chart or sailing directions.

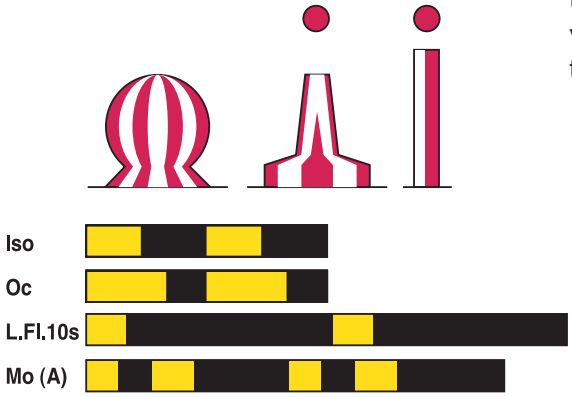
The colour of the special mark is always yellow and the top mark is a single yellow X. If a light is fitted, it will be yellow and may have any rhythm not used for white lights, for example, FlY, Fl (4) Y.



5. Safe Water Marks

These are used to indicate that there is navigable water all around the mark. These marks can be used as a centre line, mid-channel or landfall buoy. The shape of the buoy is spherical, pillar or spar and is coloured with red and white vertical strips. The topmark, which is fitted when practicable to pillar and spar buoys, is spherical and red. If lit, an isophase occulting or single long flashing white light is exhibited.

Operators of vessels are cautioned that large commercial vessels may pass close by these marks.



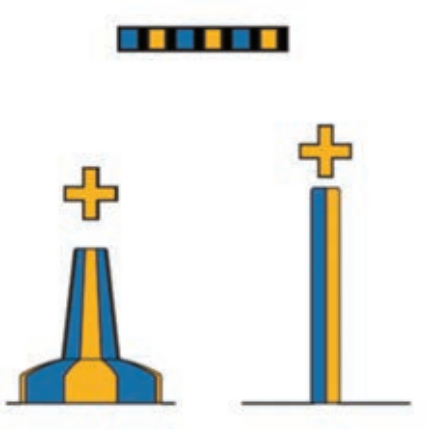
6. Emergency Wreck Marking Buoy

'New Dangers' should be appropriately marked using Lateral, Cardinal, Isolated Danger marks or by using the Emergency Wreck Marking Buoy. If the relevant Aid to Navigation Authority considers the risk to navigation to be especially high, at least one of the marks should be duplicated.

Colour: Blue/Yellow vertical stripes, coloured in equal number and dimensions (minimum of 4 stripes and maximum of 8 stripes).

Topmark: Standing or upright yellow cross.

Shape: Pillar or Spar.



Light: Yellow/Blue alternating – one second of blue light and one second of yellow light with 0.5 sec. of darkness between.

The Emergency Wreck Marking Buoy may be fitted with a RACON Morse Code "D" and/or an AIS.

Inland Waterways Schemes

Masters using inland waterways should exercise caution and refer to charts and navigation guides regularly to avoid confusion. Details of the principal marking schemes used on the Shannon, Erne and Lough Corrib waterways are provided below.

Information in relation to buoyage on other inland waterway systems should be obtained in advance of commencing any voyage from the relevant responsible authority.

Shannon Navigation

Waterways Ireland has responsibility for the management, maintenance, restoration and development of a number of inland navigable waterways including the Shannon. On the Shannon Navigation upstream of Shannon Bridge, Limerick, the buoyage system consists of red and green lateral marks. Downstream of Shannon Bridge, the IALA Region A system applies.

Red marks are kept to your left (port) going upstream and into bays and harbours. Red topmarks are always round. Fixed (as opposed to floating) marks often have a white arrow indicating the safe-side. Green marks are kept to your right (starboard) going upstream and into bays and harbours. Green topmarks are always square or rectangular. Perches and beacons often have a white arrow indicating the safe-side. Marks (see Figure 1) can consist of:

(a) and (b)	Vertical stakes or perches with circular red or square/rectangular green topmarks. The stake itself may or may not be painted the same colour as the topmark. Stakes can be near the bank, in the reed margin, on a visible obstruction or out in the water-body. In some areas a topmark is fitted to the top of a cairn of stones.
(c) and (d)	Large floating cagebuoys with circular red or square/rectangular green topmarks and often a large letter or number which can be related to the navigation charts. Buoy body painted same colour as topmark.
(e) and (f)	Small cone-shaped floating buoys with circular red or square/rectangular green topmarks. Buoy body painted same colour as the topmark.
(g) and (h)	Red or green painted floating cans or drums with a topmark.
(i) and (j)	Red circles or green squares/rectangles painted on the piers of a bridge to indicate the navigation arch or arches. (Showing “safe-side” arrows).

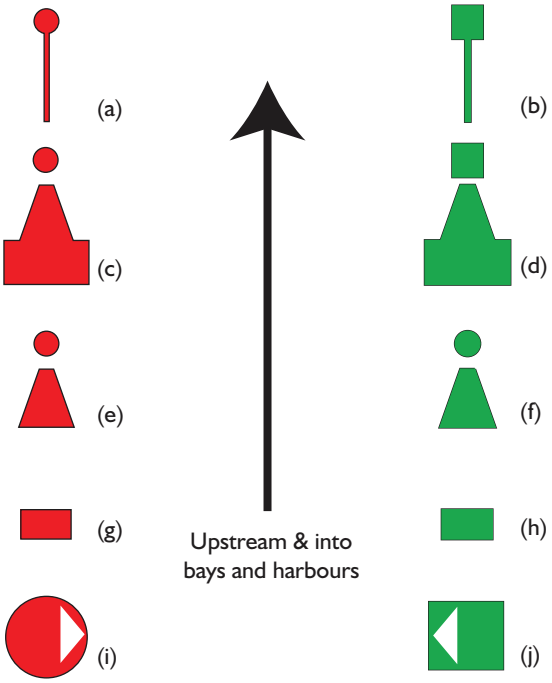


Figure 1 - Shannon Navigation Marks

Note: You must remain aware of the direction of travel relative to the direction of the buoyage system (up/downstream, into/out of harbours and bays) to avoid confusion at "middle ground" situations and refer to your navigation guide. Such situations occur (mainly on the larger lakes) where there are safe channels either side of an obstruction and one or more pairs of red and green buoys or stakes will be used in seemingly the reverse sense to mark the problem area. Do not go between the Red/Green pairs in this situation but follow the basic rules keeping red marks to your left going upstream or green marks to your right. See Figure 2.

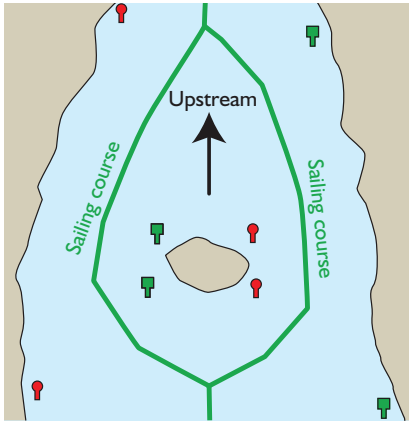


Figure 2 - Middle Ground Marking

Warning: Marks can become discoloured and misshapen over time by a combination of weather, collision damage, bird droppings, weed growth, etc., thereby disguising their appearance. It can be quite hard to see the small markers, and to distinguish colours, when visibility is poor because of cloud, darkness, rain or the sun in the wrong direction.

Erne Navigation

On the Erne navigation the marking system consists mainly of stakes with red and white painted topmarks. The topmarks are semi-circular in shape and mounted so that the flat edge of the semicircle is horizontal, either at the top of the mark or at the bottom. Both faces of the semi-circle are painted – the red half of each face denotes the hazardous side of the mark and white denotes the safe side.

In some areas on the large lakes, white painted stone cairns are used to help with position location.

Marks (see Figure 3) can consist of:

(i)	Marks with the horizontal edge at the bottom are left (port) hand marks going upstream.
(ii)	Marks with the horizontal edge at the top are right (starboard) hand marks going upstream.
(iii)	Middle grounds are denoted by red diamond shaped marks. Do not pass between pairs of middle ground marks.

Many of the Erne system marks are numbered and the numbers can be referenced to the navigation guide.

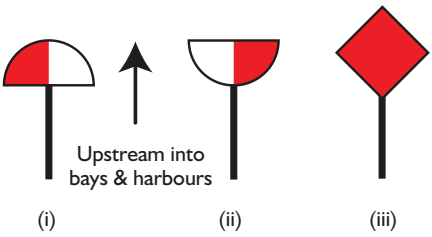


Figure 3 - Erne System Marks

Shannon-Erne Waterway

The Shannon Navigation system of red and green lateral marks is used on the Shannon-Erne Waterway from Leitrim to the middle of the summit level (Lough Scur) at a point just west of Keshkerrigan. From this point east to the Erne, the waterway uses the Erne marking scheme.

Corrib Navigation

The navigation system on Lough Corrib follows the IALA Region A system:

- RED – a cylindrical (can) shaped mark to port,
- GREEN – conical (cone) shaped mark to starboard.

Appendix 4

Anchoring, Stability and Boat Handling

Anchoring

Anchoring is an essential element of seamanship and all operators must be familiar with the procedure and carry the proper equipment on board. Anchoring is done for two principal reasons:

- For recreational purposes such as fishing, swimming or an overnight stay.
- As an emergency action, to prevent running aground in bad weather or as a result of engine failure.

The object is to secure the boat to the bottom in such a manner that it will not pull free in any anticipated weather conditions. Anchoring is a safe, simple and speedy operation provided a number of basic guidelines are followed. The equipment needed for anchoring consists essentially of an anchor and rode, which may be either line or chain, with shackles to join the various segments.

Anchors

There are many types of anchors and new designs appear from time to time. Some examples of the most widely used are as follows:

Danforth

Commonly used, it has two pivoting flukes that dig into the bottom. The Danforth can be made of either steel or high-strength aluminium. It offers good holding in mud or sand, but has a tendency to pull out of a bottom covered with weeds or grass because it often only lies on the top of such vegetation. It will hook into rocks, but may be difficult to get free; it may also bend or break when so hooked. It has the advantage of stowing flat on deck.

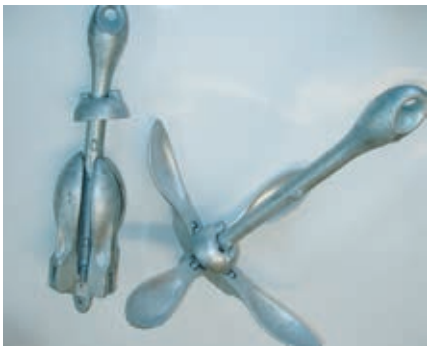
Plough Anchor

The Plough anchor is very effective because it has sufficient weight to enable its fluke to dig into a variety of bottoms, but is awkward to stow on deck. It is popular with sailors and powerboaters whose craft have bow pulpits with rollers. On larger craft, it can be deployed and recovered remotely from the cockpit when combined with an electric windlass. There are a number of different manufacturers of Ploughs, in addition to the original CQR model.

The Bruce

This anchor is much like the Plough, but has a fixed stock rather than one that pivots.

Folding Anchor



Generally suitable only for the smallest of craft and deployment in moderate conditions. It has the advantage of folding closed when stored, rather like an umbrella, and is easily stowed on board.

The Fortress

Similar to the Danforth, the Fortress is a fluke style anchor. Fortress anchors are made of lightweight high strength aluminium magnesium alloy. This anchor is popular due to the fact that it is lightweight and can be dismantled for storage. Fortress anchors have greater holding power in mud because they can be adjusted from their standard 32° to a broad 45°

fluke angle. While this type of anchor performs well in clay, sand and mud bottoms, if the bottom does not allow for digging in, such as hard or rocky, or weedy, then the flukes cannot bury and the anchor will not set.

The Delta

The Delta anchor is a fixed shank plough, essentially a development of the CQR model. It has a superior holding power to the CQR. This type of anchor is heavier and bulkier than the Danforth model. It is considered effective as a general purpose anchor for sand, thick mud, weedy bottoms and sometimes rocky areas. However it holds poorly in soft mud and the Delta is found wanting on very hard compact sand, grass, weed and kelp. The Delta is large, fairly heavy and usually stowed in a ball roller.

The number and type of anchors for a particular craft should be largely determined by the size and intended cruising area of the vessel.

The Anchor Rode

Connecting the anchor to the vessel is the anchor rode, which may be either a chain or synthetic rope. Ensure the anchor rode is correctly connected to the vessel in the first instance with the appropriate shackle. An advantage of chain is its weight adds to the holding power of any anchor and it is resistant to damage. However, it is heavy and difficult to use and stow. If the rode is comprised entirely of chain, it is generally necessary to have an anchor windlass to raise it. Furthermore, the weight of a sufficient length of chain may be a problem in the bow of a small craft, especially one with a sharp entry and limited buoyancy forward.

Line is favoured by many for anchoring because its elasticity absorbs the shock load when anchoring in moderate to heavy swells. Three-stranded twisted nylon is preferred over double-braid line because it stretches more. If you use line for your rode, a length of chain several metres long should be inserted just above the anchor to counteract against any chafing on rocks or coral. The weight of this chain also keeps the lower end of the rode down against the bottom, thereby making the pull on the anchor more horizontal. A swivel connection should be used between anchor and chain to assist

in the proper setting and stowing of the anchor.

Anchoring Procedures and Techniques

Selecting an Anchorage
Unless it is an emergency, the first step in anchoring is deciding where to lower your anchor. Do not anchor in a channel or the approaches to a channel. Refer to local charts and sailing instructions as a source of suitable anchoring locations.

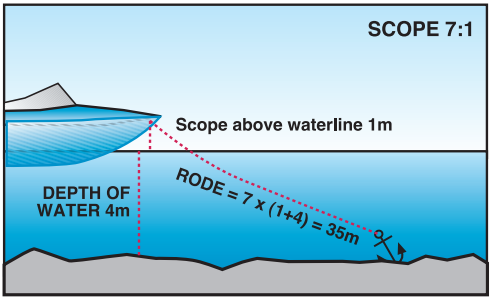
Prevailing winds, bottom depth, bottom composition, tidal rises and the existence of other craft in the anchorage should all be considered in coming to a decision as to where to deploy an anchor.

Shelter from the wind is important because calmer water will put less strain on the ground tackle. Consider any anticipated changes in wind direction and velocity. The composition of the bottom will affect the type of anchor you will use, assuming that you have a choice. Ideally, the water should be deep enough so you will not have to worry about sitting on the bottom at low tide. However, deeper water is not always better. The deeper the water, the longer the rode must be, and so the greater your swinging circle will be. Anchoring in water that, at its lowest, will be two or three times the draft of your boat, is a good practice if possible.

Approaching the Anchorage
Ensure all anchoring equipment is ready for deployment prior to making an approach. If there are other boats in the anchorage you have selected, look for a place where you will have adequate swinging room. Estimate the swinging circles of the other anchored boats – note how the other boats are lying to any wind and current. Reduce speed and enter the anchorage on the same heading as boats already anchored, slowing even more as you approach your chosen spot.

Setting the Anchor
When you have reached just beyond where you want to anchor, check all headway and start a very slow backward movement – then, and only then, deploy your anchor. Continue to move astern slowly, as you pay out the necessary length of rode. The proper length is determined by the desired scope – the ratio of the length of the rode in use to the distance to the bottom of the water. Note that this is not just the depth of the water – it is the value plus the height of the bow above the surface. The depth of the water used in calculating scope is the greatest depth that will occur while anchored, that is, the depth at high tide. For calm conditions, a scope of five is generally

satisfactory when using a line rode; when using chain, a scope of three works well. For expected bad weather, increase these values to as much as ten and seven respectively.



It is helpful if the anchor line or chain is marked at regular intervals. When the proper length of rode has been let out, it should be removed from the anchor windlass (if one has been used) and the line made fast to a Samson post, anchor bitts or a cleat. When the rode is fully extended, apply a burst of reverse power to make sure that the anchor is holding.

Take a series of bearings on shoreside marks for use as a reference as to your boat's position and check them on a frequent basis to ensure your craft has not dragged her anchor.

Getting Underway

When you are ready to leave your anchorage, go forward slowly, taking in the anchor rode by windlass or by hand as it becomes slack. Once the boat is positioned directly above, the anchor will break out of the bottom and can be recovered on board.

Dangers involved in Anchoring

- Where it is necessary to range out anchor chain/line on deck prior to dropping an anchor, ensure it is flaked out in a safe manner and does not pose a hazard to crew. Be aware of the dangers to hands/fingers of chain running at speed out over rollers. Also when recovering line, ensure it is quickly and promptly stowed so as to avoid the risk of injury.
- Always ensure an anchor line is deployed over the forward end of a boat using a suitable stemhead roller or fairlead. This is essential to keep a craft's head to the prevailing conditions.
- Do not anchor by the stern. Anchoring a small boat by the stern may result in swamping and capsize. The transom area offers less freeboard than the bow and greater resistance to tide/weather. In a current, the force of the water can pull the stern under. The boat is also vulnerable to swamping by wave action. In addition, the weight of a motor, fuel tank or other gear in the stern increases the risk.
- Anchor rodes should be secured to a suitably strengthened cleat,

Samson post or windlass, positioned as far forward in the boat as possible. Anchor lines should not be led aft within a boat, e.g. to Thwarts or seats, as to do so may result in the craft broaching into prevailing weather /tide conditions and being swamped.

- When recovering an anchor on small boats, take care to ensure the line is neatly and correctly stowed as it is brought on board. Do not allow it to foul items such as oarlocks, which may cause the boat to broach in the event of load coming on the anchor rode.

Stability

A boat may be subject to heeling forces from a number of sources, from which it must have the ability to right itself or suffer a capsize.

Typical forces include:

- Forces generated by wind
- Forces created by waves
- Excessive offset load, e.g. crowding of persons to one side
- Reduction of original stability due to modifications (extra weight added high up in the structure)
- Excessive water in bilges creating a free surface effect
- Flooding damage.

The ability of any boat to right itself is called stability. It should be evident that stowing gear and installing equipment on a boat requires consideration. Both should be as low in the boat as practical. It is an absolute necessity to make sure that neither can suddenly shift from one side of the boat to the other.

Recreational craft designs built under the Recreational Craft Directive will have been assessed against an ISO stability and buoyancy standard. The essential requirements dictate that a boat must have appropriate buoyancy, stability and freeboard for the design category it is intended for. The Builder's Plate mounted on the transom will include the boats maximum recommended load, indicated by the maximum number of persons and/or equipment. It is essential that craft are not overloaded.

While a boat floats at its mooring, there are two basic forces at work –

- **gravity**, a naturally downward force that is trying to pull the boat toward the centre of the earth

and

- **buoyancy**, which effectively moves a boat upward to the point equal to the weight of the amount of water the boat is pushing out of the way.

Looking at a cross-section of a boat's hull, sitting level in the water, you can imagine two theoretical points.

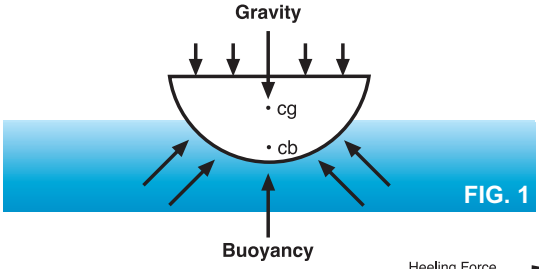
The **Centre of Gravity (CG)** will be in the very centre of the entire hull space. The force of gravity can be considered to act through this point.

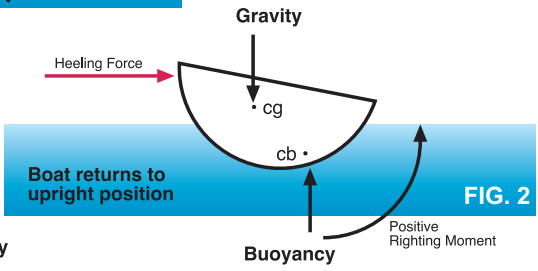
The other point, the **Centre of Buoyancy (CB)**, will be in the centre of the underwater portion of your boat, and it is through this that the upwardly acting buoyancy force acts.

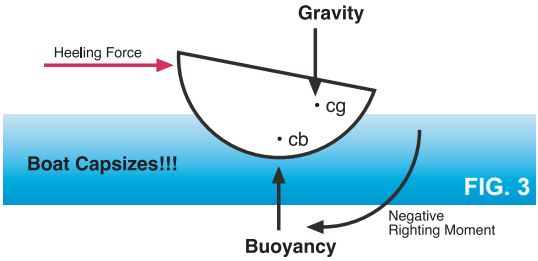
When the CG and the CB are vertically aligned, the boat is level. When a boat is properly designed and constructed, with gear stowed correctly, the CG should always stay in the same place. The CB, however, will change position any time the boat begins to heel (list) because the amount and shape of the boat under water changes.

The distance between the Centre of Gravity and the Centre of Buoyancy is called the Righting arm. The weight of the boat is pushing down at the CG and the weight of the water is pushing up at the CB. This situation creates a rotating force or motion that is called the righting moment.

As long as the upward force of buoyancy is able to return the boat to an upright position, the situation is called a positive righting moment (Fig 2). In this situation CG is always within CB.







If for any reason, however, the Centre of Gravity should shift outside of the Centre of Buoyancy, it creates a negative righting moment and the boat is going to capsize (Fig 3).

Negative righting moments occur due to the Centre of Gravity (CG) of a boat being raised above its design point as a result of –

- Overloading,
- Due to structural modifications for which the craft was never designed, e.g. addition of wheelhouse, seating on top of existing wheelhouses, taller rigs, in mast furling, radar sets, etc.,
- Excess water in bilges or flooding (Alters position of CG).

Besides careful stowing, boat handling may affect a boat's stability, e.g. **never** run parallel to large waves in a boat that is overloaded or too small for the situation. As the waves cause the boat to roll from one side to the other, the positions of the CG and the CB are constantly changing. Even a relatively small change during the rolling, such as gear shifting or a passenger moving to the low side, will create a negative righting moment. Always think twice about any modification to your boat that raises its Centre of Gravity, and seek professional advice before commencing.

Boat Handling Hazards

Overloading
This will reduce a boat's freeboard and affect its handling abilities. Commonly it can result in capsize and sinking on smaller craft.

Offset Loading
Where the load is poorly distributed to one side it will result in reduced stability in one direction of heel, making the boat vulnerable to swamping due to reduced freeboard, and generally suffering from permanent list. Such a craft will have its handling characteristics adversely affected.

Poor Trim
This will result in a boat sitting either too far down in the water at the bow or stern depending on where the weight is positioned. If too far forward, water will be taken over the bow and steering will be affected. If aft, there is the risk of swamping over the stern and handling will be affected.

Weight too high
This will reduce stability and make the boat unstable. Always distribute weight as low as possible.

Swamping
The rapid filling of a boat with water as a result of poor loading and/or wave action.

Appendix 5

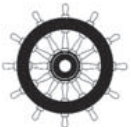
Personal Flotation Devices/Lifejackets, Jacklines and Safety Harnesses

Types of personal flotation devices (PFD/Lifejackets)

The term personal flotation device (PFD) is an all-encompassing term, which covers all forms of lifejackets and buoyancy aids intended to help keep a person afloat in the water. These range from “CE” marked lifejackets through to “CE” marked buoyancy aids.

Lifejackets provide face up in-water support to the user regardless of physical conditions. Buoyancy aids require the user to make swimming and other postural movements to position the user with the face out of the water.

The following Table lists the different types of PFD/lifejackets with suggested guidance on selection and where they should be used. The Table is for guidance only. Persons must assess the risks appropriate to their area of operation and select personal flotation devices accordingly.

Type and Markings	Suggested Uses
International Standard: IMO SOLAS/EU Marine Equipment Directive 	Lifejackets for seagoing ships. Intended primarily for use on seagoing ships under IMO (International Maritime Organisation) rules. Use for abandoning ship. Not intended for everyday use as they are generally bulky and they need to be kept in good condition for use in abandon ship situations.
European Harmonised Standard: I.S. EN ISO 12402-2:2006 **Old Standard:** EN 399 	For offshore use and by people who are using items of significant weight and thus require additional buoyancy. Also of value to those who are using clothing which traps air and which will adversely affect the self-righting capacity of the lifejacket. Designed to ensure that the user is floating with his/her mouth and nose clear of the surface at an angle and with sufficient freeboard to limit mouth immersions in waves.

Type and Markings	Suggested Uses
European Harmonised Standard: I.S. EN ISO 12402-3:2006 **Old Standard:** EN 396 	For swimmers and non-swimmers of any age. For general offshore and rough weather use. Turns most unconscious wearers face up in water. However, performance may be affected if the user is wearing heavy and/or waterproof clothing. May be suitable for use in tidal waters or when foul weather clothing is being worn and where the wearers may not be capable of helping themselves due to injury or exhaustion.
European Harmonised Standard: I.S. EN ISO 12402-4:2006 **Old Standard:** EN 395 	For swimmers of any age. For use in relatively sheltered/calm waters and intended for those who may have to wait for rescue. Will not turn unconscious wearers face up in water (particularly when wearing heavy clothing). May be suitable in instances where the wearers remain capable of helping themselves. Whilst these PFDs may be less bulky than other types of PFDs, they should not be used in rough conditions or when there is wave splash.
European Harmonised Standard: I.S. EN ISO 12402-5:2006 **Old Standard:** EN 393 	Only for good swimmers and for use near to a bank or shore where help is close at hand. Requires active participation of the user. Will not hold the face of an unconscious wearer clear of the water and does not have sufficient buoyancy to protect people who are unable to help themselves. May be suitable in circumstances where more bulky or buoyant devices could impair the user's activity or actually endanger them. They have minimum bulk and cost, but they are of limited use in disturbed water and cannot be expected to keep the user safe for a long period of time. Not a lifejacket.

Type and Markings	Suggested Uses
Special purpose lifejackets and buoyancy aids – performance levels 50-275 **European Harmonised Standard:** I.S. EN ISO 12402-6:2006	These are special purpose devices for specific needs that go beyond the requirements of the average user and those that rely on the skill, knowledge, special training and participation of the user. This should be stated clearly in the information supplied by the manufacturer of these items. For use when fire-fighting. They are also for use with personal watercraft (jet skis), waterskiing or similar towed uses and are also used for white water rafting.

Note

Irish Standard (I.S.) refers to National Standards which are used to ensure uniformity and minimum standards for products and services in Ireland. Only Irish manufacturers will have this prefix. Other European manufacturers will use their own country prefix instead of I.S.

EuroNorm (EN) refers to European-wide standards that are used for ensuring the uniformity and minimum standards for products and services.

International Organisation for Standardisation (ISO) refers to International Standards that are used to ensure uniformity and minimum standards for products and services at an international level.

It is essential that pleasure and recreational craft owners select PFDs that are suitable for the particular circumstances in which they will be used.

Before purchasing a PFD/Lifejacket ensure:

1. The device is sufficient to give a person using it a positive buoyancy in waters which are likely to be encountered. Users should be aware that certain PFDs may not perform as well in extreme climate conditions, even if they are fully approved PFDs.
2. PFDs may also be affected by other conditions of use, such as chemical exposure and welding, and may require additional protection, e.g. a protective layer, to meet the specific requirements of use. If the user intends taking a PFD into such

conditions, the user must be satisfied that the PFD will not be adversely affected.

3. The device is appropriate to the body weight and chest girth of the person who is to wear it.
4. The device has on it the CE conformity marking consisting of the initials "CE" taking the form of the specimen given in Annex IV of Council Directive 89/686/EEC of 21 December 1989 (as amended by Council Directive 93/68/EEC of 22 July 1993 and Council Directive 96/58/EC of the European Parliament and the Council of 3 September 1996).

Please Note: Some inflatable PFDs come provided with crotch straps and others are sold with the crotch strap as an optional extra. To maximise the lifesaving potential of inflatable PFDs, it is recommended that a crotch strap (or leg straps) should always be worn, over the top of all clothing. For further details see Marine Notice Nos. 45 of 2012, 39 of 2013, 48 of 2015, 10 of 2016 and 27 of 2016.

Marine Notices are available on the Department of Transport, Tourism and Sport website www.dttas.ie or from the Irish Maritime Administration, Department of Transport, Tourism and Sport, Leeson Lane, Dublin 2, D02 TR60.

Notes for selection of PFD/Lifejackets

The selection of a PFD/lifejacket is a complex issue and it is dependent on many factors such as:

- the area of operation for the vessel
- sea state
- weather conditions
- seasonal variations
- night and day time operation
- ease of use
- type and buoyancy of clothing worn
- proximity to rescue services.

This Appendix attempts to deal with these issues and to highlight concerns and issues that should be considered in selecting a PFD/lifejacket.

Inflatable PFD/lifejackets such as those complying with I.S. EN ISO 12402-3:2006 (EN 396) and I.S. EN ISO 12402-2:2006 (EN 399) are lightweight and less restrictive and can be worn comfortably in both warm and cold weather. They can also be fitted with automatic inflation devices and may turn the wearer face upwards in the water, depending on the clothing worn.

It must be recognised that clothing traps air, which may result in a person not floating as would be expected. Clothing absorbs water, making a person heavier to

support. The person may need to use a PFD with a higher performance standard to ensure that they self-right face up and their mouth and nose are kept sufficiently clear of the water.

If the wearer is at risk of entering the water in a disabled or unconscious condition, then the lifejacket should be fitted with both manual and automatic activation to ensure that the lifejacket will inflate automatically.

Consideration should also be given to fitting personal flotation devices with lights. A lifejacket light can aid location and reduce the recovery or rescue time in bad visibility, day or night. These lights should comply with the EuroNorm standard EN ISO 12402-8:2006 (EN 394).

Guidance for correct use of PFD/Lifejackets

1. Inflatable personal flotation devices must 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 wearer's breathing is not restricted.
2. PFD/lifejackets should be worn in the correct position on the torso as per the manufacturer's instructions to prevent them from riding up above the wearer's shoulders. Hold-down devices such as crotch straps or thigh straps can greatly assist in keeping the PFD in the correct position. Where supplied, thigh straps should be correctly fitted and adjusted.
3. Every user should read the manufacturer's instructions for wearing, maintaining and servicing a lifejacket, and be fully aware of how to activate and operate it.
4. PFDs must be serviced and maintained on a regular basis. Servicing of PFDs should only be carried out by manufacturers/approved agents in accordance with the manufacturer's instructions. Users should carry out regular safety checks prior to each use.

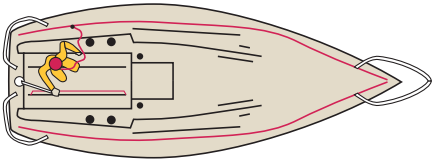
5. As a minimum, checks should include:
   - Harness straps/stitching inspected and checked for damage/wear
   - External lining inspected for wear/damage
   - All buckles checked/adjusted as required
   - All zips, buckles, fasteners, webbing straps and lights (if fitted) are functioning correctly
   - Hold-down devices attached to the PFD, if fitted
   - In the case of an inflatable PFD, the CO2 gas firing cylinder is firmly screwed into the inflation valve and has not been fired
   - Manual firing lanyard positioned for use if required
   - Be aware of any marked expiry dates of the firing mechanism components.
6. PFD users should not use PFDs with expired components and should remove these PFDs from the boat. They should refer to an approved service agent if there are any concerns about a PFD.
7. Automatically inflatable PFD/lifejackets, which operate by means of a soluble bobbin, may activate in error if left in a damp condition. When inflatable PFD/lifejackets 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.
8. 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.

PFD/lifejackets are available for babies.

Please Note:

Wearers must be aware of the legal requirements in relation to the wearing of PFDs and the penalties arising from non-compliance. For further details see Chapter 1 and Marine Notice No. 10 of 2016.

Jacklines and Safety Harnesses



Lifelines/Jackstays

Offshore sailors will be familiar with jackstays or webbing straps that run fore and aft over most of the length of the boat to allow crew to complete most operations on deck, while remaining attached by their harness.

There are a number of points to be aware of in relation to jackstays:

- The more conventional type is made from stainless steel wire, which has the tendency to get underfoot and trip crew members. On many yachts they have been replaced with a webbing strap, which has the advantage of not as readily tripping up crew members.
- They are normally made from polypropylene or blended synthetic fibres. The weakness they have is that they degrade with ultra violet light and weathering, and have been known to fail when a load is placed upon them.
- They should be tested each season. If in doubt, cut them in half and have them replaced with new ones, which are relatively inexpensive.

Appendix 6

Weather, Sea States and Tides

Forecasts and Warnings

Met Éireann regularly forecasts for small boats operating in coastal waters, including essential information on the expected wind direction and strength, the state of the sea and swell, visibility, and changes expected during the forecast period. Forecasts are issued in the early morning for the remainder of the day until midnight, at about midday for the rest of the day and the following day, and in the late afternoon for that night and the following day. Check well ahead of your planned trip – you can get an idea of the changes in the weather pattern from the forecasts issued 24 hours or longer before you leave shore. Strong wind warnings are issued whenever winds of 25 knots or more are expected. The direction and strength of the wind, sea and swell information and an indication of expected developments are also given. Gale or storm warnings are issued when the wind is expected to reach Beaufort Scale Force 8 (34 knots).

Small Craft Warnings

The small craft warning is issued for expected winds of **Force 6 or more**, and it is issued at **all times** of the year. The small craft warning covers the large internal lakes as well as coastal areas. A gale warning is issued for Force 8 or more and supersedes the small craft warning.

Weather forecasts should always be checked prior to departure and can be obtained from the following sources:

Primary Weather Sources:

- National Radio – shipping forecasts are broadcast on national radio stations. In addition, a service for inland waters is also broadcast for the major waterways. RTE Radio 1 broadcasts three times daily at approximately 6:02am, 12:53pm and at 11:55pm.
- Local radio stations will broadcast forecasts for local waters and inland lakes. Dublin and Galway local stations broadcast winds for the respective bays.
- National Television Channels – Met Éireann provides weather bulletins on RTE 1 and RTE 2.
- Telephone and fax – Met Éireann offers a charge service for detailed sea area forecasts.
- Internet – Met Éireann web page – www.met.ie.
- M.met.ie is a cross platform site

designed to work on web enabled mobile phones.
- Coast Guard Radio – generally announced on VHF Channel 16 and broadcast on Channel 26. The Sea Area Forecast (SAF) is broadcast on the named channel at three hour intervals beginning 01:03 followed by 04:03, 07:03, 10:03, 13:03, 16:03, 19:03 and 22:03. Gale warnings are also preceded by an announcement on Channel 16 and usually broadcast on receipt, and repeated at the next one of the following times: 00:33, 06:33, 12:33 and 18:33.

Secondary Weather Sources:
- Teletext/Aertel p. 162, 163, including any small craft warnings issued.
- Harbour Offices and Marinas will post a copy of the current local sea area forecast on noticeboards, as will yacht clubs during sailing events.
- Marine Institute Weather Buoys.
- Navtex receivers on board provide a printed forecast in addition to navigation information.
- Meteoalarm provides extreme weather alerts for Ireland and the rest of Europe (www.meteoalarm.eu). The system uses colour coding to indicate the severity of the expected hazard. An explanation of the warnings categories and thresholds can be found at www.met.ie/nationalwarnings.
- A number of websites are available that specialise in giving information on marine weather. Some examples are given below:
  http://passageweather.com/
  https://www.windguru.cz/
  http://magicseaweed.com/

Beaufort Force 0

Wind speed (knots): Under 1
Wind description: Calm
Sea state:
Sea is mirrorlike.

Beaufort Force 1

Wind speed (knots): 1-3
Wind description: Light Airs
Sea state:
Ripples with appearance of scales, no foam crests.

Beaufort Force 2

Wind speed (knots): 4-6
Wind description: Light Breeze
Sea state:
Small wavelets, crests beginning to break, scattered whitecaps.

Beaufort Force 3

Wind speed (knots): 7-10
Wind description: Gentle Breeze
Sea state:
Large wavelets, crests beginning to break, scattered whitecaps.

Beaufort Force 4

Wind speed (knots): 11-16
Wind description: Moderate Breeze
Sea state:
Small waves, becoming longer, numerous whitecaps.

Beaufort Force 5

Wind speed (knots): 17-21
Wind description: Fresh Breeze

Sea state:
Moderate waves, taking longer form, many whitecaps, some spray.

Beaufort Force 6

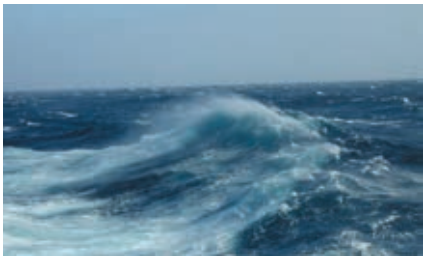
Wind speed (knots): 22-27
Wind description: Strong Breeze

Sea state:
Larger waves forming, whitecaps everywhere, much spray.

Beaufort Force 7

Wind speed (knots): 28-33
Wind description: Near Gale
Sea state:
Sea heaps up, white foam form breaking waves begin to be blown in streaks.

Beaufort Force 8



Wind speed (knots): 34-40
Wind description: Gale
Sea state:
Moderately high waves of greater length, edges of crests begin to break into spindrift, foam is blown into well defined streaks.

Beaufort Force 9

Wind speed (knots): 41-47
Wind description: Strong Gale

Sea state:
High waves, sea begins to roll, dense streaks of foam, spray begins to reduce visibility.

Beaufort Force 10

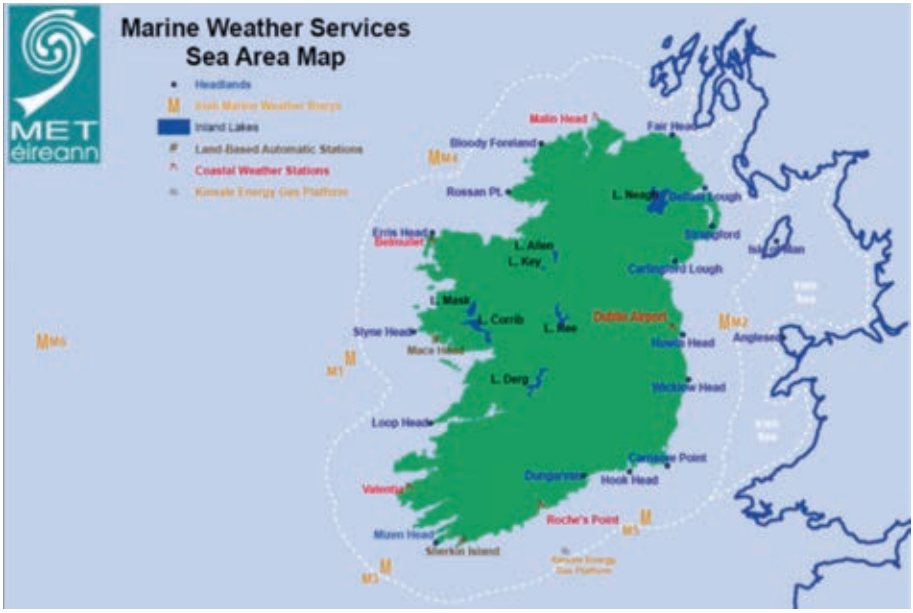
Wind speed (knots): 48-55
Wind description: Storm
Sea state:
Very high waves with overhanging crests, sea takes on white appearance, foam blown in dense streaks, rolling is heavy, visibility reduced.

Tides

Along with the weather, an understanding of tides and how they affect sea states is important. Some knowledge of tides is desirable before going afloat on the sea.

The tide is basically the rise and fall of the sea level; is caused by the combined effects of the forces exerted by the Moon and the Sun and can have a marked effect on maritime-related activities. On Irish coastal waters, tides are semi-diurnal (two high and low waters each day). Tides can also influence marine activities in that they result in water movements (tidal streams). This movement can be significant inshore such as on estuaries and near headlands. Tide levels/streams are important for many recreational activities including swimming, sailing, fishing, boat berthing, anchoring and passage planning. Notable hazards from tides include tide rips and races, inadvertent grounding and stray navigation. Tidal level predictions and information can be obtained from various nautical Almanacs, newspapers, websites and phone apps.

Marine Weather Services Sea Area Map



This map shows areas covered by Met Éireann marine forecasts. Note the white dashed line represents the furthest coverage limit for the Sea Area Forecast.

Marine Institute Weather Buoys

The Marine Institute has 5 weather buoys around the Irish coast which aim to provide improved weather forecasts and safety at sea around Ireland.

Buoy Positions

M2 : 53.4800°N 05.4250°W

- Irish Sea: Approximately 20 nautical miles (37 km) east of Howth Head.

M3 : 51.2166°N 10.5500°W

- Off the Cork coast: Approximately 30 nautical miles (56 km) southwest of Mizen Head.

M4 : 54.9982°N 09.992154°W

- Off the Donegal coast: Approximately 45 nautical miles (83 km) west northwest of Rossan Point.

M5 : 51.6900°N 06.7040°W

- Off the south Wexford coast: Approximately 30 nautical miles (56 km) south of Hook Head.

M6 : 53.07482°N 15.88135°W

- Deep Atlantic: Approximately 210 nautical miles (389 km) west southwest of Slyne Head.

The buoy network provides vital data for weather forecasts, shipping bulletins, gale and swell warnings as well as data for general public information and research.

Appendix 7

Directive on Recreational Craft and Personal Watercraft – Advice on buying a Recreational Craft

Since June 1998 all recreational craft new to the European Economic Area[1] (EEA) were required to comply with the Recreational Craft Directive, Directive 94/25/EC, as amended. The Directive was implemented in Ireland by the European Communities (Recreational Craft) Regulations 1998 (S.I. No. 40 of 1998), as amended in 2004 by the European Communities (Recreational Craft) (Amendment) Regulations 2004 (S.I. No. 422 of 2004).

Directive 2013/53/EU on recreational craft and personal watercraft repealed Directive 94/25/EC on recreational craft from 18 January 2016. However, Directive 94/25/EC, as amended by Directive 2003/44/EC, continues to apply to recreational craft, personal watercraft, components or propulsion engines placed on the EU market for the first time before 18 January 2017. Directive 2013/53/EU was transposed into Irish law through the European Union (Recreational Craft and Personal Watercraft) Regulations 2017 (S.I. No. 65 of 2017), as amended by the European Union (Recreational Craft and Personal Watercraft) (Procedures for Watercraft Identification) Regulations 2017 (S.I. No. 217 of 2017).

The Directive is beneficial to consumers as it requires craft to meet essential safety, health, environmental protection and consumer protection requirements. Directive 2013/53/EU lays down requirements for the design and construction, exhaust emissions and noise emissions of recreational craft, personal watercraft, components and propulsion engines installed in or on watercraft.

Watercraft products within the scope of Directive 2013/53/EU (and Regulation 3(1) of S.I. No. 65 of 2017), as amended:

- Recreational craft of hull length from 2.5 metres to 24 metres;
- Personal watercraft of less than 4 metres in hull length;

[1] The EEA consists of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden and the United Kingdom.

- Partly completed watercraft, being a partly completed recreational craft or personal watercraft;
- Components, when placed separately on the Union market (e.g. ignition-protected equipment for inboard and stern drive petrol engines and petrol tank spaces; starting-gear protection devices for outboard engines; steering wheels, steering mechanisms and cable assemblies; fuel tanks intended for fixed installations and fuel hoses; prefabricated hatches, and port lights);
- Propulsion engines installed or specifically intended for installation in or on watercraft, or subject to major engine modification;
- Watercraft subject to major craft conversion.

A boat owner who has bought a new boat or a used boat in a third country and returns the boat by whatever means to the EEA territory, and places that boat into service for the first time in the EEA, will be subject to the requirements of the Directive. Importers of watercraft from third countries that place products on the EU market are obliged to mark the product with their name and address.

Anyone considering purchasing a watercraft product should check for the following:

1. in the case of a watercraft, that it is affixed with a **Watercraft Builder's Plate** and that it has sufficient structure, stability and buoyancy in accordance with its design category;
2. that it is affixed with the **CE marking**;
3. in the case of a propulsion engine, that it is marked with a **Propulsion Engine Identification** and complies with other essential requirements of the Directive, e.g. **installation requirements**;
4. in the case of an imported product, that it is labelled with the **importers contact details**;
5. that it is identified by a **type, batch or serial number** or a **Watercraft Identification Number (WIN)**;
6. that it is accompanied by an **Owner's Manual(s)**; and
7. that it is accompanied by a **Declaration**.

1 and 2: Watercraft Builder's Plate, CE Mark and Design Category

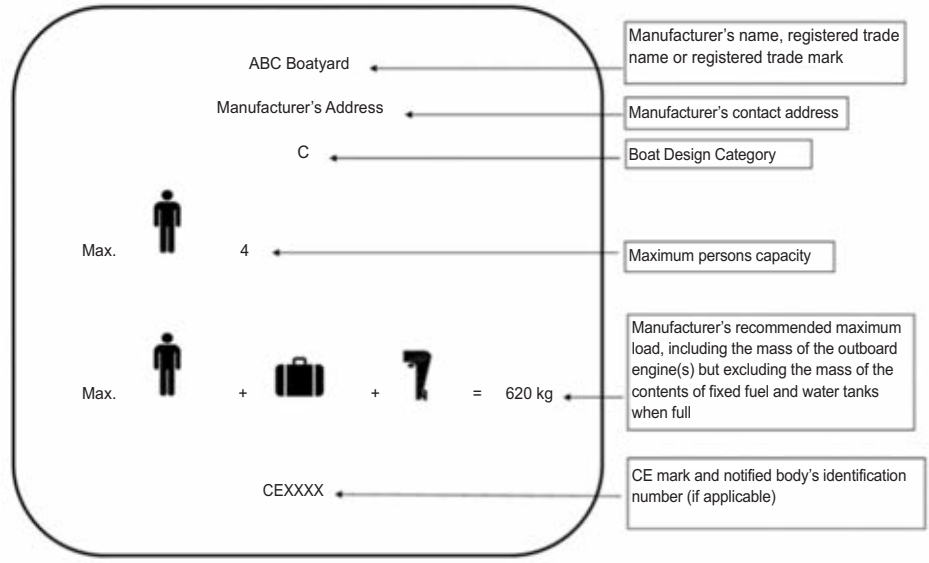
Each watercraft must carry a permanently affixed plate, preferably in the cockpit or near the main steering position, containing the following information:

- Manufacturer's name, registered trade name or registered trade mark, as well as contact address;
- CE marking;
- Watercraft design category (summarised in section 1.2.8 of this Code):
  - A, B, C and/or D for recreational craft;
  - C and/or D for personal watercraft;
- Manufacturer's maximum recommended load;
- The number of persons recommended by the manufacturer for which the watercraft was designed;
- Additional information depending on the type of watercraft:
  - If a recreational craft is designed to be fitted with outboard propulsion engine(s), the maximum engine(s) power (kW);
  - If an inflatable recreational craft, the recommended working pressure (Bar or psi);
  - If a sail kit is provided with a recreational craft, the maximum sail area (m^2 or ft^2).

A Watercraft Builder's Plate should not be affixed to a partly completed watercraft. In the case of post-construction assessment, the contact details of the notified body that has carried out the conformity assessment are included on the Builder's Plate, in place of those of the manufacturer, and the words 'post-construction assessment' are also included.

All watercraft, designated components and propulsion engines are subject to CE marking, indicating that a product complies with the relevant EU legislation. In the case of a watercraft, CE marking must be affixed on the Watercraft Builder's Plate (mounted separately from the Watercraft Identification Number). In the case of any other product, such as a propulsion engine, the CE mark shall be affixed to the product, but in the case of a component where that is not possible or warranted on account of the size of the component, it shall be affixed to the packaging and to the accompanying documentation.

Each watercraft must have sufficient structure, stability and buoyancy in accordance with its design category. The four watercraft design categories are summarized in section 1.2.8 of this Code.



Example: Builder's Plate with minimum information for craft powered by outboard engines.

3. Propulsion Engine Requirements

Every engine must be clearly and durably marked with the following information:

- Engine manufacturer's name, registered trade name or registered trade mark, as well as contact address and, if applicable, the name and contact address of the person adapting the engine. This is not necessarily the address where the manufacturer is actually established. This address can for example be that of the authorised representative or of the customer services;
- Engine type, engine family, if applicable;
- A unique engine serial number;
- CE marking.

Every propulsion engine installed in or on watercraft must meet the applicable essential safety and environmental requirements as laid down in Directive 2013/53/EU. Any person who carries out a major modification to a propulsion engine must ensure that the modified engine is in conformity with the Directive.

To ensure safe handling characteristics, a watercraft should

not be fitted with a propulsion engine that is more powerful than the maximum power for which the watercraft is designed and constructed. All tiller-controlled outboard propulsion engines must have an emergency stopping device fitted.

4. Importer's Plate

The plate must indicate the importer's name, registered trade name or registered trade mark, as well as contact address, preferably in the cockpit or near the main steering position, but not on the Watercraft Builder's Plate.

5. Product Identification

In the case of a propulsion engine, a unique engine serial number must be permanently marked on the engine. In the case of a watercraft, a Watercraft Identification Number (WIN) must be marked in two positions:

- watercraft exterior: top of transom, starboard side, and
- watercraft interior: in a position that is not visible.

The Watercraft Identification Number is unique to each craft. It is a code that identifies the manufacturer, country of manufacture and date of construction, as follows:

IE ABC 12345 D 16 14

IE	Country code of the manufacturer, i.e. where the craft was built;
ABC	Unique Code of the Manufacturer – assigned by the national authority of a Member State. In Ireland, unique codes of the manufacturer are assigned by the Marine Survey Office of the Department of Transport, Tourism and Sport;
12345	Unique Serial Number assigned by the manufacturer;
D	Month of Manufacture (A = January, B = February, etc.);
16	Year of Manufacture (2016);
14	Model year (2014).

6. Owner's Manual

Every product must have an Owner's Manual. This must be in a language easily understood by the end-user, which in Ireland is Irish or English. It contains the instructions and information essential to the safe use of the product, drawing particular attention to the set-up, maintenance, regular operation of the product, prevention of risks and risk management. It should also contain all the instructions and manuals for any equipment fitted. For propulsion engines, the maximum rated engine power must be declared in the Owner's Manual.

7. Declaration

Each individual product must be accompanied by an EU Declaration of Conformity or, in the case of a partly completed watercraft, by a Declaration by the manufacturer or the importer of the partly completed watercraft. This is a legal document signed by the manufacturer, or his or her authorised representative, stating that the craft meets all the requirements. This is an important document, particularly if the craft is to be used or taken into other Member States, as enforcement officials can ask to see it.

Directive 2013/53/EU does not apply to certain watercraft – see Article 2.2 of the Directive, Regulation 3(2) of S.I. No. 65 of 2017, as amended, and section 1.2.8 of this Code.

Please note that this advice is designed to provide basic guidance. It is not a complete authoritative statement of the law.

For more information contact:

Marine Survey Office
Irish Maritime Administration
Department of Transport, Tourism and Sport
Leeson Lane
Dublin 2
D02 TR60

Telephone: + 353 (0)1 678 3400
Fax: + 353 (0)1 678 3409
Email: mso@dttas.ie

Appendix 8

Passage Planning Template

Vessel				**Date**	
Route				**Distance/Time**	
Weather Forecast					
Tides	**HW**	**LW**	**Spring / Neap**	**Draft**	

Use approved GMDSS communications systems. A mobile phone should not be relied on as the primary method of maritime communication.

VHF Channels	

Safety Equipment Checklist completed by:

Number of Crew on Board				**Crew briefed on passage**	
Fuel Checked		**Fresh Water**		**Food/Equipment**	

Charts and publications to be used for passage Insert the chart numbers and the relevant pages of the sailing directions and/or Almanac here:		
Confirm route is marked on charts and agrees with this passage plan	**Y**	**N**

Any rocks, shallow areas, strong currents or other dangers on the route

Contingency plans and safe places of refuge on the proposed route **Note:** Check tides and access for any alternative ports and bays. Ensure chart is on board.

Name and contact information of person/organisation ashore informed of the voyage details including estimated time of arrival or return.	
Name and signature of person responsible for this passage plan:	**I confirm that I have checked this plan and am satisfied that it is safe for the voyage to proceed:**

The following table is used to give an indication of the proposed track the vessel will travel and should include the expected compass heading on each leg and the length of the leg. Positions can be in Latitude and Longitude or bearing and distance from a known mark or place. The remarks/description section should be used to give some information or advice on the waypoint or leg, i.e.: “should be able to see lighthouse”, “look for leading lights”, “stay well clear of cardinal mark”, etc.

W/P No	Waypoint Name	Position	Remarks/ Description	Heading	Distance (NM)
				°	
				°	
				°	
				°	
				°	
				°	
				°	
				Total Distance	

Appendix 9

List of Course Providers

(see Appendix 10 for full contact details)

Chapter 2: Sail and Motor Boats – Coastal Operation	• Irish Sailing Association • Comhairle Fo-Thuinn (Irish Underwater Council)
Chapter 3: Sail and Motor Boats – Inland Waterways	• Irish Sailing Association • Inland Waterways Association of Ireland • Comhairle Fo-Thuinn (Irish Underwater Council)
Chapter 4: Sailing Dinghies	• Irish Sailing Association
Chapter 5: Personal Watercraft – Jet Skis and High Speed Power Boats	• Irish Sailing Association
Chapter 6: Windsurfing and Stand-Up Paddle Boards	• Irish Windsurfing Association • Irish Surfing Association
Chapter 7: Canoeing/Kayaking	• Canoeing Ireland
Chapter 8: Rowing Boats	• Rowing Ireland • Irish Coastal Rowing Federation
Chapter 9: International Certificate for Operators of Pleasure Craft	• Irish Sailing Association
Chapter 11: Emergency Procedures	• Contact the Marine Survey Office

Appendix 10

Contact Details

10.1 Irish Maritime Administration contacts

Website: www.dttas.ie

Maritime Safety Policy Division
Irish Maritime Administration
Department of Transport, Tourism and Sport
Leeson Lane
Dublin 2
D02 TR60

Telephone: +353 (0)1 678 3434
Fax: +353 (0)1 678 3409
Email: marineleisuresafety@dttas.ie

Irish Coast Guard HQ
Irish Maritime Administration
Department of Transport, Tourism and Sport
Leeson Lane
Dublin 2
D02 TR60

Telephone: +353 (0)1 678 3454
Fax: +353 (0)1 678 3459
Email: admin@irishcoastguard.ie

Marine Survey Office (Dublin)
Irish Maritime Administration
Department of Transport, Tourism and Sport
Leeson Lane
Dublin 2
D02 TR60

Telephone: +353 (0)1 678 3400
Fax: +353 (0)1 678 3409
Email: mso@dttas.ie

Mercantile Marine Office (Dublin)
Irish Maritime Administration
Department of Transport, Tourism and Sport
Leeson Lane
Dublin 2
D02 TR60

Telephone: +353 (0)1 678 3480
Fax: +353 (0)1 678 3489
Email: mmo@dttas.ie

Marine Survey Office (Ballyshannon)
Department of Transport, Tourism and Sport
Town Council Building
Abbeyview
Ballyshannon
Co. Donegal
F94 C44W

Telephone: +353 (0)71 982 2400
Fax: +353 (0)71 982 2439
Email: mso@dttas.ie

Marine Survey Office (Cork)
Department of Transport, Tourism and Sport
Centre Park House
Centre Park Road
Cork
T12 RKON

Telephone: +353 (0)21 496 8992
Fax: +353 (0)21 496 8617
Email: mso@dttas.ie

10.2 Contact Details for other organisations

Bord Iascaigh Mhara
P.O. Box No. 12
Crofton Road
Dun Laoghaire
Co. Dublin
A96 E5A0

Telephone: +353 (0)1 214 4100
Fax: +353 (0)1 284 1123
Email: contact@bim.ie
Website: www.bim.ie

Comhairle Fo-Thuinn
Irish Underwater Council
78A Patrick Street
Dun Laoghaire
Co. Dublin
A96 HY45

Telephone: +353 (0)1 284 4601
Fax: +353 (0)1 284 4602
Email: info@diving.ie
Website: www.diving.ie

Commission for Communications Regulation (ComReg)
1 Dockland Central
Guild Street
Dublin 1
D01 E4X0

Telephone:
Consumer: +353 (0)1 804 9668
Industry: +353 (0)1 804 9600
Email: consumerline@comreg.ie
Website: www.comreg.ie

Commissioners of Irish Lights
Harbour Road
Dun Laoghaire
Co. Dublin
A96 H500

Telephone: +353 (0)1 271 5400
Fax: +353 (0)1 271 5566
Email: info@irishlights.ie
Website: www.irishlights.ie

Inland Waterways Association of Ireland (IWAI)
2 Kylemore Park
Taylor's Hill
Galway
H91 T22T

Telephone: +353 (0)91 589 333
Lo-Call: 1890 924 991
Email: info@iwai.ie
Website: www.iwai.ie

Irish Canoe Union/Canoeing Ireland
Irish Sport HQ
National Sports Campus
Blanchardstown
Dublin 15
D15 DY62

Telephone: +353 (0)1 625 1105
Fax: +353 (0)1 625 1106
Email: info@canoe.ie
Website: www.canoe.ie

Irish Coastal Rowing Federation Ltd
Email: info@coastalrowing.net
Website: www.coastalrowing.net

Irish Sailing Association
3 Park Road
Dun Laoghaire
Co. Dublin
A96 K3C3

Telephone: +353 (0)1 280 0239
Email: info@sailing.ie
Website: www.sailing.ie

Irish Sea Kayaking Association
Email: iskacommittee@gmail.com
Website: www.iska.ie

Irish Surfing Association
Easkey Surf and Information Centre
Easkey
Co. Sligo
F26 CX4K

Telephone: +353 (0)96 49 428
Fax: +353 (0)96 49 428
Email: info@irishsurfing.ie
Website: www.irishsurfing.ie

Irish Water Safety
The Long Walk
Galway
H91 F602

Telephone: +353 (0)91 564 400
Lo-Call: 1890 420 202 (24 Hours)
Fax: +353 (0)91 564 700
Email: info@iws.ie
Website: www.iws.ie

Irish Waterski and Wakeboard Federation
Email: info@irishwwf.ie
Website: www.irishwwf.ie

Irish Windsurfing Association
Email: secretary@windsurfing.ie
Website: www.windsurfing.ie

Marine Casualty Investigation Board
Leeson Lane
Dublin 2
D02 TR60

Telephone: +353 (0)1 678 3485
+353 (0)1 678 3486
Fax: +353 (0)1 678 3493
Email: info@mcib.ie
Website: www.mcib.ie

Met Éireann Headquarters
65/67 Glasnevin Hill
Dublin 9
D09 Y921

Telephone: +353 (0)1 806 4200
Fax: +353 (0)1 806 4247
Email: met.eireann@met.ie
Website:
www.met.ie/forecasts/sea-area.asp

General Forecasting Division (Met Éireann)
Telephone: +353 (0)1 806 4255
Fax: +353 (0)1 806 4275
Email: forecasts@met.ie
Note: Provision of forecasts is subject to a fee

Rowing Ireland
National Rowing Centre
Farran Wood
Ovens
Co. Cork
P31 K704

Telephone: +353 (0)21 743 4044
Fax: +353 (0)21 743 4045
Email: info@rowingireland.ie
Website: www.rowingireland.ie

Royal National Lifeboat Institution (RNLI)
Airside
Swords
Co. Dublin
K67 WA24

Telephone: +353 (0)1 895 1800
Fax: +353 (0)1 890 0458
Email: lifeboatsireland@rnli.org.uk
Website: www.rnli.org

Scouting Ireland (Head Office)
Scouting Ireland
Larch Hill
Dublin 16
D16 P023

Telephone: +353 (0)1 495 6300
Fax: +353 (0)1 495 6301
Email: questions@scouts.ie
Website: www.scouts.ie

Waterways Ireland
The Inspector of Navigation
Waterways Ireland
The Docks
Athlone
Co. Westmeath
N37 RW26

Telephone: +353 (0)90 649 4232
Fax: +353 (0)90 649 4147
Email: info@waterwaysireland.org
Website: www.waterwaysireland.org

10.3 Fishery Bodies

Inland Fisheries Ireland (HQ)
3044 Lake Drive
Citywest Business Campus
Dublin 24
D24 Y265

Telephone: +353 (0)1 884 2600
Email: info@fisheriesireland.ie

IFI Ballina
Ardnaree House
Abbey Street
Ballina
Co. Mayo
F26 K029

Telephone: +353 (0)96 22 788
Email: ballina@fisheriesireland.ie

IFI Ballyshannon
Station Road
Ballyshannon
Co. Donegal
F94 WV76

Telephone: +353 (0)71 985 1435
Email:
Ballyshannon@fisheriesireland.ie

IFI Clonmel
Anglesea Street
Clonmel
Co. Tipperary
E91 RD25

Telephone: +353 (0)52 618 0055
Email: clonmel@fisheriesireland.ie

IFI Dublin
3044 Lake Drive
Citywest Business Campus
Dublin 24
D24 Y265

Telephone: +353 (0)1 278 7022
Email: dublin@fisheriesireland.ie

IFI Galway
Teach Breac
Earl's Island
Galway
H91 K6D2

Telephone: +353 (0)91 563 118
Email: galway@fisheriesireland.ie

IFI Limerick
Ashbourne Business Park
Dock Road
Limerick
V94 NPEO

Telephone: +353 (0)61 300 238
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Appendix 11

Glossary of Terms

AHC	Ampere Hertz Capacity
AIS	Automatic Identification System
Class XII Boats	Recreational craft greater than 13.7 m in length.
COLREGS	The International Regulations for Preventing Collisions at Sea, as amended.
ComReg	Commission for Communications Regulation
COSPAS/SARSAT	A satellite system to provide distress and alert information to Search and Rescue services.
CQR	Pronounce “secure” – a plough anchor.
DSC	Digital Selective Calling (part of GMDSS).
DTTAS	Department of Transport, Tourism and Sport
EPIRB	Emergency Position Indicating Radio Beacon
GMDSS	Global Maritime Distress and Safety System
GMDSS Sea Area A1	An area within the radiotelephone coverage of at least one VHF coast radio station in which continuous DSC alerting is available (approx. 30 nautical miles from a coast station).
GMDSS Sea Area A2	An area, excluding Sea Area A1, within the radiotelephone coverage of at least one MF coast radio station in which continuous DSC alerting is available (approximately 150 nautical miles from a coast station).

GMDSS Sea Area A3	An area, excluding sea areas A1 and A2, within the coverage of an INMARSAT geo-stationary satellite in which continuous alerting is available (approximately 70°N to 70°S).
GPS	Global Positioning System – U.S. satellite navigation system.
HF	High Frequency
HRU	Hydrostatic Release Unit
IALA	International Association of Marine Aids to Navigation and Lighthouse Authorities
IMA	Irish Maritime Administration
IMO	International Maritime Organization – this is based in London and is the UN specialised maritime agency. It is responsible for maritime safety and prevention of pollution of the marine environment. It provides a forum for international co-operation on such issues as the regulation of international shipping and navigation efficiency.
INMARSAT	Satellite communications.
Irish waters	Includes the territorial seas, the waters on the landward side of the territorial seas, and the estuaries, rivers, lakes and other inland waters (whether or not artificially created or modified) of the State.
ISA	Irish Sailing Association
IWS	Irish Water Safety
LOA	Length overall of vessel.

LSA	Life Saving Appliances
Marine Notice	Information, advisory or guidance notices issued by the IMA.
MARPOL	International Convention for the Prevention of Pollution from Ships. It was adopted on 2 November 1973 at the IMO.
MED	Marine Equipment Directive (Wheel mark)
MF	Medium Frequency
MMSI	Maritime Mobile Service Identity
MOB	Man Overboard
MSO	Marine Survey Office – a division of the IMA and DTTAS.
NAVTEX	Marine Safety Information service, via dedicated telex receiver.
NRT	Net Registered Tonnes
Partially Smooth Waters	Areas of water specified as “partially smooth” in a Marine Notice.
PFD	Personal Flotation Device
PLB	Personal Locator Beacon
Pleasure Craft	See recreational craft.
PWC	Personal Watercraft (jet skis)
RCD	Recreational Craft and Personal Watercraft Directive
Recreational Craft	Vessels used for leisure or sport purposes.

RIB	Rigid Inflatable Boat
RNLI	Royal National Lifeboat Institution
SAR	Search and Rescue services incorporating cliff, sea and air rescue.
SART	Search and Rescue Radar Transponder
S.I.	Statutory Instrument (Secondary Legislation)
Smooth Waters	Areas of water specified as “smooth” in a Marine Notice.
SOLAS	IMO International Convention for the Safety of Life at Sea 1974, as amended. This Convention was one of the first international treaties of its kind. It was first formed and adopted in 1914 as a reaction to the Titanic disaster in 1912.
Statutory Requirements	Irish legislation comprising of Acts and Statutory Instruments and incorporating national law, European Union Regulations and Directives, and obligations under various international maritime conventions.
SUP	Stand-Up Paddle Board
To Sea	All sea areas not defined as “smooth” or “partially smooth” water in a Marine Notice.
UCM	Unique Code of the Manufacturer
VHF	Very High Frequency
VTS	Vessel Traffic Service

Notes