

# Flood Rescue Boat Operator (FRBO)

The Flood Rescue Boat Operator training course is a 3-day course which incorporates all elements of the RBO course and adds flood rescue capability. It is ideal for any emergency service personnel who may attend flood events with boats for low level casualty and victim recovery from a flood or slow moving water environment.

## Contact hours

18 hours (3 days)

or

6 hours (1 day) add-on to RBO qualification

or

12 hours (2 day) add-on to International Certificate of Competence or equivalent national course, eg RYA powerboating level 2

## Prerequisites

Swiftwater and Flood First Responder (SFR)

Minimum age: 18.

## Qualification valid for

3 years

## Taught by

- Flood Rescue Boat Operator Instructor (FRBOI)
- Swiftwater and Flood Rescue Boat Operator Instructor (SFRBOI)

## Assessment

The assessed elements of this course are:

- Foundation knowledge
- Boat handling under power
- Boat handling with paddles
- Team/personal recovery
- Casualty pick-up and recovery

## Flood Rescue Boat Operator (FRBO) skill sheet contents

Theory	
1.	Rescue 3 philosophy
2.	Water rescue training standards
3.	Personal equipment
4.	Dynamic risk assessment and incident size-up
5.	Pre-planning
6.	Medical and decontamination considerations
7.	Navigation and route planning
8.	Communications
9.	Crew operational roles
10.	Multiple boat operations
11.	Floodwater dynamics and hazards
12.	Boat, hull and drive types
13.	Rescue boat equipment
14.	Pre- and post-trip checks
Practical	
15.	Launching and recovery
16.	Boat handling under power
17.	Boat handling with paddles
18.	Towing
19.	Anchoring/securing
20.	Wading with boats
21.	Tethered boats
22.	Night/poor visibility operations
23.	Search operations
24.	Team/personal recovery
25.	Casualty pick-up and recovery
26.	Casualty management
27.	Boat-based conditional rescues
28.	Transporting loads
29.	Boat-based stretcher management
30.	Rescues from elevated positions
31.	Vehicles in water
32.	Working with helicopters

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# Flood Rescue Boat Operator (FRBO) learning outcomes and key teaching points

When delivering the FRBO course modularly (eg as an add-on to a current, valid RBO qualification), the instructor should revisit, eg through discussion, those learning outcomes that have been covered on the previous course, to confirm the student's knowledge.

	Skill sheet element		Learning outcome
1	Rescue 3 philosophy	1.1	Explain the order of priorities at a water rescue scene
		1.2	Recall the steps required in order to develop judgement
		1.3	Apply best practice guidelines to powerboat operations, in order to produce safe working practice
2	Water rescue training standards	2.1	Recognise the different levels of training with the Rescue 3 scheme, and identify the role of a boat at a rescue scene
		2.2	State how the Rescue 3 scheme fits within national and international standards
		2.3	Identify where powerboats fit into rescue options
3	Personal equipment	3.1	Identify PPE and equipment used for in-water operations by rescue boat operators
		3.2	Select appropriate PPE for a rescue boat operator, dress and perform buddy checks
4	Dynamic risk assessment and incident size-up	4.1	Ensure appropriate redundancy for passage plan and potential environmental changes
		4.2	Perform a risk assessment of the following areas: rescue site, downstream and upstream
		4.3	Based on risk assessment of environment and casualty requirements, select an appropriate plan
5	Pre-planning	5.1	Identify sources of information useful for pre-planning powerboat operations
		5.2	Describe key information that should be included within a pre-plan specific to powerboat
6	Medical and decontamination considerations	6.1	Identify priorities when dealing with casualties from both mid-water and a dry location
		6.2	Apply techniques which minimise exposure to the water and decontamination procedures
7	Navigation and route planning	7.1	Apply International Regulations for the Prevention of Collisions at Sea (IRPCS) in order to safely operate powerboats under a variety of light conditions
		7.2	Orient map to ground and identify how water level changes will affect information represented on map/chart
		7.3	Using an appropriate information source, identify tick features that will be seen en route
		7.4	Using a map/chart, confirm when at an objective
		7.5	Be able to use a sat nav unit in a flooded urban environment
		7.6	Use stop/catch features when planning a route
8	Communications	8.1	Be able to communicate boat-to-boat and boat-to-shore using hand and whistle signals
		8.2	Apply simple commands in order to centralise command within the boat
9	Crew operational roles	9.1	Explain the primary roles of helm, bowman and rescuer within a rescue boat, and their duties
		9.2	Apply crew roles when performing a variety of tasks
10	Multiple boat operations	10.1	Identify the roles and the benefits of working with multiple boats
		10.2	Explain how working with multiple boats adds resilience to operations
11	Floodwater dynamics and hazards	11.1	Identify the physical impact of water flowing within an urban area
		11.2	Identify how public services and infrastructure will contribute to physical, chemical and biological hazards within flooding
		11.3	Explain the effect of these on rescue boats operating in floodwater
12	Boat, hull and drive types	12.1	Identify how different hull types and construction will affect performance and deployment
		12.2	Identify different types of drive units and fuel requirements
13	Rescue boat equipment	13.1	Select and use appropriate equipment required for powerboat operations
		13.2	Recall post-use care and inspection procedures for equipment
		13.3	Based on tasking, differentiate between mandatory equipment and optional equipment

	Skill sheet element		Learning outcome
14	Pre- and post-trip checks	14.1	Perform systematic checks of boat/hull, fuel and engine system, and auxiliary equipment
		14.2	Prep equipment in order to give a clean working space within the boat
		14.3	Run through pre-start checks prior to starting engine
		14.4	Perform post-trip checks
15	Vehicles in water	15.1	Identify why vehicles in water are a common occurrence in a flood event
		15.2	Describe forces acting on a vehicle in water
		15.3	Describe boat and vehicle interaction, stability of vehicles, and direction of approach options
16	Working with helicopters	16.1	Describe the benefits and hazards of working with helicopters
		16.2	Identify the impact of a helicopter on the operations scene and craft
17	Launching and recovery	17.1	Identify considerations when launching and recovering via trailer
		17.2	Identify hand launch considerations, including manual handling
		17.3	Identify how changing conditions and deployment will affect launching/recovery site choice
18	Boat handling under power	18.1	Identify the importance of trim when in displacement and planing mode, and use crew in order to apply trim
		18.2	Be able to control momentum when travelling forwards and in reverse, identifying how changes in drive and trim affect steerage and pivot of boat
		18.3	Be able to change direction of the boat at speed in wider areas and low speed in confined areas
		18.4	Manage boat and crew when coming to or leaving shallow areas, buoy/moorings, and other vessels
		18.5	Explain the terms ground speed and water speed, and why they are important with boat handling
		18.6	Be able to hold station in a slow-moving floodwater environment
		18.7	Describe the use of a variety of angles relative to the current vector when dealing with downstream flow, eddies and flow around obstacles in a slow-moving floodwater environment
		18.8	Perform direct and indirect break-ins, and direct outs, comparing the different methods, and selecting an appropriate technique depending on task
19	Boat handling with paddles	19.1	Identify application for paddle skills
		19.2	Identify the importance of correct trim and power distribution
		19.3	Be able to paddle forwards, backwards and turn
		19.4	Recognise the importance of applying angle before momentum
		19.5	Apply simple command within the boat in order to achieve simple objectives
20	Towing	20.1	Perform both line astern and alongside tows
		20.2	Identify variables that influence choice between line astern and alongside tows
		20.3	Identify areas that will require management
21	Anchoring/securing	21.1	Identify why anchoring/securing a rescue boat would be required
		21.2	Recognise types of tethers/anchors depending on area, boat size and design
		21.3	Perform deployment, including measurement of depth and checks to ensure anchor is holding
22	Wading with boats	22.1	Explain how a floating platform will aid rescuers within a wading rescue
		22.2	Identify the risks of wading with a boat and steps taken to minimise these
		22.3	Perform wading rescues with the aid of a floating platform
		22.4	Identify the environmental variables and hazards that will directly affect wading with boats
23	Tethered boats	23.1	Compare the application and limitations of single, 2- and 4-point tethered systems
		23.2	Use appropriate anchors/belay methods for water energy and consequence
		23.3	Use a tethered boat for transportation and mid-stream access
24	Night/poor visibility operations	24.1	Identify problems associated with hazard recognition, group control and application of rescue techniques during night/poor visibility operations
		24.2	Identify control measures that may be required when operating boats in slow-moving floodwater in darkness
		24.3	Implement these control measures in order to successfully perform static and mobile rescues
25	Search operations	25.1	Explain how untethered boats could be incorporated into the search process
		25.2	Use boats to identify key landmarks that define the search area
		25.3	Construct deployment strategy to perform reconnaissance, a hasty (low coverage) search, and a high coverage search

	<b>Skill sheet element</b>		<b>Learning outcome</b>
26	Team/personal recovery	26.1	Identify reasoning behind team/self-rescue ability
		26.2	Perform team-based rescue (or self-rescue) over sponson whilst in deep water
27	Casualty pick-up and recovery	27.1	Allocate roles for casualty pick-up and recovery
		27.2	Use environmental factors in order to make a controlled approach
		27.3	Manage the hazard of the engine and the casualty in the water
		27.4	Recover casualties into boat using forwards- and backwards-facing techniques, and rolling
28	Casualty management	28.1	Identify priorities for casualty care
		28.2	Describe how casualty care would impact on boat handling, length of transit and operation
		28.3	Identify suitable placement of casualty once aboard and how medical stabilisation would influence this
29	Boat-based conditional rescues	29.1	Identify how addition of conditional rescue tools will aid the helm's margin for error
		29.2	Identify environmental and casualty variables that will influence the choice of rescue
		29.3	Perform conditional rescues from a boat, applying control measures in order to reduce risk to personnel and casualty
30	Transporting loads	30.1	Identify content of briefing and safety provision for casualties or third parties
		30.2	Describe how boat stability is affected during loading/unloading of casualties and loads
		30.3	Describe how boat performance and handling is affected when loaded
		30.4	Identify the risks involved when securing loads in rescue boats
31	Boat-based stretcher management	31.1	Perform risk assessment of environmental conditions and casualty requirements
		31.2	Identify the different types of stretcher to be used and issues within the boat to be used
		31.3	Identify pros and cons/risks of strapping casualty into stretcher/stretcher to boat
		31.4	Identify best placement and securing of stretcher within different boat types
32	Use of ladders from a boat	32.1	Identify different applications for use of ladders from boats
		32.2	Identify methods of stabilising the boat whilst using ladders from them
		32.3	Identify methods of stabilising ladders whilst using them from a boat
		32.4	Describe changes that will affect the stability of the ladder and boat
		32.5	Demonstrate clear communication between helm and rescuer when ladder is being weighted

## Flood Rescue Boat Operator (FRBO) training site and equipment list

### Training site

The training site should be a flat or slow-moving water environment. The training site should be such that there is no risk of damage to boat and equipment, or injury to crew, if there is a loss of motor propulsion.

### Team equipment

The training provider must provide the following for each working group:

- Suitably equipped rescue boat
- Appropriate vehicle, trailer or launching trolley
- Fuel, tools and spare parts for emergency repairs
- First aid, crew welfare and emergency shelter kit
- Whiteboard and marker pens
- Emergency distress kit
- Radio/communication ability
- Appropriate ropes for tethered ropework
- Karabiners
- Pulleys
- Tape slings

### Personal equipment

The students must bring (if not provided by the training provider)

- Drysuit or suitable waterproof protective clothing
- PFD
- Thermal undersuit
- Protective footwear
- Throwline and suitable quick release belt
- Marine water safety helmet - PAS 028:2002<sup>1</sup>
- Gloves
- Eye protection
- Knife
- Waterproof notepad

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<sup>1</sup> Whilst there is no established inland powerboat helmet standard, the marine safety helmet standard PAS 028:2002 is the most appropriate for inland powerboat use.