



Operation Guidelines for Club RIBS

First Edition

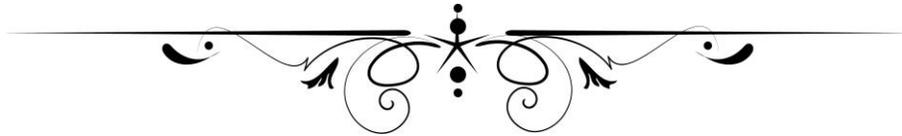
Operation Guidelines for Club RIBS

First Edition

Edited by

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(Diving Officer 2010-2012)



Compiled and approved by the 2012-2013 committee for the membership of
Bushey & Borehamwood Sub-Aqua Club (BSAC Branch 0456)

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1 Preface

This document is intended as a guide to using the Bushey & Borehamwood Sub-Aqua Club boats. It assumes the reader/boat operator has a recognised certificate (RYA Level 2, BSAC Diver Cox'n), has been shown how to use either of the Club RIBS with equipment, and is approved by the Branch Diving Officer to use the boats.

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2 Responsibilities and Definitions

Overall responsibility for the boat equipment, boat handling, passage planning and safety of persons on board lies with the trip Primary Cox. This is usually the most experienced or qualified boat coxswain on the trip. They must be a qualified boat handler (RYA Level 2 or BSAC Diver Cox'n) with sufficient experience for the operating location. The Primary Cox for each trip must be approved by the Diving Officer or one of the other nominated persons in the club such as the Boat Officer.

The safe operation of the boat and the safety of all on board is the direct responsibility of the boat coxswain. The coxswain is the most qualified or experienced boat handler on the boat at any given time. Any boat coxswain may allow any club member who holds an RYA Level 2 Powerboat Certificate or above to drive the boat. Coxswains approved by the Diving Officer and Boat Officer may allow club members who have completed a BSAC Boat Handling course to drive. Any coxswain holding an RYA or BSAC Boat Handling/Powerboat Instructor Certificate may allow anyone to drive the boat, as long as they are correctly supervised if un-qualified.

If the boat coxswain is not driving the boat, the boat driver is also responsible for the safe operation of the boat while they are at the controls. The boat driver will at all times follow any direction given by the boat coxswain. **All other club members on board will do as directed by the coxswain or driver, regardless of diver grade or any other factor.**

3 Booking Procedure

Before advertising any trip involving the boat, ensure the boat is not already booked by referring to the Club calendar (Which is kept up to date by the Diving Officer and Web Officer). Days marked as **AVON** or **HUMBER** or already have boat activity on them. If you really want a particular date that is already booked contact the Boat Officer, as some activities such as boat servicing/maintenance can be easily moved.

To book the boat for a trip contact the Diving Officer and give them i) the Trip Destination and the dates The Diving Officer and Boat Officer will then book the boat for you for that period. Just putting your trip on the club calendar does not mean you have booked the boat.

3.1 Towers, Coxn's and boat-hands

Find towing drivers, a Primary Coxswain and a boat-hand (if required), and tell the Diving Officer who they are. The Diving Officer will either OK the trip or tell you need more experienced people to run your trip. For trip to unknown, new or adventurous locations the Diving Officer (and Boat Officer) may request to see or be part of the planning process for the boat operations on that trip.

Before the trip leaves the Primary Coxswain must arrange a time with the Boat Officer to check the boat, sign for it, and collect the keys. This will usually be the Thursday night before the trip leaves, but should be arranged at a mutually convenient time.

4 Preparing the Boat

Before taking the boat on any trip, the boat will be checked by the Primary Coxswain for that trip along with the Boat Officer or another nominated person. After this check, and once both are satisfied that the boat is OK, the boat will be signed for by the Primary Coxswain using the forms provided.

Most items on the following list will be checked at this time. Any not checked at this time must be checked before the boat leave for the trip.

Deck Checklist:

Anchor, chain, warp and shot weight	A flag on board
2 buoys on board, normally in the bow	Drainage bungs secure
deck clear of rubbish	Bulge pump in place and secure
Shot lines attached to tie off points	Spare fuel tank secure behind rear tank rack, and full.
Throw line attached to rear of navigators seat	Main bottle rack bolted securely to deck (It does un-bolt, so you need to check all the bolts)

Console and Pod Seat Checklist:

Throttle box OK

Top of of console clean and free of
and rubbish

Kill chord attached

Spare kill chord in poly bottle (?)

Battery secure

Oil tank secure, Oil level checked

Dive management sheets and Casualty
Record sheets in folder

Fire extinguisher secure and damage
free

Tank Rack Box contains:

*Tube Pump

*Chart case with passage planning sheets in it, as well as pencil

*Stationary box (pencils, passage planning sheets, chinagraph, etc)

Electrics and Engine Checklist:

Electrical isolator switch working

Fuel tank full (check manually)

Both Engine management instruments
working

Install GPS/plotter and confirm
working

Check Radio

Battery on charge

Power trim functions

Bilge pump runs

Nav lights all work

Engine steering box secure (waggle it
and check it doesn't move!!!!)

Elephant trunks OPEN for towing

RUN THE ENGINE WITH THE MUFFS ON!!!!!!!!!! Don't find out after you've driven for four hours on a Friday night that it won't start!

A-Frame Checklist:

VHF antennae secure

Radar Reflector Secure

Poly bottle rack secure

Oars secure

Poly bottles present (remove for towing/non-secure storage)

First aid bottle containing trauma kit

Emergency Bottle containing flares, TPAs (space blankets), gloves, etc

Trailer Checklist:

Hitch greased and rolls easily (side to side)

Winch functions correctly – grease/oil if necessary

Brake off, and function easily

Wheel hubs greased

Tyres inflated and not worn (including spare)

Ratchet straps and trailer board present and ready for towing

Boat Box (in towing Car)

Store GPS/plotter and cover, after checking on boat

Charts for trip destination

Almanac (?)

Hand held VHF radios and chargers (cable and socket)

5 Towing the Boat

Before towing the boat:

1. Ensure the tow vehicle and driver are both legal to tow the boat!
2. Ensure the boat prep checklist has been carried out
3. Inflate the tubes to **normal** pressure
4. Check the bow is secured by the winch AND auxiliary tie down cable
5. Put the engine travel lock into position and lower the engine onto it
6. Put the prop bag over the engine leg
7. Ensure the ratchet straps are secure.
8. Attach the ratchet strap through the two towing eyes on the transom, ensuring it does not put pressure on the lighting board bars.
9. Extend the lighting board bars and attach lighting board with number plate.
10. Secure lighting cable down the length of trailer.
11. Hitch up trailer, ensuring breakaway cable and lighting are connected.
12. CHECK THE HITCH IS SECURE by lifting the trailer and seeing it lift the tow vehicle as well. This can be done by hand if you're He-Man, or by using the jockey wheel if you are mortal.
13. Lift the jockey wheel as far as it goes and secure it.
14. Check no loose articles are left in the boat, and all instrument covers are removed and stowed in the console.

The above may be done in any practical order, however the last two items on this list must be done just before leaving, after all other faffing with the boat is complete, and **MUST** be done by the towing driver.

15. Get someone to check the trailer lights work. Remember it is illegal to tow a trailer without **all** the lights working, even in daylight.
16. Walk round the trailer and make sure nothing is out of place, pay attention to the hitch, wheels, tie downs, winch and lighting board.

Do the last checks **after** every stop on a long journey, as the gremlins that live in the boat will conspire to ruin your day and have the police take you licence or your money away.

6 Launching

Before launching the boat always check the launch site first. This can save a lot of time and hassle, as well as avoiding damage or injury. Even if you are familiar with the site, never just drive the boat in without checking first.

Make sure:

1. You know the local regulations regarding launch and recovery
2. You have paid if you have to do so
3. You have checked out the condition, depth and slope of the slipway. Ask people if unsure. Failing that put your suit on and get in the water and check the slip yourself!
4. You can get over the lip at the top of the slip without grounding out the tow hitch. If necessary, go over at an oblique angle, very slowly.
5. You have briefed everyone involved in the launch about what you're going to do. Do not assume people know even simple things such as not to stand behind the trailer while it is on a slope

Once you are happy with your launch site, in any order:

1. Make a passage plan for your voyage
2. Load the boat
 - a. Lines
 - b. Flag
 - c. Oars
 - d. Buoys
 - e. Chart plotter
 - f. Chart case with chart and passage plan
 - g. Poly bottles
 - h. Hand held VHF
 - i. O2 kit
3. **DO NOT put diving equipment** on the boat before it is in the water!
4. Remove trailer board and collapse mounting arms into trailer, make sure they are tightly secured
5. Remove ratchet straps from across/behind the boat
6. Remove prop bag
7. Close elephant trunks
8. Keys in boat, kill cord fitted, isolator turned on, electrics off, bilge pump off.

9. Turn on the ignition and check the battery. If you're launching anywhere where an engine failure on launch would be serious **RUN THE ENGINE BEFORE YOU LAUNCH, AND HAVE IT RUNNING AS YOU HIT THE WATER!** If an engine failure on launch would be catastrophic, don't launch!
10. Raise the engine and take out the travel lock, then lower the engine past the point at which the lock can be engaged (this can be done after the boat is in the water if launching in calm conditions)
11. Reverse the boat towards the slip and get the back of the boat over the water.

Either

12. Continue until the boat is in the water, remove the winch strap and auxiliary cable, and launch the boat using the engine in reverse and/or people pushing at the bow

OR

13. Remove the winch strap and auxiliary cable, get the driver in the boat at the controls, and then reverse the boat into the water, with the vehicle driver touching the brakes firmly to roll the boat off the trailer.

Note: Having the electronics off when you're launching is not me being strange, it means you have maximum voltage available from the battery to start the engine when you need it!

7 Recovering the Boat

Before recovering the boat, as with launching, look at the slipway and local area and assess conditions for recovery. Many boat accidents happen at recovery at the end of the day when people are tired and want to go home. If you are not happy with conditions at the recovery site, drive the trailer and boat to a different site, or make provisions to leave the boat on the water. The club would rather pay a week of visitor moorings in a marina than right the boat off trying to recover in marginal conditions.

For recovery:

1. Brief everyone, especially the vehicle driver.
2. Have the trailer reversed into the water. A good guide (for most RIBS) is to have the top of the trailer mudguards just submerged.
3. Make sure the winch strap is set to the right length for the way you intend to recover, and the person at the winch knows how to use it. Make sure they have the winch in the high speed gear.
4. Make sure the boat is as empty of water as possible, with the bilge pump on just prior to removal.
5. Trim the engine up to avoid hitting the bottom
6. Put the boat on the trailer, either by driving or manhandling and winching. Manhandling is the preferred option as it minimizes the risks to the others present.
7. Secure the winch strap tight and attach the auxiliary cable
8. Open the elephant trunks to empty water out of the boat as it is pulled away.
9. Check to make sure nothing is going to fall over the transom when the tow vehicle moves off
10. Make sure no one is going to get run over or walk behind the boat. Remember, you can see more from in the boat than in the tow vehicle.
11. Make sure that after you recover you take everything out of the boat that might get nicked or fall off.
12. Chart plotter
13. Poly bottles
14. Chart folder
15. Personal kit
16. Open the bungs and drain the boat if you get the chance while on the slope of the slipway.

17. If you're not going to wash the boat that night, trim the engine down and let the water drain out of the gearbox.
18. Switch off the electrics, bilge pump, and isolator. **Take the keys out!**

7.1 Notes on shallow slipways

If you are operating from a shallow slipway there are a few things that you might have to do differently. Firstly, shallow implies you can't get the trailer in the water far enough to launch the boat while it is hitched on the tow vehicle. In this case you need to drop the trailer in on a rope. Remember, the boat is heavy, use strong rope! None of the shot lines in the boat would be strong enough unless doubled or tripled up. If you're rope-work / knot tying is not up to the job don't launch. If you're using multiple strands of rope they must be EQUALISED so they all share the load, rather than breaking one at a time! When reversing a vehicle with a boat on a rope always have someone at the hitch to steer the boat, and go very slowly. If you are launching on a rope then make it really long so you can keep reversing so the boat just floats off the trailer, rather than having to reverse it off and stress the ropes. If the rope breaks without the boat attached to the trailer it will sink and you will be really in the **** with a boat but no trailer to put it on!

When recovering on rope always have someone wade out and put the handbrake on. This helps stop the trailer moving as the boat is recovered. Do not drive the boat hard onto the trailer as it may move forwards even with the brake on. Unless it is very calm and you are experienced at working with the vehicle driver, do not attempt to float the boat over the trailer and then pull the trailer up under the boat. This usually ends up with the boat not sitting on the trailer correctly and potentially being damaged. **NEVER, EVER, EVER** attempt to recover on a shallow slip with waves breaking onshore. If you are over the trailer and a wave breaks behind you, you may be carried over the trailer front and dumped on the front bar and winch! This often destroys the boat hull, as well as the trailer, and you may find yourself in the middle of a large amount of broken wreckage with waves breaking on you!

When pulling the boat back up a shallow slip with ropes, move away very slowly, and have no-one near the rope in case it breaks. Remember to have someone take the brake on the trailer off before you move away!

8 Loading and stowage

The **maximum** capacity of the Avon is 6 (six) divers with sets and two crew. The maximum capacity of the Humber is 4 (four) divers and two crew.

Stuff loaded onto the boat generally falls into one of several categories

- i) Dive kit
- ii) Boat kit
- iii) Diver's/Boat crew's personal items and
- iv) People

Boat kit should all have its assigned place in the boat and that is where it lives. However illogical you think that place is, endeavour to use it so everyone knows where everything is. Safety equipment such as flares and first aid kits **MUST NOT** be stowed anywhere except their assigned place. No items that are not boat kit should be stowed mixed with the boat safety equipment. This means nothing goes under the driver's seat or in the poly bottles unless the Boat Officer or coxswain says so.

Personal kit is stowed where possible (usually towards the bow or in the tank rack box). This space is to be kept clear of boat equipment to leave it free for the divers/crew to use.

Documentation such as charts, guide books and sketches of sites are best stowed in the console, as this is the driest place on the boat. NO WET ITEMS are to be stowed in the console, as this is where the battery and electrical distribution box are.

Diving sets are stowed either side of the tank rack, or in the bow section. All sets are to be attached with a bungee around the valve knob, and another around the whole set, enclosing the divers fins as well. Weight lives in foot trays either side of the console. No lead is to be left loose on the deck during transit to or from a dive site. Masks, gloves and hoods should be with or in fins, bungeed to the rack.

Stage cylinders or ponies are best stowed on the tank rack in between the larger cylinders. They may alternatively go behind the rear racks or in the bow section. For long transits cameras and torches not attached to stabs are best stowed in the stern or held by their owners.

Often the most difficult thing to stow is people, as they have an annoying habit of not staying where you put them! Encourage people to follow the common sense rules you should have given them in your safety brief. Make a habit of insisting no-one stands between the driver and the starboard side of the boat, as this obstruct the driver's vision severely. Insist that everyone hold on to

something while the boat is at planning speed. Also try to stop people sitting on the tubes and holding onto just the lifelines, as they won't stop you falling out of the boat!

8.1 Notes on weight trim

Remember people and kit has a significant effect on the trim and therefore the handling of a RIB. If you have trouble getting on the plane move people forward, but resist the temptation to do it while still try to get up and planning. If this doesn't work you are overweight. Consider getting rid of water, fat divers, twinsets or excess chocolate. Moving people forward also affects the handling of the boat in reverse. If you ever have to park in reverse in a tight spot consider moving people forward to help the handling in reverse (try it, it does work!) The other time to move weight forwards is if you're in really shallow water and think you might run aground. It's much better to hit the bottom with the bow than drag the whole length of the keel across something.

9 Boat storage and end of trip procedures

After every trip when the boat is back at the shed the trip Primary Coxswain is responsible for ensuring the boat is packed away properly. Always put the boat back in the clubhouse **full** of fuel. When refuelling, remember to put the reserve fuel into the boat, and then refill that can. This stops the reserve fuel sitting in the boat for years collecting moisture

1. All personal/dive kit is to be removed from the boat
2. Boat is hosed with fresh water paying attention to
 - a. Ropes
 - b. Controls
 - c. Tube/hull join
 - d. Engine
 - e. Anywhere else salt collects
3. Trailer is hosed down, particularly
 - a. Winch
 - b. Wheels
 - c. Trailer board arm locks
 - d. Brakes (using a flush kit if appropriate)
 - e. Jockey wheel and hitch
4. Engine is flushed with fresh water:
 - a. Tilt the engine fully down
 - b. Apply the mufflers
 - c. Turn on the water gradually until water comes out of the exhaust and tell tale
 - d. Flush for at least one minute
5. Semi-deflate tubes and tie up with shot line
6. Put boat in shed with the brakes off
7. Check the oil tank, and refill is required
8. Hang any wet boat kit up to dry on the a-frame/bottle rack
9. Open any seats, console and bungs to dry boat
10. Put handheld VHF's on charge (storing the Lithium batteries empty will reduce their lifetime)
11. Make sure all publications are returned to the sheves
12. Return O₂ kit to clubhouse.
13. Leave all passage plans from the trip in the boat box along with the boat keys.

10 Passage Planning

It is the responsibility of the trip Primary Coxswain to ensure a passage plan for the day's boating/diving activities is made. This should take into account the experience of the divers/crew and particularly the coxswain and dive marshal. The passage plan should be kept in the chart case in or on the console. Always carry the chart of the operating area in the case as well. It is the responsibility of the boat coxswain for each voyage to ensure that they are carrying a passage plan and chart, and to update the plan is necessary.

Passage Plan should include:

1. Details of the planned route with useful navigation points or hazards marked in a clear order. Such as:
 - a. **Planned route** with bearings to follow and waypoints.
 - b. **Waypoints**, with co-ordinates and bearings relating to route.
 - c. **Landmarks**, with co-ordinates and bearings relating to route.
 - d. **Pilotage marks**: buoys, landmarks etc.
 - e. **Hazards**.
 - f. **Timings** for route (e.g. slack times at dive site).
 - g. **Speed** restrictions/no-go areas (harbours, bathing areas).
 - h. **Safe water**/safe havens.
 - i. **Contingency** plans.

Must be easily interpreted by other boat crew, should the coxswain become incapacitated.

2. **Tidal information** for the area where the boat will operate. May include:
 - a. HW/LW times, tidal stream information (direction and speed) and expected surface conditions (e.g. races) as appropriate.
 - b. Slack water for the dive site should be calculated and marked down.
3. **Weather forecast**, up to date the area. Wind strength and direction, expected surface conditions, visibility etc. Remember: if visibility or predicted sea state make it unsafe to dive or make a boat passage, do not go out!
4. **Communications information** such as Radio frequencies of Vessel Traffic Services, harbour master, etc
5. **Notices to Mariners** (NOTMS) that affect the area
 - a. **Subfacts** – information about submarine operating areas
 - b. **GunFacts** – information about military gunnery range firing times

- c. **Nav Warnings** such as missing buoys, drifting containers, etc

You can get these from the internet or charts.

- 6. **Aid to finding the dive site**, such as transits, known shots on site, etc

REMEMBER to inform somebody on land (even if they are in London) of your plan and expected time of return, as well as informing the coastguard. If you don't know some of the information needed to construct your passage plan you need to find it! If help is needed with any of the passage planning, contact the Boat Officer or the Diving Officer prior to the trip.

11 Safety Briefing

Before each voyage any passengers, crew or divers aboard the RIB who are not familiar with the boat must be given a safety brief.

11.1 All persons on board

The items below are mandatory for all persons:

1. **Radio** – location (fixed and handheld) and distress procedure(DSC and voice)
2. **First aid kit** – location
3. **Flares** – location
4. **Anchor** – location and brief use
5. **Personal safety on underway** – hold on, don't go near transom, don't obstruct the driver
6. **MOB procedure** – shout and point
7. **Kit stowage** – personal and diving
8. **Fire extinguisher** – location
9. **Throttle box** – precautions when moving around the boat

11.2 Boat Handlers and Crew

It may be beneficial to brief experienced divers/boat handlers and anyone acting as crew in the boat on:

1. **Tools/Spares** – location
2. **Shot line** – Location and deployment
3. **Electronics** – operation
4. **Kill cord/throttle** – operation and precautions

12 Operating rules

The following rules are non-negotiable.

Anyone found breaching them will be banned from driving all club boats, and the case brought before the club committee to decide what action to take. This may include a long term ban from operating the club boats.

1. **Always wear the kill chord.**

The only exceptions are:

- a. When pointing the boat at someone in the water such as during diver pick-up, such that sudden engine cut out would result in the boat hitting the person. In this case the engine must be "just in gear" (removal of the kill chord is only necessary if the boat driver is alone and has no crew to fend the person in the water off the boat)
 - b. When operating very close to a lee shore, when engine cut out would result in the boat running aground (the boat driver **MUST** remain astride the helmsman's pod seat)
 - c. In very rough seas, when engine cut out might result in the boat being rolled by a wave before the engine could be restarted (highly unlikely)
2. **Always make and carry a passage plan**, and a chart for the area you are operating in.
3. **Always turn on all the fixed electronics on the boat every time she is used.** This ensures that they work if you need them suddenly. It also stops the next person who uses the boat assuming everything works because you didn't report a fault
4. **Check the cooling water tell-tale every time you start the engine.** If it doesn't appear, even with some idle throttle open, stop the engine immediately.
5. Look behind you before engaging reverse gear, obvious but plenty of people don't
6. Always pause in neutral when moving from forward to reverse gear.
7. **Be aware of your wake.** Boats particularly vulnerable to being affected by your wash include; rowing boats, small yachts with people on the foredeck, dive boats with people kitting up, small sailing dinghies – particularly modern open transom designs when at slow speed. Remember the calmer the sea, the less prepared people are for your wake. Don't forget people ashore near the waters edge.

8. **Use the bilge pump when water enters the boat** as this reduces the chance of water finding its way down into the cable run in the hull.
9. **Handheld VHF goes within arms reach of the driver/coxswain or stays in the polybottle.** If you are the only driver on the boat you **MUST** attach the handheld to yourself in case you fall out of the boat!
10. **Use Dual-Watch (DW) on the main VHF if you are not monitoring channel 16.** You don't have a legal requirement to do this anymore, but the CG will be mighty annoyed with you if they find out you aren't monitoring 16 or 13 even though you had a radio. (Ch 13 has replaced Ch 16 as the new bridge-to-bridge voice calling channel)
11. **Always put the A-flag up when you have divers down.** Always take the A-flag down when you have your divers back on board.
12. **Read the almanac for you operating location.** The boat officer and club committee will have very little time for you if you mess up because you didn't know something that you could easily have read.
13. **Do a radio check with someone ashore if possible.** Try not to use the CG as they have better things to do. NEVER use Solent CG as they will shout at you. If no-one is left ashore, do a feedback check between the fixed VHF and the handheld.
14. If you are the boat driver, wear a **lifejacket**, even if you're wearing a drysuit.
15. **NEVER allow kit to be passed across the seats** when the engine is on, as it is easy to knock the throttle. Always brief anyone in the navigator's seat about this as well.