Guidance on Safe Use of Dalgety Bay Sailing Club Raft

This guidance is based on the Risk Assessment approved by the Management Committee under the Club's Health & Safety Policy.

Where any items referred to are mandatory, these are shown in bold type.

The raft is designed to be easy to use and is checked and overhauled annually. By being aware of these simple guidelines it will be safe and available for many years to come.

For safety, until you are confident and are familiar with the raft operations you must go out with an experienced user.

Use of the raft is at your own risk

Before you go

- Book the raft in advance on the chart outside the changing rooms. Allow sufficient time for your planned job.
- Check the forecast and tidal data. Do not use the raft if the conditions are too rough. Remember to check that the raft will be afloat and capable of returning to the mooring during your planned use. The raft mooring dries at some low tides. At 1.0m of tide you can just about launch your dinghy from the bottom of the slip and the raft is also afloat. This is the best time to check your moorings as it requires less lifting.
- If moorings are to go ashore you need to land them near mid tide or higher
- Take sufficient tools with you e.g. 2 big hammers/stilsons/mole wrench/hacksaw screwdrivers/ grease /wire/rapid setting Araldite/ rope for lifting/tying that is strong but can be scrapped/ spare floatation buoy/bottle/ weight/string to act as a marker. Paint etc to renew identification on buoy (best done ashore) Sharp cutting device for rope, spare shackles, swivels etc,
- **Never go out alone, always have a minimum team of two.** Three people are better. Most effective use of the raft is when several boat owners co-operate. Have a plan of operations before you start and designated personnel for parts of the operations and an agreed "skipper". Accidents happen when conflicts occur.
- **Always wear a lifejacket**. Old clothes and gloves are a good idea, you can get very dirty. Especially in early season warm clothing is essential and you should also consider taking a hot drink and some food if you plan to be out for an extended time.
- **Always carry at least a mobile phone or VHF radio for emergency use**
- Take sufficient fuel with you from the fuel store. It is unleaded fuel and the canister is marked 'Raft'. Remember the engine kill cord and the 'emergency pack'.
- Inform a responsible person ashore of your plans

On the water

- Tie your tender alongside and take it with you as a means of escape
- Check that all the required equipment is present, including that required for safe operation. (see inventory below)
- The engine is kept on board and secured with a safety chain. Always check security of the clamps before use. The engine should be left in the raised position after use.
- The raft mooring must be secured to the raft by the riser chain and the buoy and mooring rope stored on deck.
- The raft has 2 anchors on board. These should be checked and ready for immediate deployment in an emergency.
- If lifting the mooring clear of the seabed you will need to anchor the raft and/or mark the mooring position with a marker buoy, rope and weight. You will need to supply these.

Lifting Operations

The raft has been fitted with a new winch (2009). The safe lifting capacity is limited by three factors:

- The certified lifting capacity of the winch (1700 kg with 1 layer of wire wound on and 1300 kg with 3 layers)
- The breaking load of the cable (8570 kg)
- The limit at which the raft will tip and potentially capsize

It has been demonstrated (see test report 3/11/09) that the raft is stable up to a bow load of circa 2500kg. The winch SWL is therefore the limiting factor if a single weight is being raised. A load of 1700kg will cause the bows of the raft to start to submerge in calm water, and is therefore a good indication that the limit is being approached. If a second weight is lifted after the initial weight is secured to the raft (see also below) then winching should stop before water reaches the handrail stanchion circa 1m from the bows.

Safe operation therefore requires:

- The two counterweight water barrels are in place at the stern, are 2/3 full of water, and are securely tied on.
- Knowledge of the weight of your mooring.
- The maximum safe lift with the winch is 1700 kg. Mooring weights have a tendency to stick in the mud and initial pull to break them clear can be substantially more than their suspended weight. The best indication is that if the bows start to submerge more than a few inches then you are attempting to lift too much. Stop and consult the moorings officer.
- Chain that has been brought on board should be stowed as near the raft centre-line as practicable and neatly flaked to avoid snagging when lowering the mooring later. Crew on the bows add to the weight and should stay away from the bows when not required.
- If your mooring consists of 2 or more weights, only 1 weight should be attached to the wire at a time (hence get tides right so that you can expose the

chain far enough down). The first weight can be secured to the raft whilst the second one is raised,

- Good coordination is required between the winch operator and the lift supervisor at the bows. Watch for snagging which can put extreme loads on the winch.
- Moorings usually need to be lifted in several 'bites'. Secure the mooring chain with rope in good condition whilst letting out the winch wire and reconnecting the hook.
- Always engage the hook fully so that the load is not taken on the tip. If the chain is too small use shackles or rope. Never hook the cable back onto itself..
- When lowering the mooring this can be done in either a controlled manner (ie the reverse of lifting) or by 'free fall'. If the latter is chosen ensure that the chain is not snagged, the winch is not attached, and all personnel are well clear of the chain.
- Care of the winch wire is vital. It must be kept greased and not be kinked or wound back onto the drum too slack. If too slack the coils can form a 'riding turn' and you will be unable to unload the winch. Ensure the cable passes through the jockey wheel provided and that it is freely turning and sliding.
- Be aware and communicate at all times. The biggest risk of injury is probably from finger / hand entrapment or winching.
- Winching is a strenuous operation and should only be attempted by persons who are in adequate physical condition. Share the load by rota with other operators for prolonged operation.

An extract from the winch operating manual is given below. Before use always ensure you are familiar with these:

⚠ WARNING

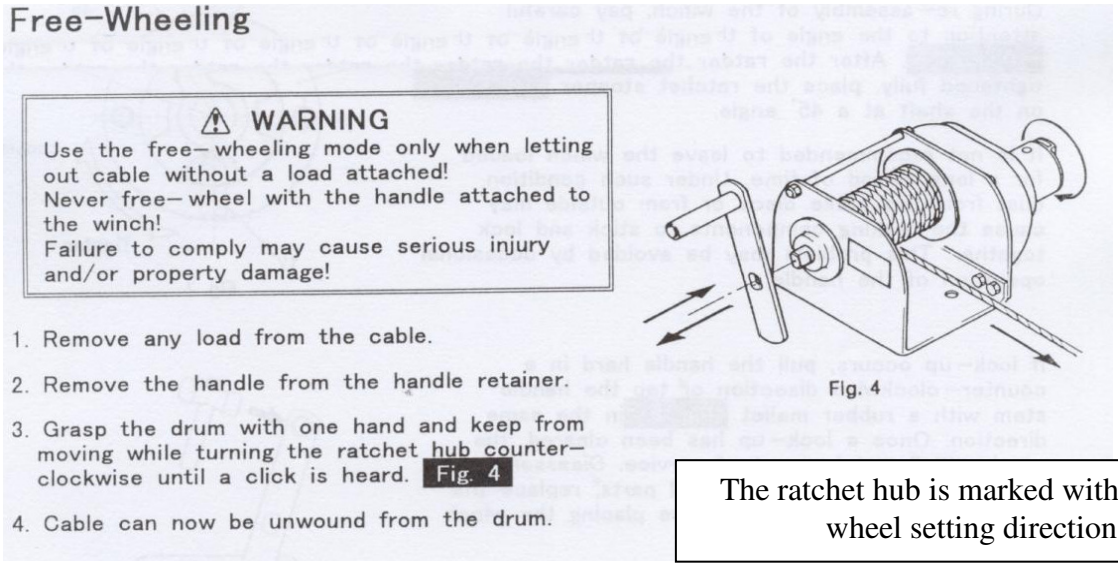
Never pull in a load by turning the handle counter-clockwise.
The brake will not work and the handle will spin at a high rate of speed if the load should suddenly unwind.
Failure to comply may cause serious injury and/or property damage.

Winding and Unwinding Cable.

Use this procedure for winding and unwinding cable in a controlled manner with a load hooked.

1. Insert the handle into the handle retainer (socket) and tighten the thumb screw.
2. Turn the handle in a clockwise direction to take in cable. you should hear a clicking sound. This is the sound of the ratchet stopper riding over a steel ball in the plunger. If you do not hear a clicking sound, the winch is in the free-wheel position. Grasp the winch drum to keep it from turning and turn the handle clock-wise until it stops. The winch mechanism is now engaged.
3. Turn the handle counter-clockwise to let cable out.

Note: The handle for both of these operations is in the handle retainer. Use the handle on the other side of the winch when taking up cable in the free-wheel mode only.



Free-Wheeling

⚠ WARNING
Use the free-wheeling mode only when letting out cable without a load attached!
Never free-wheel with the handle attached to the winch!
Failure to comply may cause serious injury and/or property damage!

1. Remove any load from the cable.
2. Remove the handle from the handle retainer.
3. Grasp the drum with one hand and keep from moving while turning the ratchet hub counter-clockwise until a click is heard. Fig. 4
4. Cable can now be unwound from the drum.

Fig. 4

The ratchet hub is marked with the free wheel setting direction

After use

Please ensure that:

- the raft is washed to remove mud from the deck
- the winch handle is reversed and the thumbscrew tightened
- the winch cover is secured (tied down)
- the raft mooring is securely attached
- the engine raised and the fuel taken ashore
- the engine kill cord & emergency pack is returned to the lower boat shed
- **you report usage and any faults in the log book**.

Raft Inventory

2 Anchors with chain & warp
2 Oars
Mooring Warps
Spare Winch handle
Bucket
Brush
Emergency pack (kept ashore and collected before raft use) comprising:
    1st Aid
    Flares
    Knife

Advice on Moorings

Separate guidance on mooring construction is available, however all moorings should:

- be in accordance with club guidelines
- be marked with the name of the boat
- be examined annually
- have a sketch or photograph showing the design to aid recognition

Consult with the mooring officer for help and advice particularly if:

- **laying a new mooring**
- **moving an existing mooring**
- **the mooring is heavier than 1000 Kg**

Warning Notice to be posted on Raft Winch Pedestal

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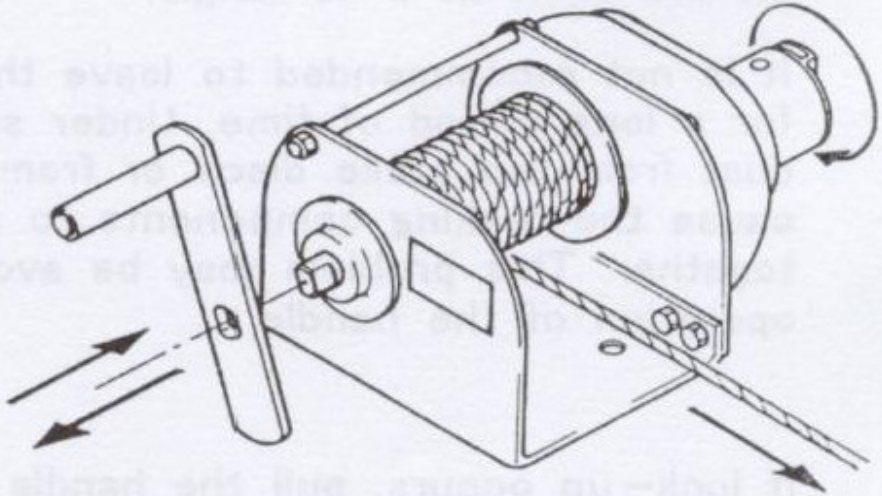

Fig. 4

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