

## Renforth Boat Club

Established 1971

### How to build yourself a mooring

**How to build a mooring:** Building a mooring is something that anyone can do if they have the information, time and a little bit of money. If you don't want to do this your self you have a couple of options. You can call the Mooring Man and about 1000 dollars later you will have a mooring. You could wait until one becomes available at the club and then put your name in for it. Check with the Harbour master for cost and availability.

**a. Stone:** 2400 or 4000 lbs: So if you have decided to do it your self the first thing that



you need is a stone. This is usually a concrete block that is either 2 by 2 by 4 or 2 by 4 by 4. If you boat is under 30 feet then the smaller one will do fine. To get this stone you can go to a concrete company and ask them



to cast one for you.



They will only charge you about 25 dollars for this. You should bring them the bottom chain to cast into the block. After it is poured and cured you will have to arrange for a truck to pick it up. The concrete company will load it for you. It is best if this is on a flat bed truck to have it near the back and put a couple of blocks under it so that you can have the truck back down the wharf and then you can easily flip it into the water.

**b. Bottom Chain:** 22 feet of 1 inch or  $\frac{3}{4}$  chain: The bottom chain is really the key to how the whole mooring system works. I would say that this is more important than the block itself or the size of the top chain. The job of the bottom chain is to change the direction of "pull" from vertical to horizontal. If this part of your mooring system is parallel to the bottom for the most part then there is very little chance that your mooring will ever move. To achieve this the chain must be heavy and at least as long as the depth of the water. Our harbour is about 20 feet deep for most of the time. This chain can be obtained for scrap value at the following sources. The

scrap yard at the end of Rothesay Ave, The Coast Guard, or Simpsons down at Five Fathom Hole. What ever you do, don't pay full price for this chain!

**c. Top Chain** 25 feet of 3/8 inch or 1/2 inch proof coil: If the bottom chain is the most important part of the system then the top chain is the weakest link! Pardon the pun! The role of the top chain is to transfer the weight of the pull of the vessel to the end of the bottom chain. You will again need a chain that is at least the depth of the water. 24 feet is usually fine for our area. 3/8 chain is fine for boats under 30 feet, half inch is recommended for bigger vessels. The size of the chain is not really critical because of its breaking strength but rather for its additional weight. You will need two shackles of decreasing size to connect the two chains together. The pins on the shackles should be "seized" with stainless steel wire. This is an absolute must since, you can guarantee that any shackle left long enough under varying load, will undo itself! The chain that I prefer comes from Fales in the Industrial park. It is American made and is used in the salt and potash industry. It resists corrosion well.

**d. Float.** Ball or Log: This is your choice. Each has its promoters and detractors, traditions, advantages and disadvantages. Here are my thoughts on the matter.

A cedar log that has been drilled, pinned at the bottom and "trained" with a set of training pants will last for years and years with very little maintenance. For winter preparation all you have to do is slip the headlines off. The down side is that a log is often harder to spot when picking up your mooring, they can mark your boat if hit it and they tend not to get inspected often as it is very difficult to pull the whole log up and actually look at the chain connection.

The inflatable ball is easy to see, inspect and do maintenance on. If however you don't get around to removing it in the winter, you only have a slight chance of finding it in the spring. Between the ice and the snowmobiles they are very susceptible to damage and sinking, or being dragged by the ice flow. Another reason for the floating ball is that when you do winterize it you drop the chain in the mud where there is very little oxygen and the chains tend to last much longer. You are also forced to do an inspection twice a year simply by servicing it.


**e. Headlines:** Headlines are the connection between your vessel and the mooring ball. You should have two of them. One on the top of the ball where you can see the connection and one on the chain that goes directly to the mooring. This second (safety) is a foot or two longer and does not take any load. It is there in case of failure of the first line. The lines should be made of Nylon and be replaced every three years. Polypropylene can be used but should never be trusted after two years. It is extremely susceptible to UV damage and chafe. Head lines should have chafing gear attached where they go through the chocks. The length of the headlines should be between 1.5 and 2 times the distance from the mooring bit to the surface of the water. This will look short to you, but it is the safest and most neighborly. A long headline does nothing at all for the holding power of your mooring. If you want to increase holding power you must do this with the bottom chain. A long headline is a hazard to navigation and also takes up excessive room in the mooring field.

If you use nylon lines then you will need to affix a float at the end of the lines for pickup as nylon sinks. This gives the added bonus that your headlines are not trailing out in the water causing a hazard to other boats moving through the mooring field. Yes they are a little more difficult to pick up, but it is good seamanship.

When you have your mooring in the water and it is time to put it in position please contact the harbourmaster and make arrangements for it to be placed in an approved location.

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