



# STANDARD DIY MOORING SPECIFICATION

This is a metric version of the standard specification that has been in used since the moorings were first laid in the 1990's. Adhering to this spec means your boat is likely to have similar behaviour to the boats around it. (Original sinker dimensions in ft are preserved until such time as we replace the blocks).

## TUDOR SAILING CLUB MOORING SPECIFICATION

This specification is to be applied to all new moorings, or when a larger boat is put on a mooring.

The sizes in this specification are recommended minimum standards – within reason, using thicker chain is fine and will mean it lasts longer. NB Two suggested lengths are shown, depending if your mooring is Deep (most Inner Row) or Shallow (Outer Row, or Inner Row near bridge). It is recommended that chains are sized according to actual depth of water at sinker positions but total length should be no less than 1.5 x depth of water at HAT.

### Sinkers: (All to be 'dug in')

**For boats up to 10 m:** Sinkers to be 4' diameter, 15" thick and concave on the underside. Eyes to be made up to 1<sup>1</sup>/<sub>4</sub>" diameter steel bar set in concrete with a mooring ring large enough to pass a 1" (25mm) dia shackle through.

### Chain Sizes:

**For boats up to 26 ft:** Ground chain to be 20 mm diameter chain; 4 m long for Deep Inner Row moorings or 3 m long for Shallow Outer Row.  
+ Bridle chain to be 3 m of 10 mm for either location (Deep/Shallow).

**For boats up to 10 m:** Ground chain to be 25 mm diameter chain; 5 m long for Deep Inner Row moorings, or 4m long for Shallow Outer Row.  
+ Bridle chain to be 3 m of at least 12 mm for either location.

**For boats on trot moorings:** Ground chain to be 5 m of 22 mm diameter.  
Bridle chain to be 4 m of at least 12 mm.

**Swivels:** To be fitted to all moorings of a diameter no smaller than the ground chain.

**Shackles:** To be no smaller than the chain, and their pins are to be securely locked with galvanised fencing wire or monel wire. Thick black nylon cable ties can also be used but may be less durable in the sun.

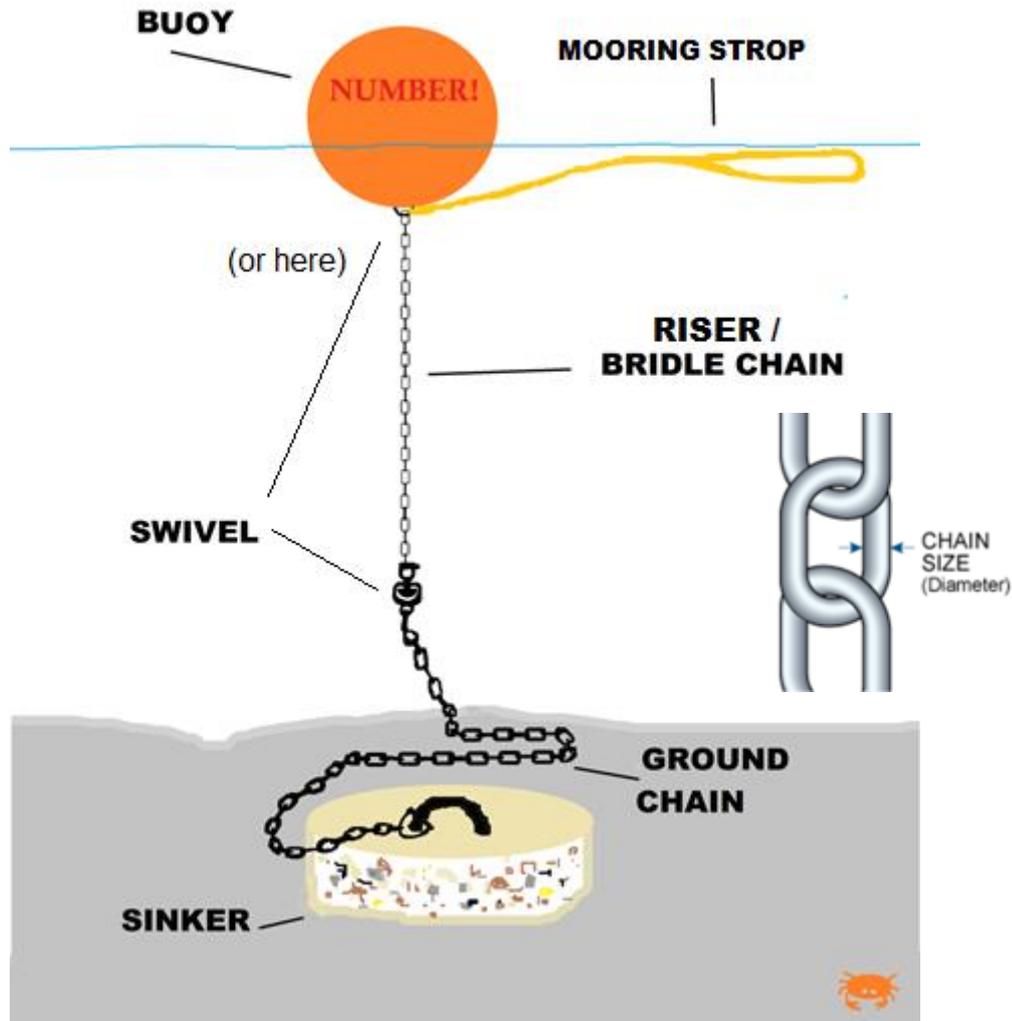
**Buoys:** To be a suitable size so it floats with >50% visible at High Water Springs.

**Buoy Lines: / Strop** To be chain of the same diameter as the bridle chain. Alternatively, a thick nylon rope strop at least twice the diameter of the bridle chain with a steel thimble spliced in, and covered with a length of plastic tube where it passes over the fairlead. Buoy line length to be 1.5 x the freeboard between buoy and fairlead.

**ALL MOORINGS TO BE INSPECTED ANNUALLY BY THE USER AND REPAIRED / REPLACED AS FOUND NECESSARY**



This diagram shows the Standard Tudor DIY Mooring described previously:



## ALTERNATIVE LHB MOORING SPECIFICATION

The Bosun's Committee can allow moorings to be laid by Langstone Harbour Board, subject to discussion with the Committee.

If Langstone Harbour Board are employed to refurbish your mooring, they have their own standard and are likely to use one single length of quite heavyweight chain which will be at least as strong as the Tudor 10m spec.

**MEMBERS ARE STILL RESPONSIBLE FOR THEIR MOORINGS WHICH MUST BE FULLY INSPECTED ANNUALLY, AND REPAIRS MADE AS REQUIRED.**



## TIPS AND ADVICE

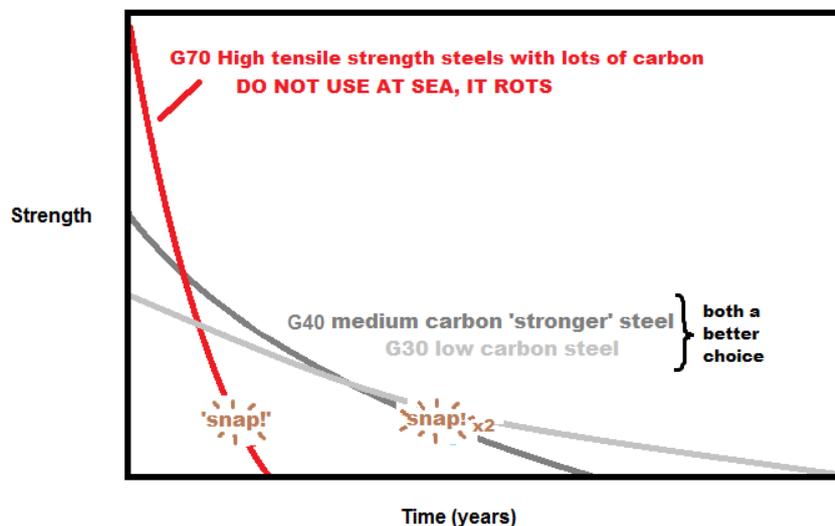
If in doubt, ask around the club for advice on how to maintain your mooring. Thank you for the many tips and hints I have received over the years. Here are some ideas to help you do it right:

- **Before buying chain, understand what length you need.** It depends on where your mooring is. This is covered by the table above; this is a reminder.
  - If your sinker and ground chain is pretty much always accessible at Low Water (and is often high up on the exposed bank) then you have a Shallow, Outer Mooring that needs the shorter-spedced chain
  - If Low Water rarely uncovers where your ground chain meets the sinker, then you have a Deep, Inner Mooring that needs the longer-spedced chain



- Chain that is too short may pull the buoy under water at spring high tide and it could get sliced by someone's prop. Also your boat could get dragged low in the water or you might pull your block out
- Chain that is too long will make clashes with other boats more likely
- **Use chain from a reputable supplier familiar with marine conditions**
  - Beware that some high-tensile strength steels can contain a lot of carbon which means they rust a lot quicker and are not suitable for use in a salty environment – don't buy bargain scrap industrial heavy lifting-chain

### Mooring Chain Steel Type vs Longevity





- **Inspect your chain right down to the sinker at least once a year**
  - This is especially important if you are new to the club and have inherited a mooring with tackle kindly donated (abandoned?) by a previous owner
  - A good ground chain can often end in a very worn bottom shackle, as this shackle gets all the movement when your boat swings sideways in storms
  - Don't assume that because some of your chain is OK the rest of it is
  - Swivels are another weak point, as are mooring strops
  - Remove old ground chain – don't throw it over the side; it can rust into a sharp mass that can puncture your boat
- **Deal with wear in your mooring chain early.** It may look like "It's OK. I can see half of the metal left", but looks can be deceiving...
  - The strength comes from the chain's cross-sectional area, not its diameter, and as the diameter drops, the area of metal left drops at a much faster rate
  - Worse, a deceptive layer of rust on top may conceal greatly thinned metal
  - E.g. If your diameter has halved, you only have a quarter of the strength left

### Chain Thickness vs Strength Left



- Do not let your chain get this weak – it is a condition of holding a mooring that it is maintained properly and the Bosuns can inspect and condemn a poorly maintained mooring, requiring you to remove your boat until it is fixed
- **Swivel Position:** A swivel prevents your boat winding itself down onto the seabed.
  - A lot of people put the swivel in the middle where it rusts less.
  - Others put it under the buoy where it is easier to check
  - Both are fine. Your choice. Just make sure you have one and it is not seized
- **A good way to change your chain over is to assemble it before launching.** Link together the buoy, bridle, swivel, ground chain in a nice warm garage in the safety of home.
  - You have all the tools you need and they cannot go overboard
  - No fingers will get cold and unresponsive
  - You cannot run out of time, tide or good weather
  - Just one shackle to install down at the water – the one to the block. Easy!
  - Some owners lightly grease shackle threads or apply silicone sealant – prevents the thread rusting and weakening, and aids disassembly