***Note: Change to two yearly inspection requirements 21/07/2021**
All moorings must have their top rope, top chain and secondary chain brought to the surface for inspection, unless approved by the Harbourmaster in writing.

Mooring construction guidelines

Length of Vessel (m)	Dry Block Weight * (Kg)	Steel Weight (Kg)	Ground Chain (mm)	Intermediate Chain (mm)	Riser Chain (mm)	Top Rope (mm)
Less than 6	400	250	18	12	10	16
6-8	700	450	24	15	10	18
8-10	900	600	24	15	12	22
10-12	1300	800	28	18	12	30
12-14	1800	1100	36	22	16	34
14+	Check with GW Harbour Masters Office					

* See "Mooring blocks" below

Chain lengths – *Refer diagram on reverse*

D Depth of water at the block, sounded at MHWS.
F Height above water of the bow roller/fairlead.
G Distance from the bow roller/fairlead to the securing cleat.
L Length of vessel.

Ground Chain length = 0.55D
Intermediate Chain = 0.55D
Riser Chain = 1.1D
Top Rope = 1.5F+G
Feeder rope to buoy = to suit

Swinging radius. The approximate swinging radius is: 1.7D+L

Mooring blocks. When a material is submerged, it will lose some of its weight due to buoyancy. Eg. Concrete will lose about 40% once it is submerged, hence the additional dry weight requirement over steel.

Swivel. The size of swivel used should be at least one size greater than the larger of the two sizes of chain being joined. It can be located either between the intermediate chain and riser chain or between the riser chain and top rope.

Use of shackles. The size of shackle used should be at least one size greater than the larger of the two sizes of chain being joined. Shackle pins are to be securely welded or moused.
Note: Shackles should be kept off the seabed when the mooring is in use, to avoid the abrasive effect of the seabed material on the mousing wire etc.

These specifications are to be used as a guide only. Different types of vessels, moored in different locations will require different mooring specifications.

Factors to consider:

- Heavy/Moderate/Light displacement vessel – i.e. its weight compared to its length.

- Where is the mooring located?
  - Is it subject to adverse weather or sea conditions?
  - Is there any current?
  - What is the seabed material?

For further information please contact the Harbour Masters Office on 048304160 or email Harbours@gw.govt.nz

https://www.gw.govt.nz/environment/harbours-and-coasts/boating-facilities/

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Good Afternoon all Swing mooring owners 21/07/2021

I trust you have all weathered the recent storms, fortunately no breakaways in the last few weeks ☺ .

Through consultation with some swing mooring owners, swing mooring inspectors and best practice through other regional councils. We are changing the way Wellington swing moorings are inspected.

Due to generally poor diving conditions experienced in Wellington for swing mooring inspections, we are making it a **requirement that swing moorings must have their top rope, top chain and secondary chain brought to the surface for inspection**.

This will be introduced after your next inspection (which can be in-water), giving you the opportunity to have a spare top section made. – see the notes below.

The intention is not to raise the entire mooring block and mooring for inspection as this was expensive and potentially challenging with current and other conditions. Also this could de-stabilise an otherwise solid mooring.

What does that look like:

- Swing moorings must have their top rope, top chain and secondary chain "brought to the surface for inspection", this requires these sections to be **uncoupled** from the block or ground chain and brought to the surface for inspection/repair.

- A pragmatic way of achieving this efficiently is, at your next inspection, have the inspector create a template of your mooring after any repairs. This will give you 2 years to **duplicate this section of mooring**, so that in future all the swing mooring inspector needs to do, is to swap it out with the old section and do a check on the ground chain, block, eye and connecting shackles.

- This way **nearly all shackles can be welded,** as they are a common point of failure. (Maybe have a welded large link as a choke to the ground chain and potentially have moussed shackles to the swivel if you don't wish to buy two.

- This would allow you to **replace the rope every two years** rather than taking a gamble, as top ropes are also a common point of failure.

- The best part is it will **save you money in the long run and give a better result**. This should only necessitate one trip by the Swing mooring inspector to fit the new section and conduct an assessment of the ground chain and the block.

- Making up the duplicate section of mooring **can still be conducted by the swing mooring owner, however it must be signed off by the swing mooring inspector as "Fit for purpose"**. Consult with your inspector

- Please only use **self-colour marine grade steel chain, shackles and swivels**.

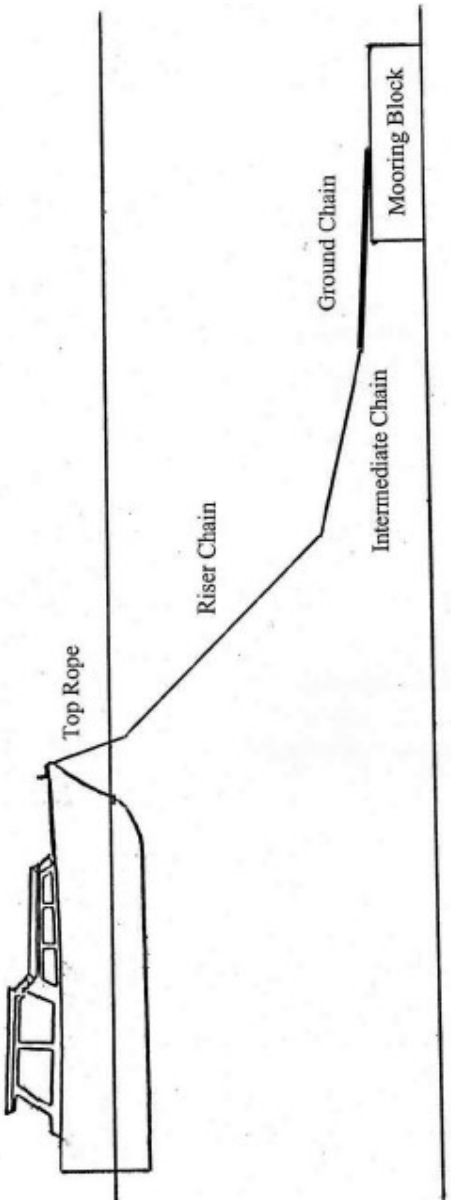
- Avoid mixing metals e.g. stainless and back steel or galvanised shackles or chain.

- If welding the shackle pin, weld on the underside of the pin only. (Outside of the hole in the D shackles) so not as to foul the chain movement.

- Cookes or Wellington Provedoring are some of your local and best suppliers.

- Please consult the **construction guidelines attached** as a minimum requirement for your build.

- If you are proactive you could have a backup, should you need it.


Top Rope
Riser Chain
Intermediate Chain
Ground Chain
Mooring Block