



BYS MARINA - FLOAT & PEN SPECIFICATIONS – Issue 1.2

BYS Marina conditionally accepts Float and Pens as described in this document and reserves its right to update this policy and conditions of compliance from time to time.

Specifications and Approval processes assist in protecting the Marina Infrastructure, provide a Safe and Ergonomic Marina Environment for all Berth and Boat Owners, Staff and Guests to use safely and enjoy.

Approval Process. *Prior to any Float or Pen being accepted and installed in the BYS Marina, approval must be sought and granted in writing by BYS Marina.*

Insurance. *All Floats and Pens (or similar devices used to dock craft in BYS Berths) must be insured as per all BYS Marina Vessel requirements. Proof of insurance must be provided to BYS Marina annually, as part of the Pen or Float approval criteria.*

Berth specific approval is required, given berths vary considerably. BYS Marina is exposed to Wind, Cross Tides plus residual Wave movement during heavy weather events. Therefore, all Vessels (including Pens & Floats) must be suitably installed to suit these variable conditions.

1.0 GENERAL CRITERIA

Floats and Pens are classified as Moored Vessels. They must be sized to be less than the Berth size, to safely accommodate all conditions and BYS Marina compliance requirements.

Whilst there is commonality with Berth lengths (8m, 10m 15m etc.), widths and shape are not common. Therefore, all Vessel approvals are based on individual berths.

Vessels (inc. Floats and Pens) are not to be in hard contact with the infrastructure (walkways, fingers, piles etc.) under any sea, tide (both directions, high and low) or wind conditions.

Contact with the infrastructure may occur only via appropriately located and approved fenders, or otherwise secured such that the Vessel is held off the infrastructure at all times.

Fenders are encouraged on the Finger Side, given rope tensions / conditions change over time and will need maintaining and adjusting as required to avoid the float / pen impacting the infrastructure. BYS Marina Staff may adjust or replace mooring lines when necessary. When a mooring line is replaced, a nominal fee will be charged to the berth holder.

Mooring Lines attached to the Mooring Pile (located between neighboring berths) are recommended to be attached via a Pile Ring, Tide Slide or similar to help maintain the relative mooring position of the Float / Pen between the berth Breast Line and the Finger, regardless of tide height.



2.0 PRIMARY SPECIFICATIONS

2.1.0 DETERMINING VESSEL (PEN or FLOAT) MAXIMUM WIDTH.

2.1.1 Finger Side.

Establish the Fender Size or General Clearance as set by fixed mooring lines preventing the vessel from contacting the Finger under all Sea, Tide (flow both directions & height) and Wind conditions. Allowance for standard fenders (typically around 200mm diameter) must be allowed for on the finger side. An allowance for line slack between the Vessel (including floats/pens) and finger needs to be allowed for vessel movement as per normal mooring practices.

As noted above, *Pile Rings, Tide Slides or similar* Mooring Pile attachments (as opposed to using the standard Mooring Pile Eye Bolt) will improve the relative mooring position of the Float or Pen to the Finger, independent to tide movements.

2.1.2 Fairway Side.

0.5m minimum clearance from the Berth Boundary / Breasting Line (1.0m minimum between neighboring vessels under all sea, wind and tide conditions) is essential.

The 0.5m clearance Fairway between a berthed Vessel and Breast Line (1.0m minimum between neighboring vessels) is a 'No Vessel Mooring Zone' under any conditions.

Therefore, greater allowance than 0.5m minimum needs to be provided when determining a Pen or Float Width, considering rope tensions and conditions change over time, or are inadvertently altered after approved installation.

Therefore, the maximum width of any moored Vessel (Pens and Floats) in the BYS Marina is the Berth Width minus Clearance and or Fenders on the Finger Side (2.1.1) minus more than 0.5m on the Breast Line Side (2.1.2) to accommodate vessel movement and variable line tensions / condition.

2.2.0 VESSEL (PEN or FLOAT) LENGTH.

A Pen or Float must not at any time be in contact the Main Walkway (or allow any protrusions, such as anchors, over the main walkway) or the Gusset (triangular structural component) connecting the Main Walkway with the Finger. Therefore *wide, rectangular Floats / Pens will need to be shorter in length* to avoid interference with the Finger Gusset and may disadvantage the size of vessel for that installation. See details below in **3.2** and **Pics. D, E & F**.

Therefore, narrower and or angled front sections on Floats or Pens generally offer more efficiency and ergonomics for boat owners.



The Pen or Float must not protrude beyond the rear Mooring Pile separating the Berths, unless specific approval is sought, in line with overall Vessel Sizing for Individual Berths.

3.0 SECONDARY SPECIFICATIONS / CONSIDERATIONS.

3.1 WALKWAYS (Service Planks) when added to Floats and Pens.

Where metal (or any hard surface) walkways are added to floats and pens (for boat maintenance and access convenience), they are *permitted on the non-finger side only (unless they do not protrude past the outside edge) of the Float or Pen.*

This specification *minimises potential personal injury or damage to the Marina Finger, unless approved Fenders are used as per any hard-sided vessel, whilst meeting all other Pen Size and Installation Criteria.*

Where Service Planking is added, *'D' shaped extruded Fenders or similar are highly recommended for the length of outer edge of the plank and or at minimum on the plank corners, where damaging impact may occur to neighboring vessels. See **Pic. C** below regarding a typical hard corner safety hazard, **Pic. G** for non-compliant side / lack of fenders and **Pics. H & J** for optimum plank / walkway positions (on top of pontoons).*

3.2 GUSSETS - Marina Fingers.

The Gussets (triangular sections) connected to the Main Walkways and Fingers are Structural. *Vessels are not to impact these gussets under any conditions.*

Pen & Float Selection Tip. When considering Pen and Float Options, wide rectangular designs will need to be *set further back from the Main Walkways as per **Pics D, E & F** below to avoid contact with the Gusset.*

This means wide rectangular Floats / Pens by default locate the *Vessel further back from the Main Walkway and where rear entry to the Vessel is desired, it may be past the Finger End, making ergonomic / safe vessel entry problematic! See **Pic. D.***

3.3 REMOVAL of PENS / FLOATS (Decommissioning).

When Pens / Floats are removed, any damage / screw holes etc. must be restored to original when decommissioning. This criterion is part of the approval conditions. See **Pic. M** as an example of incomplete decommissioning. Where BYS Marina Staff carry out the repairs, an appropriate fee will be charged to the berth holder.

3.4 POWER LEADS & PLUGS.



All Floats and Pens that predominantly remain plugged in (typical where sump pumps are integral to a Pen), then the power lead must be tested and tagged annually in line with BYS Marina electrical lead standards. Where screw plugs are available (mainly Stage 2. Marina), then screw plugs must be used.

Where Floats or Pens remain predominantly unplugged and only plugged in occasionally such as to raise a Float, then the power lead must be in general compliant condition, as per any temporary auxiliary electrical device such as drills, polishers etc.

Regarding all Specifications - IF IN DOUBT - ASK!

BYS staff (and other berth holders) are *here to help and will be pleased to run through all the requirements plus provide valuable experienced and advice!*

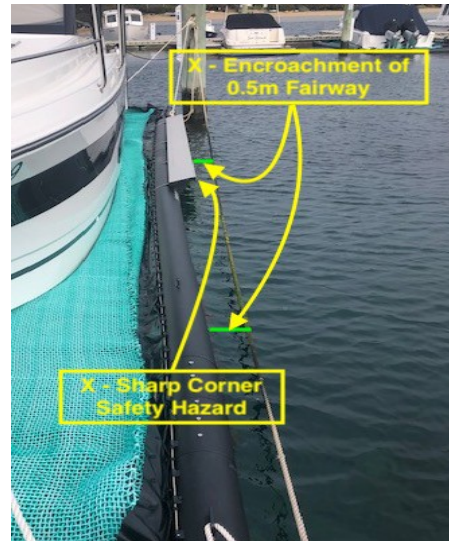
4.0 REFERENCE PICTURES & EXPLANATIONS.

X = Unacceptable / Fail.

4.1 FAIRWAY BETWEEN VESSELS (Non-Mooring Zone - All Berths)



Pic A. Compliant Fairway.



Pic B. Non-Compliant Fairway.

Pic C. Non-Compliant Fairway.

Pic A. Pens Correctly Installed (re Non-Mooring Zone / Fairway), where a permanent 1.0m minimum Fairway must exist between neighboring vessels moored under all Sea, Wind and Tide Conditions.

Pic B. Poorly adjusted mooring lines have allowed this Float to encroach on the neighboring berth and is therefore a *non-compliant installation* – even if the float itself is compliant.

Pic C. Poorly adjusted mooring lines have allowed this Pen to encroach into the 0.5m *minimum No-Mooring Zone* of this berth and therefore this installation is *non-compliant*.

The installation of the Plank in **Pic C.**, whilst on the *non-finger side*, which is acceptable, it is non-compliant because a) It encroaches on the minimum 0.5m Fairway and b) Presents a *Hard Corner Hazard* to the neighboring Vessel, unless a permanent Corner Fender is fitted.

Pic J. Furthermore, where Planking is installed, we recommend they be located directly on top of the polyethylene pontoons where possible, rather than offset outward as in this example. This recommendation *reduces potential hazards plus provides more tolerance / size availability to the Pen / Float Owner*.

This Specification and Recommendations have the following benefits...

- a) Eliminates (or significantly reduces) Hard Corner Hazards.
- b) Reduces the overall width of the Pen, making it easier for the installation to be compliant regarding the 0.5m minimum permissible Fairway (non-mooring zone).



4.2 VESSEL ACCESS.

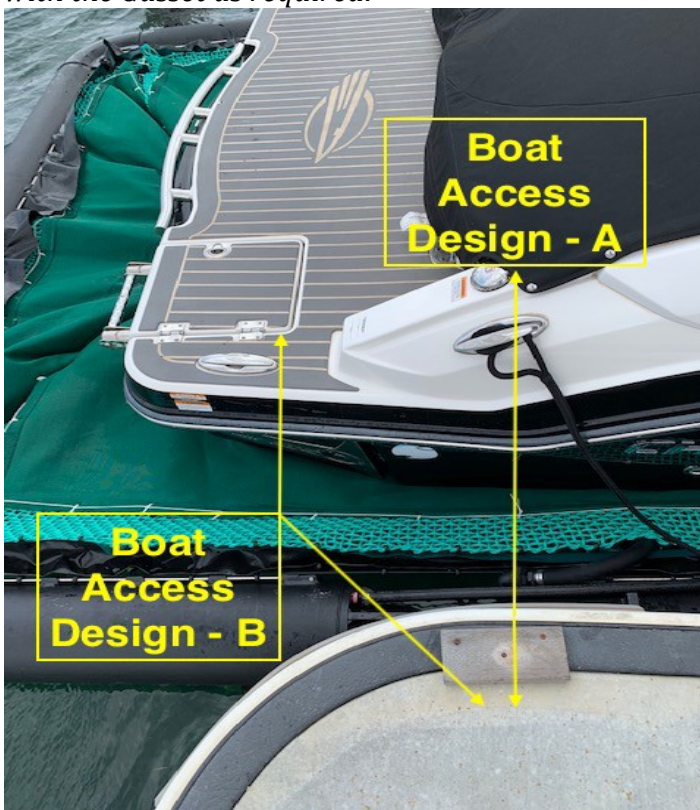
For Boat Owner Consideration. When selecting a Float or Pen, it's important to determine *if rear access to the vessel is required at the end of the finger* and to determine *where the craft will be located with each design option or brand of Pen / Float being considered.*

The example below illustrates the impact of the design of Float or Pen can have regarding Vessel Access.

The forward position (towards the main walkway) of the Float / Pen when secured will determine the transom (access) position of the craft relative to the finger.

Refer to **Pic D.** for two variations of float / pen design. **Pic E.** demonstrates how close the Pen can be to the Main Walkway, providing it doesn't Impact the main Walkway or Finger Gusset. This is the most ergonomic pen design for vessel access at the end of the finger.

Pic F. demonstrates a less ergonomic design of Pen for vessel access, *when avoiding contact with the Gusset as required.*

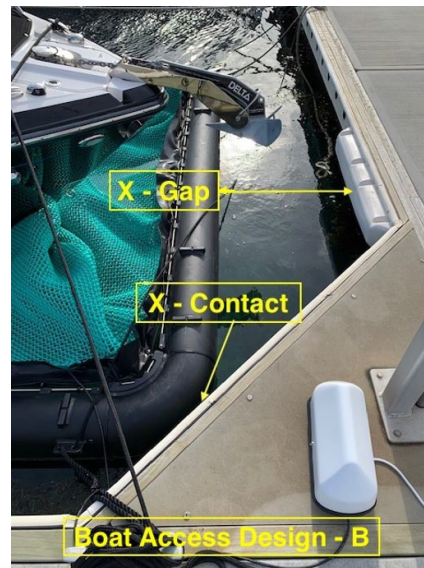




Pic D. Boat Access - Variation.



Pic E. Design - A



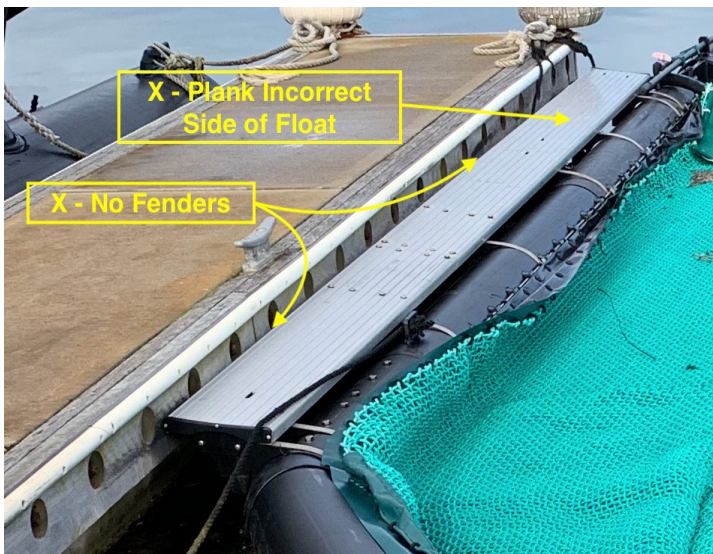
Pic F. Design - B

4.3 FENDERS - FINGER PROTECTION and SAFETY.

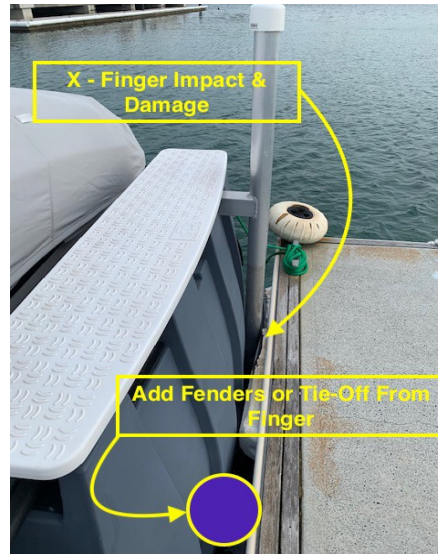
All rigid sided vessels must be permanently *tied away from the finger to avoid contact under all conditions, and or suitably sized fenders must be located between the vessel and finger, to eliminate hard contact at all times.*

Access Planks as per **Pic G.** when installed *should be located on the fairway side and not the finger side, without adequate size and number of fenders being installed.* The exception to this requirement is Access Planks located as per Pic H., where the Plank (plastic in this instance) is *well inside the Float perimeter* and therefore poses no risk to other Vessels or Infrastructure.

Pics G, H. and I. demonstrate the *need for either adequate fenders to be added or the floats to be tied such that they cannot impact the Finger, to be BYS Marina Compliant.*



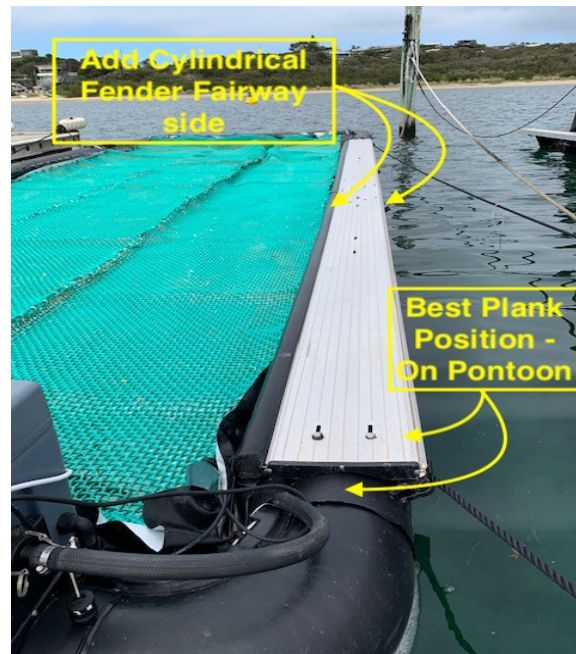
Pic G. Non-Compliant Installation.



Pic H. Non-Compliant



Pic I. Non-Compliant Installation. (Pontoon)

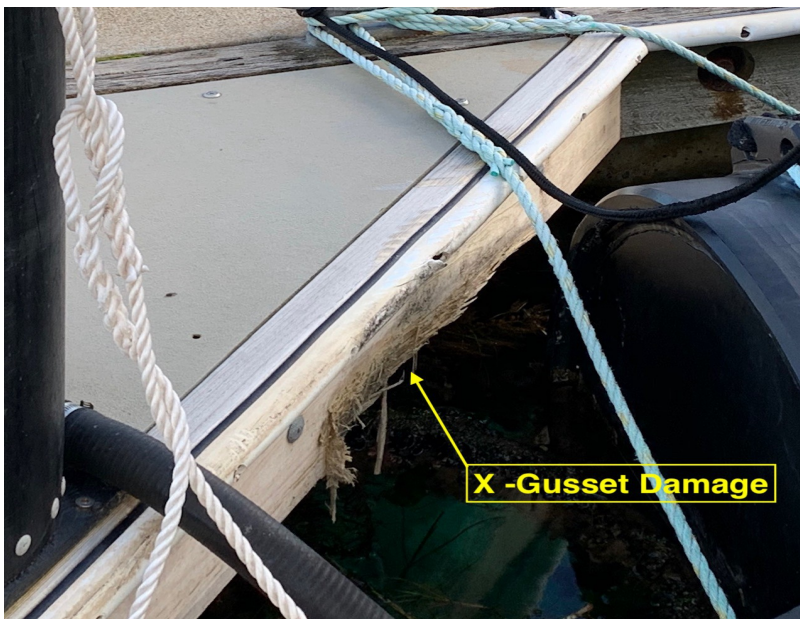


Pic J. Preferred Plank Position (On Pontoon)



4.4 GUSSET PROTECTION.

Installations of Floats and Pens are *not to contact the gussets under any conditions.*



Pic K. Non-Compliant Installation.

4.5 FLOAT & PEN MAINTENANCE.

The owner of any Float or Pen is responsible for maintaining the safe and clean working condition of that Float or Pen. In particular, Floats / Pens must not accumulate excessive growth and be relatively clean to remain compliant within the BYS Marina.



Pic L. Non-Compliant Condition.

4.6 DECOMMISSIONING FLOATS / PENS.

Any Float / Pen removed from the Marina, *the owner must make good the Marina Infrastructure from any Customised / Non-Standard Marina Attachments.* Standard attachments include; Power, Fire, and Water facilities.



Pic M. Non-Compliant Decommissioning.