

#### CYCLONE WARNINGS

Bureau of Meteorology (BoM) issues Tropical Cyclone (TC) Advice whenever a TC is expected to cause winds in excess of 62 km/hr (gale force) over land. A TC Advice may be a Watch and/or a Warning, depending on when and where the gales are expected to develop.

For ongoing information from BoM during Tropical Cyclone periods refer to:

Recorded Cyclone Warning Service: 1300 659 210  
Internet: <http://www.bom.gov.au/cyclone/>

Department of Fire and Emergency Services (DFES) will release a Cyclone Community Alert to keep people informed and safe. Alert levels change to reflect the increasing risk to life and advises what you need to do before, during and after a cyclone. DFES issues the following cyclone alerts, ADVICE, WATCH & ACT, EMERGENCY WARNING and FINAL ADVICE. (see reverse side)

Internet: <http://www.emergency.wa.gov.au/>

#### KEY CONTACTS NUMBERS

DoT Incident Control Centre: P: 1300 966 459

**During an "EMERGENCY WARNING":** P: 9159 1400

DFES Recorded Emergency Info P: 133 337

SES Emergency Assistance P: 132 500

WA Police Port Hedland: P: 9173 8100

Town of Port Hedland: P: 9158 9300

All Emergencies: P: 000

#### MOORING & PEN INFORMATION

Vessel length	Bow & stern line loads	Spring line loads
20 metres	12 tonnes	5 tonnes
15 metres	7 tonnes	4 tonnes
12 metres	5 tonnes	2 tonnes

Typical mooring line loads under cyclonic conditions.

Note: Line loads will vary depending on the mooring configuration, wind direction and cyclone category.

#### SIGNIFICANT HEIGHTS

8.3m	—	Highest Recorded - Cyclone Veronica
7.6m	—	HAT
6.7m	—	MHWS
4.7m	—	MHWN
4.0m	—	Mean Sea Level
3.9m	—	AHD
3.3m	—	MLWN
1.3m	—	MLWS
0.0m	—	LAT (2005)
-0.4m	—	Lowest Recorded - 1959

**To be read in conjunction with the Department of Transport  
Spoilbank Marina Cyclone Mooring Guidelines.**

Available at: <https://www.transport.wa.gov.au/marine/cyclone-community-information.asp>

#### NOTES

1. This plan is not to be used for navigation. Use Australian Hydrographic Office nautical chart Aus54.
2. Positions on this plan are related to the Geodetic Datum of Australia 2020 (GDA 2020). For GPS use, this approximates WGS 84.
3. Sounding Datum is Lowest Astronomical Tide (LAT) which is 3.9m below AHD (2005).
4. Hydrographic survey composite includes the latest marina survey from August 2023.
5. The approaches to this Marina are via the waters of the Port of Port Hedland controlled by the Pilbara Ports Authority and vessel operations are subject to direction by the Pilbara Ports Authority Harbour Master when traversing the Port area.
6. Anchoring on seabed of marina is prohibited.

#### DISCLAIMER & ACKNOWLEDGEMENT

The information contained in this publication is provided in good faith and believed to be accurate at time of publication. The State shall in no way be liable for any loss sustained or incurred by anyone relying on the information. This information in no way takes away the responsibilities of a Vessel's Master.

This Community Information Sheet has been prepared for community safety advice to preserve life and property. The support of the reader is crucial to the effectiveness in protecting life, property and the environment.

# Tropical Cyclone - Community Information Sheet

## Port Hedland Spoilbank Marina – 2024/25 Cyclone Season

### 1. Purpose of the Community Information Sheet

This Community Information Sheet has been developed to assist users of the Port Hedland Spoilbank Marina during the period leading up to, the impact of and recovery from, a Tropical Cyclone. It is important that commercial and recreational boat users are well prepared and meet their Legislative requirements in having their own Cyclone Contingency Plans in place.

The Department of Transport (DoT) has a number of preparedness, response and recovery arrangements, including DoT Cyclone Management Plans to manage the impact of a Tropical Cyclone on its facilities.

### 2. Activation of the DoT Cyclone Management Plan

This DoT Cyclone Management Plan will be activated once a Cyclone Watch or Warning has been issued for the Port Hedland area by the Bureau of Metrology (BoM). This activation is an internal process of the DoT.

### 3. DoT Appointed Incident Controller

An authorised DoT Incident Controller will be appointed upon activation of the plan to initiate cyclone preparedness actions for the Port Hedland Spoilbank Marina including some involving harbour users. The Incident Controller will be assisted by the appointment of a Harbour Controller in Port Hedland.

### 4. Communication Mediums

While the DoT will not be providing scheduled radio broadcasts, frequencies will be monitored, while practical, through several local sources including:

- VHF 12 and 16 are monitored by Port of Port Hedland
- 27 Mhz 88 and VHF 16 and 81 are monitored by sea rescue

A 24 hour, 7 day/week HF service operates from the Water Police Coordination Centre that monitors the 4125, 6215 and 8291 kHz distress and calling frequencies. This service covers WA coastal waters within 200 nautical miles offshore. The closest transceiver is at Port Hedland and the call sign is "Coast Radio Hedland".

Key Contacts listing can be seen on the reverse side of this Sheet.

Refer to DFES website 'Emergency WA' or BoM website for current cyclone information and alert levels.

### 5. Responsibilities of Masters and Owners of Vessels

***The information contained within this Community Information Sheet in no way replaces the existing legal obligations of owners and masters of vessels, nor does it seek to over-ride the responsibilities of a Master to take appropriate precautions for the safety of the crew, or to interfere with the Master's independent discretion.***

In general terms, Vessel Owners or Masters should undertake the following tasks in order to prevent or minimise damage by ensuring:

- Mooring lines are strong enough, are not chafed and are correctly tensioned.
- All Biminis and canopies should be removed.
- Roller jibs and mainsails furled to booms should be removed or securely tied to prevent them coming loose.
- All equipment such as dinghies should be removed from the decks and stored below or ashore or securely fastened.
- All running rigging on yachts is tight and securely fastened.
- Check that adequate fendering is in place on boats and that these are correctly located.
- Ensure that the length of the boat moored in each berth is no longer than the length designated for that berth.

### 6. Limited Number of Mooring Pens and Mooring Positions

It is important to recognise that the Port Hedland Spoilbank Marina has a limited number of mooring pens and mooring positions. Every effort will be made to maximise the use of the Port Hedland Spoilbank Marina, however Masters should be prepared (as part of their own Cyclone Contingency Plan) to seek alternate shelter if necessary.

Please note that the Port Hedland Spoilbank Marina cannot guarantee to provide secure shelter and safety for vessels and crews in all weather and storm surge conditions.

### 7. Cyclone Emergency Welfare Centre

There are no suitable onshore Cyclone rated shelters at the Port Hedland Spoilbank Marina for crew during a Cyclone and **all crews** must relocate to suitable shore based accommodation or Town of Port Hedland Cyclone Evacuation Centre. The Town of Port Hedland Cyclone Evacuation Centre is located at the JD Hardie Youth Centre, Cottier Dr South Hedland. Crews should bring clothing, toiletries and other personal effects with them to the Welfare Centre to assist local emergency management arrangements.

### 8. Tidal Storm Surge

Harbour users need to be aware that a significant positive storm surge may result from the extreme meteorological effects of a Tropical Cyclone. Storm surge may be exacerbated when a Cyclone impacts on a coastal community in conjunction with high tide. Masters of a Vessel need to factor in the effects of storm surge when mooring and preparing their Vessel.

### 9. Cyclone Mooring Arrangements

Mooring priority will be given to vessels covered by an existing mooring agreement. Please refer to the Incident Controller for mooring availability.

A Cyclone Mooring Guideline has been prepared by the DoT, and is available, to be read in conjunction with this Community Information Sheet. The Cyclone Mooring Guideline for Port Hedland Spoilbank Marina can be obtained from the DoT Karratha Office or at the following web address <https://www.transport.wa.gov.au/imate/cyclone-community-information.asp>

### 10. Masters and Owners Actions during Alerts and Warnings

#### **BoM Declares Tropical Cyclone WATCH or WARNING**

- Initiate actions in line with vessel or Company cyclone contingency plan.

#### **DFES 'Advice' Declared**

- If en route to Port Hedland, establish/maintain contact with the Incident Controller or relay through Port of Port Hedland.
- Plan to be secured in the harbour at least 24 hours before predicted Gale Force winds.
- Ensure vessel has been adequately moored.
- Ensure sufficient fuel on board to clear the harbour after the Cyclone for a return journey.
- Secure all equipment and/or remove the equipment from the harbour precinct.

#### **DFES Watch and Act Declared**

- Ensure vessel and area of responsibility have been secured.
- Relocate to the Town of Port Hedland– Evacuation Centre or make other suitable arrangements.

#### **DFES Emergency Warning Declared**

There are no actions defined during this phase of ALERT and appropriate rated shelter should be used for your own safety and observe standard DFES guidelines and procedures for a Tropical Cyclone.

#### **DFES Watch and Act OR 'Advice' is declared**

- **Be mindful of related action statements attached to warning level**
- Extreme caution is to be taken in the post impact phase of a Cyclone both on land and on the water and where hazards or damage is observed it is to be reported to the Incident Controller.
- When leaving the harbour from a berth or a dedicated cyclone mooring extreme caution is to be exercised as navigation aids may be displaced or missing and there could be additional floating/submerged hazards.

**Note: Masters and Owners must consider their own "DUTY OF CARE" responsibilities to remain safe, to protect people, property and the environment.**

This Community Information Sheet is available online from the Department of Transport at the following web address:  
<https://www.transport.wa.gov.au/imate/cyclone-community-information.asp>

## CYCLONE MOORING GUIDELINES

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## 8.1 General

Cyclones have wind gusts in excess of 62 km/h around their centres and, in the most severe cyclones, gusts can exceed 280 km/h. Cyclone Advice is prepared by the Bureau of Metrology (BoM) with the severity of a Cyclone being described in terms of categories ranging from 1 to 5 related to the zone of maximum winds.

Category of Tropical Cyclone	Strongest 3 second Gust (km/h)	Typical Effects
1	Less than 125 km/h Gales	Minimal house damage. Damage to some crops, trees and caravans. Boats may drag moorings.
2	125 - 164 km/h Destructive winds	Minor house damage. Significant damage to signs, trees and caravans. Heavy damage to some crops. Risk of power failure. Small boats may break moorings.
3	165 - 224 km/h Very destructive winds	Some roof and structural damage. Some caravans destroyed. Power failure likely.
4	225 - 279 km/h Very destructive winds	Significant roofing and structural damage. Many caravans destroyed and blown away. Dangerous airborne debris. Widespread power failures.
5	More than 280 km/h Extremely destructive winds	Extremely dangerous with widespread destruction.

**Table 1: Description of cyclone categories**

The pens and mooring facilities in the Port Hedland Spoilbank Marina have been designed for winds generated by cyclonic conditions in accordance with the Australian Wind Loading Code AS1170.2, and with the length of vessel in each berth equal to or less than the designed length.

The floating pens have been designed for a 30 second gust wind speed of 63m/sec which is equivalent to a Category 4 cyclone. This wind speed could be exceeded in extreme events.

### 8.1.1 General Mooring Information

All vessels which have dedicated moorings at floating pens should be securely moored at least 24 hours before predicted Gale Force winds.

**Minimum Mooring Arrangements** are detailed in Section 8.3 Minimum Mooring Guideline.

Typical mooring line loads for the various locations are given in Table 2 below. These loads will vary depending upon the mooring configuration including the angle of the line with respect to the centreline of the vessel

Vessel Length Overall (m)	Overall Pen Size (m)	Bow & Stern Line Loads (tonnes)	Spring Line Loads (tonnes)
Boat Pens			
20	22	12	5
15	17	7	4
12	14	5	2

**Table 2: Typical Mooring Line loads for various mooring locations under category 5 cyclonic conditions**

The masters of vessels shall be responsible for ensuring:

- Vessel is adequately secured for cyclonic conditions;
- Mooring lines are serviceable,
- Mooring lines are of adequate capacity for the anticipated line loads,
- Mooring lines, to the extent practicable, are set to allow for the likely range in the water level, and
- Anchor points on the vessel will take the line loads without failing.

***The Bow and Stern Line Loads tabulated in Table 2 are Minimum Safe Working Loads for severe cyclonic winds. A minimum Factor of Safety of 3 should be applied when selecting mooring lines (based on Breaking Load).***

This is to allow for those factors which degrade the load capacity of mooring lines (abrasion, knots, over-stress, age, temperature, end of line configuration, etc).

For example: For a 25 metre vessel Table 2 indicates a Bow & Stern Line Load of 15 tonnes.

This is a Minimum Safe Working Load. When a Factor of Safety of 3 is applied, the mooring line must have a Minimum Breaking Load of 45 tonnes (i.e. 3 x 15 tonnes).

Furthermore, masters of vessels will be responsible for ensuring that the mooring lines are correctly tensioned in accordance with accepted best practice, to avoid vessels swinging and hitting other vessels or the mooring/berthing structures.

The lines elasticity needs to allow for storm surge conditions, hence ***steel wire ropes should not be used.***

As it is difficult to list Line Loads for all sizes of vessels, mooring line loads have been provided in Table 2 for the following vessel sizes:

- 12, 15, 20 and 25 metre vessels;
- It is suggested that for vessels that do not equate to the sizes shown in Table 2, the next larger size mooring line load should be adopted (especially if a vessel is in a larger mooring pen).

### 8.2.3 Floating Pens

The floating pens are located at the north eastern end of the marina. Pen sizes vary from 10 metre to 20 metre. Mooring Guidelines are given in Section 8.3.

Pens are designed for a 30 second gust wind speed of 63 m/sec which is equivalent to a Category 4 cyclone. This wind speed could be exceeded in a severe Cyclone.

Mooring lines need to be of adequate strength, not chuffed and correctly tensioned. The mooring lines and arrangement must be in accordance with the boat manufacturer's recommendation.

Mooring lines must be attached to the cleats as shown in Figure 1. Where independent mooring piles are provided between double pens or on the outside of end pens, mooring lines may be attached to the mooring piles. These mooring piles are not equipped with floating mooring rings. Any mooring lines so attached must be capable of freely moving up and down the sleeved mooring pile throughout the tidal cycle.

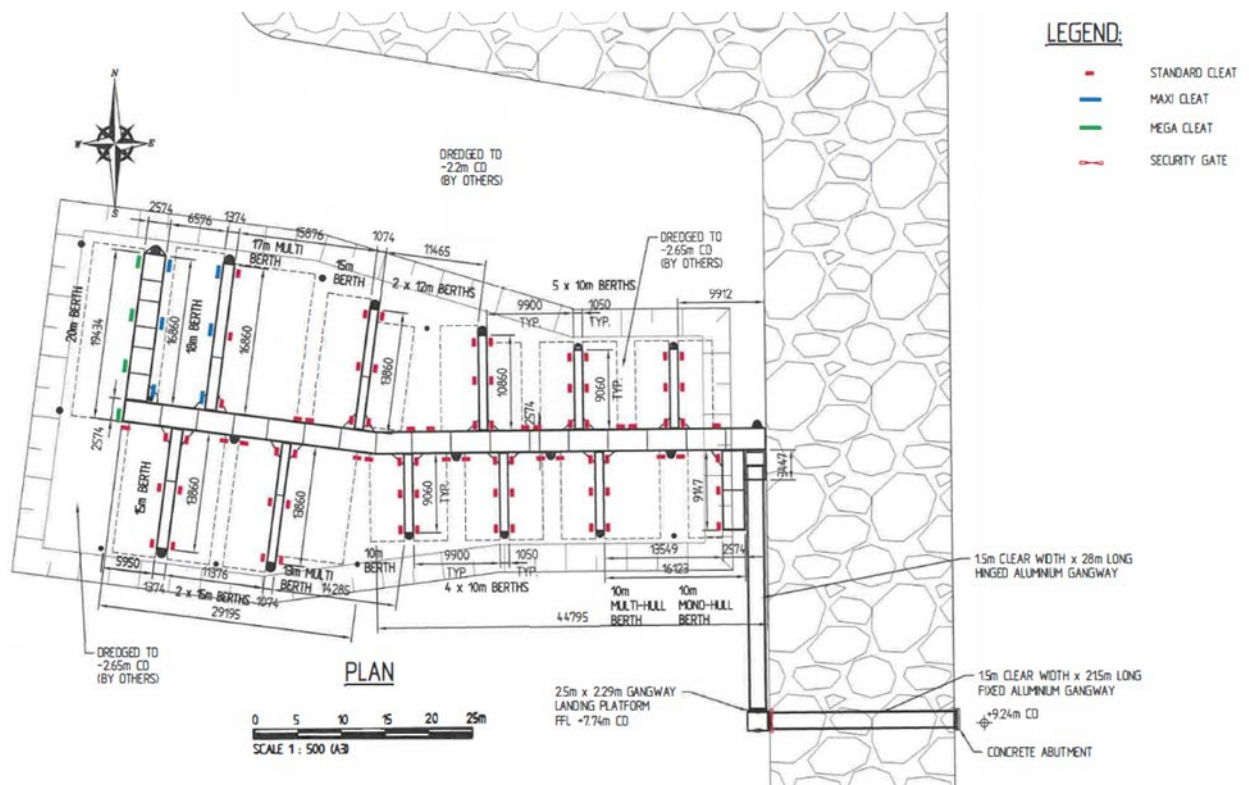


Figure 1 Spoilbank Marina Floating Boat Pens

The clearance widths for the Boat Pens are shown in Figure 1.

An aerial photograph of the boat pen layout is shown in Figure

2.



**Figure 2: Aerial view of Spoilbank Marina Boat Pens**

Other actions include:

- Roller jibs and mainsails furled to booms should be removed or securely tied to prevent them coming loose.
- All equipment such as dinghies should be removed from the decks and stored below or ashore or securely fastened.
- All running rigging on yachts to be tight and securely fastened.
- Adequate fendering to be in place on boats and correctly located.

### **8.3 Minimum Mooring Guideline**

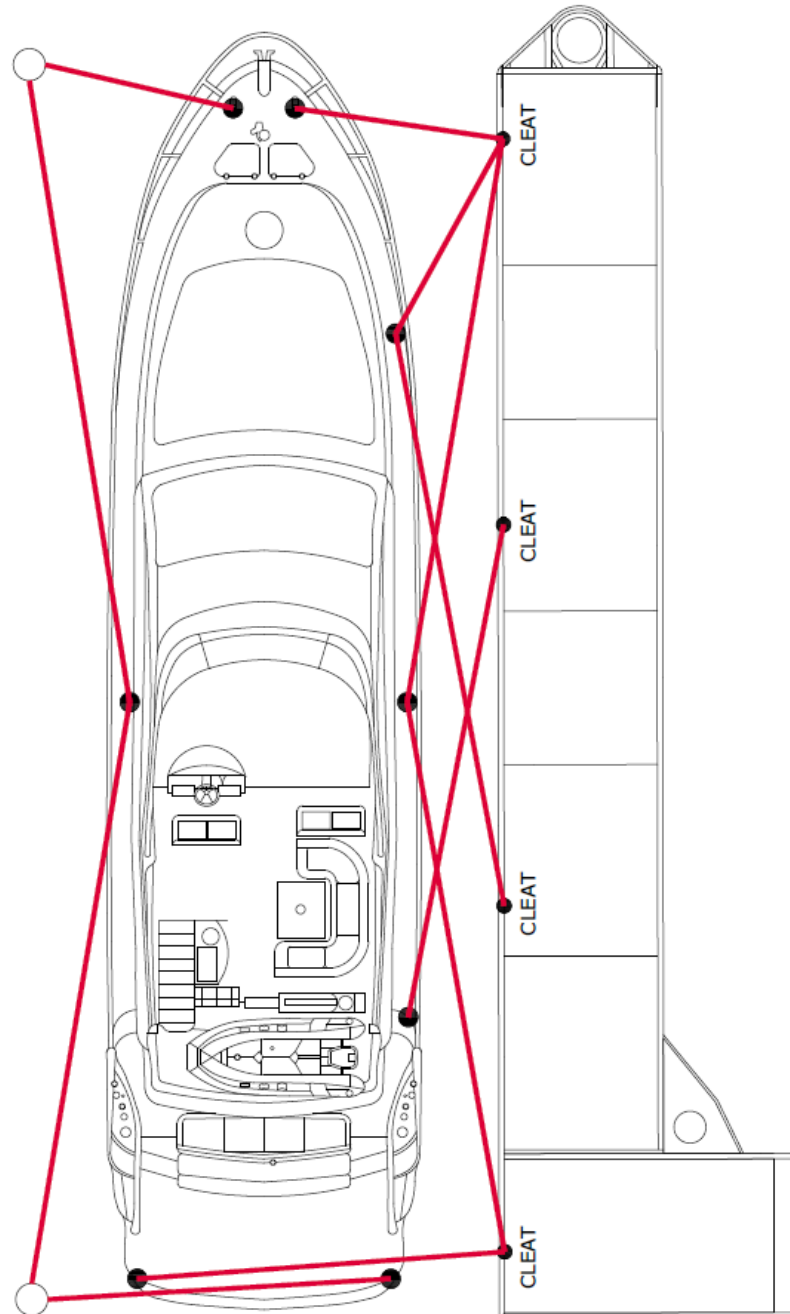
The following DoT Minimum Mooring Guideline has been developed to assist the Master of a Vessel and should be considered as the minimum requirement for securing a vessel prior to the impact of a Cyclone.

Mooring arrangements are generally specific for each vessel and correct mooring is the responsibility of the Owner/Master.

***Note: These guidelines do not absolve the Master from meeting his/her responsibilities under legislation and that of his/her employer. All lines are to be in good condition and fully serviceable at the time of mooring.***

### 8.3.1 20m Jetty Pen

In cyclonic conditions, the minimum recommended mooring guideline arrangement for a vessel in the 20m Pen is as follows;



**Figure 3: Suggested minimum Mooring Guideline for a vessel in the 20 Pen in Cyclonic Conditions**



### 8.3.2 18m Jetty Pen

In **cyclonic conditions**, the minimum recommended mooring guideline for a vessel in the 18 Metre Pen is as follows;

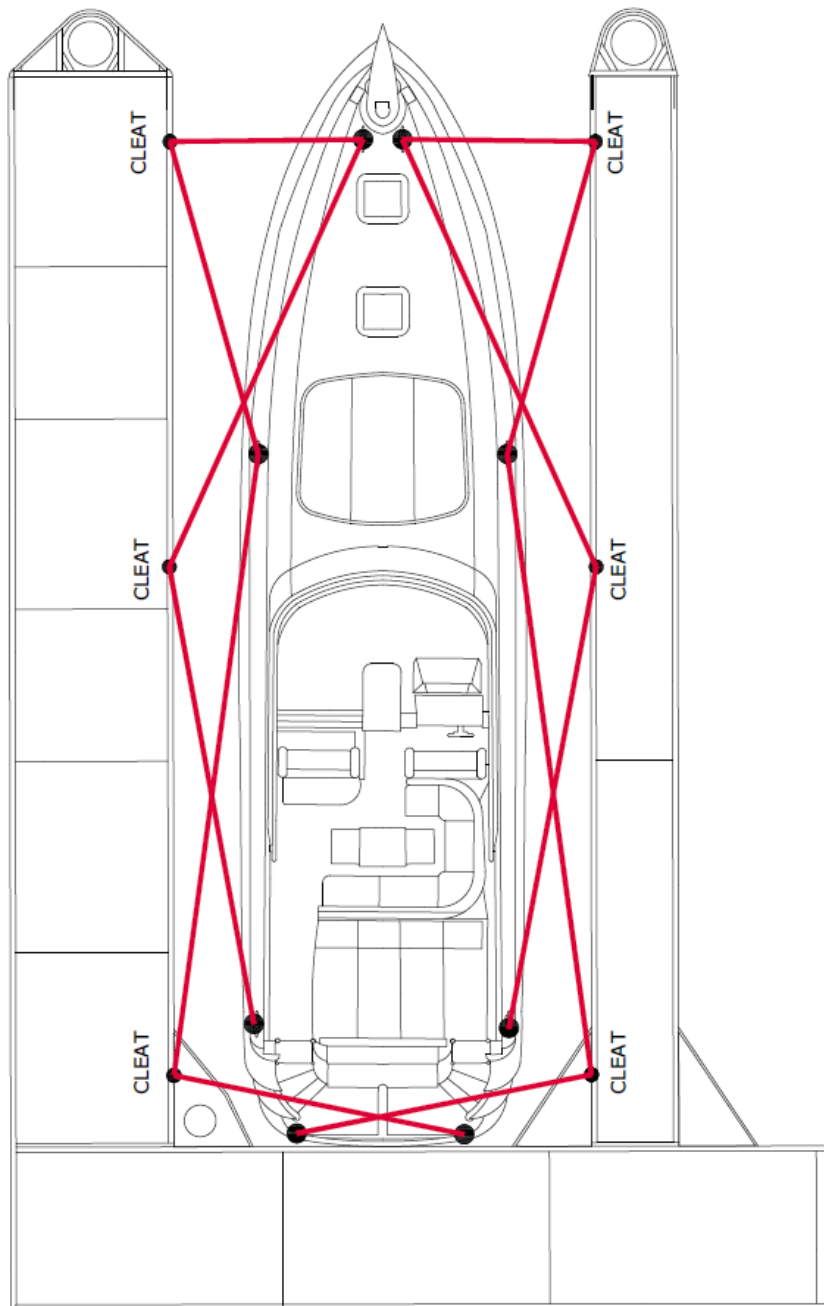


Figure 4: Typical Suggested Minimum Mooring Guideline for a vessel in the 18 Metre Pen in Cyclonic Conditions

### 8.3.3 12m to 17m Jetty Pens

In **cyclonic conditions**, the minimum recommended mooring guideline for vessels moored in the 12 – 17 metre Jetty Pens equipped with mooring piles is as follows;

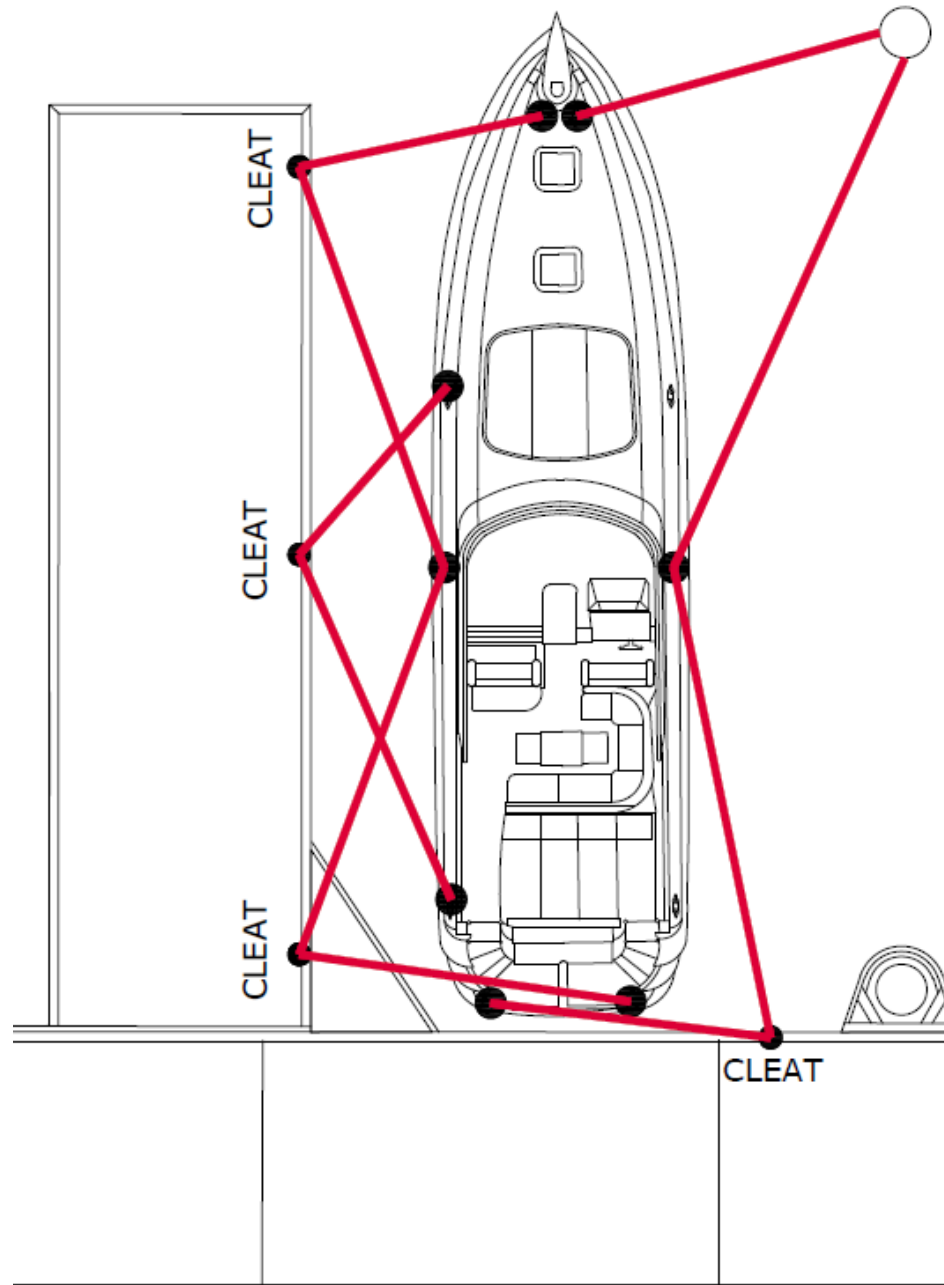


Figure 5: Minimum Mooring Guideline for vessels in 12 to 17 Metre Jetty Pens in Cyclonic Conditions

### 8.3.4 10m Jetty Pens

In **cyclonic conditions**, the minimum recommended mooring guideline for vessels moored in the 10 metre Jetty Pens is as follows;

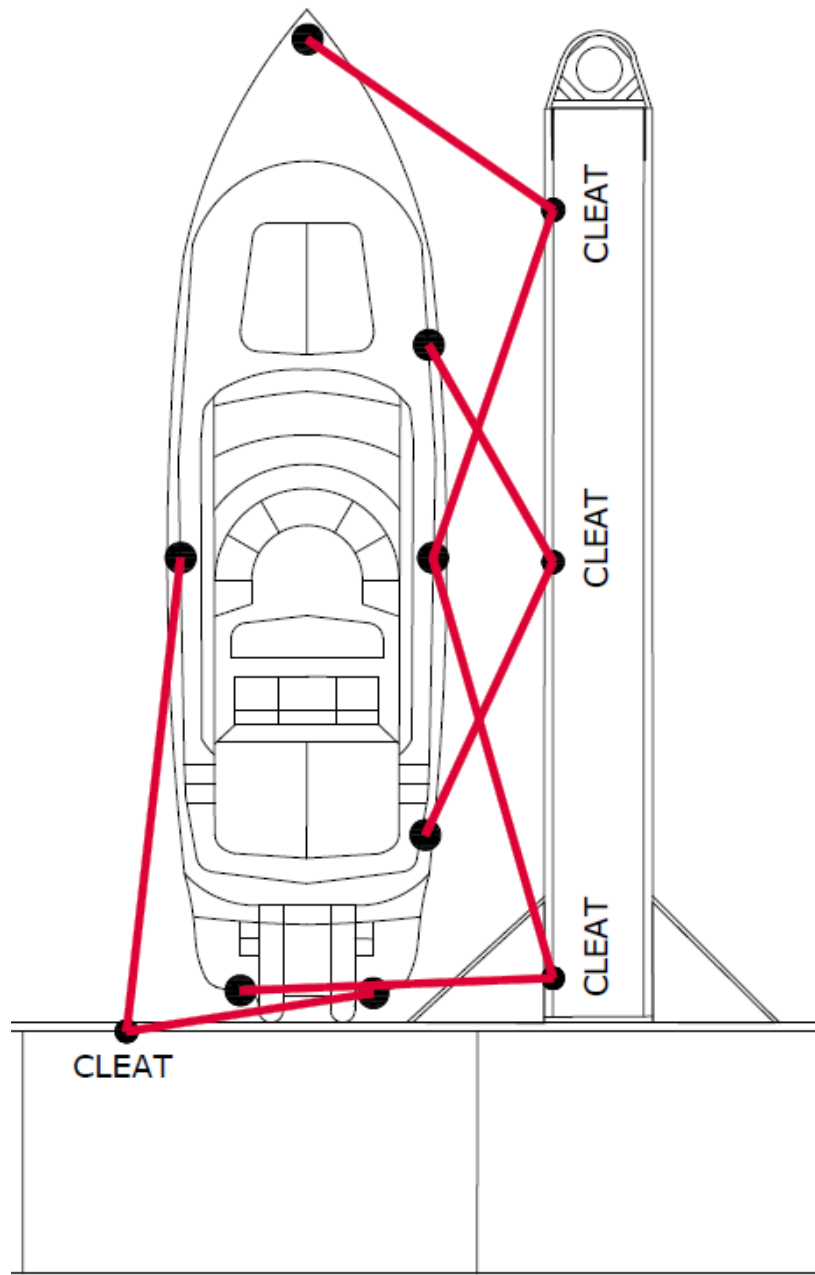


Figure 6: Minimum Mooring Guideline for vessels in 10 Metre Jetty Pens in Cyclonic Conditions