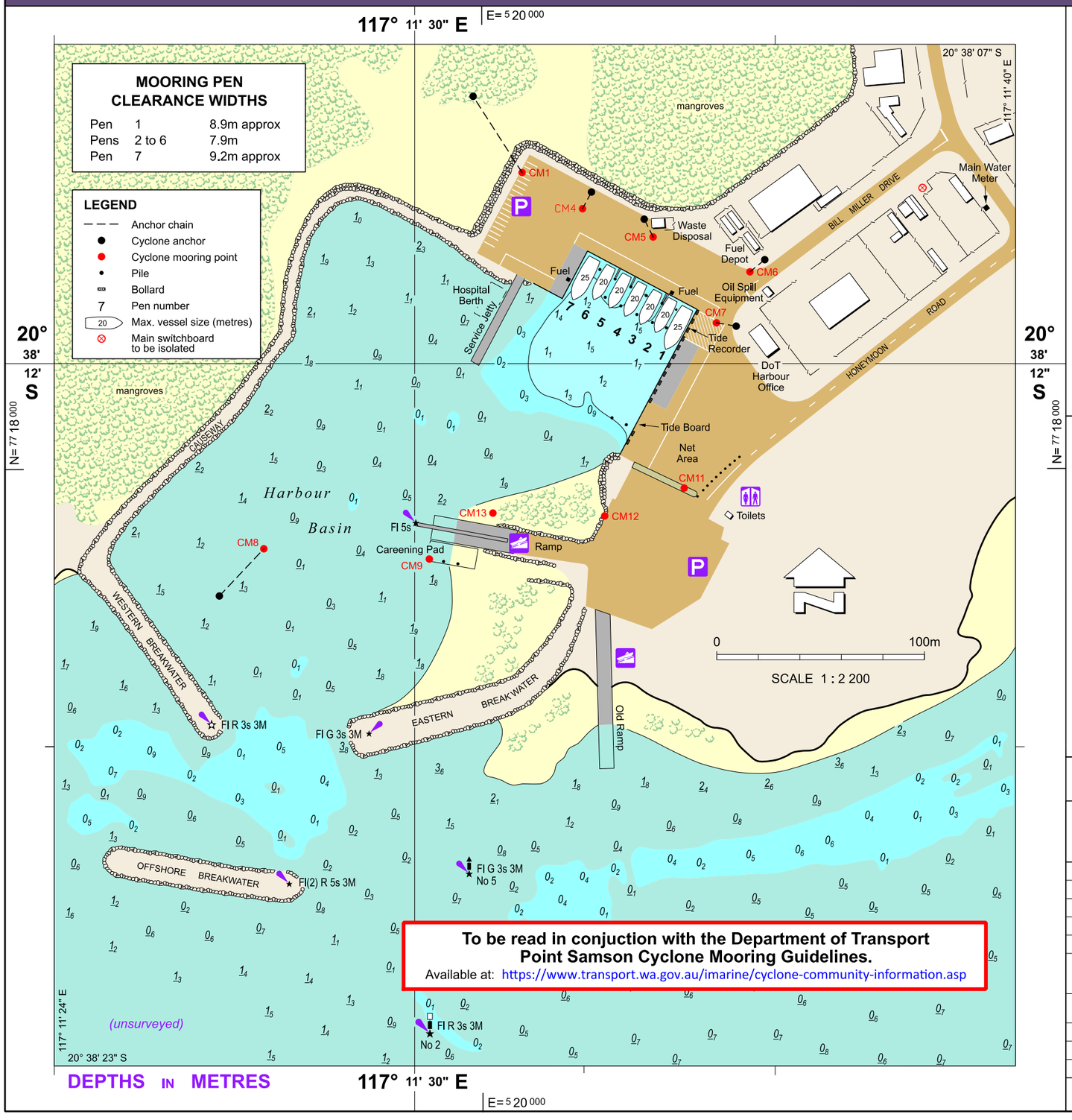
Government of **Western Australia**
Department of **Transport**

# Community Information Sheet
## Point Samson (Johns Creek) Boat Harbour
## 2023/24 Cyclone Season




**To be read in conjuction with the Department of Transport Point Samson Cyclone Mooring Guidelines.**
Available at: https://www.transport.wa.gov.au/imarine/cyclone-community-information.asp

### CYCLONE WARNINGS

**Bureau of Metrology (BoM)** issues Tropical Cyclone (TC) Advice whenever a TC is expected to cause winds in excess of 62 km/h (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, Blue, Yellow, Red and All Clear. (see reverse side)

Internet: https://www.emergency.wa.gov.au/

### KEY CONTACTS NUMBERS

| | |
|---|---|
| **DoT Incident Control Centre**: | P: 1300 966 459 |
| **During a Cyclone "RED ALERT":** | P: 9159 1400 |
| **DFES Recorded Emergency Info** | P: 133 337 |
| **SES Emergency Assistance** | P: 132 500 |
| **WA Police Karratha:** | P: 9143 7200 |
| **City of Karratha:** | P: 9186 8555 |
| **All Emergencies:** | P: 000 |

### NOTES

1. This plan is not to be used for navigation.
2. Positions on this plan are related to the Map Grid of Australia, Zone 50, based on the Geodetic Datum of Australia (GDA 2020). For GPS use, this approximates WGS 84.
3. Sounding Datum is Lowest Astronomical Tide (LAT) 2004 which is 3.466 metres below AHD 2010.
4. Hydrographic Surveys dated February 2020.
5. All cyclone chains supplied with approved rated capacity shackles (contact harbour manager for end shackle).
6. Cyclone mooring plan assumes adjacent boats are adequately tied together.
7. All piles, except for CM9, are not used for cyclone mooring.
8. The waters of this boat harbour, and its approaches, form part of a declared Shipping and Pilotage Act Port. Vessel operators are also subject to controls and directions by Shipping and Pilotage Act appointed Harbour Master.

### SIGNIFICANT HEIGHTS

| | |
|---|---|
| 6.79m | Highest Recorded |
| 6.4m | Deck of Jetty and Wharf |
| 6.2m | HAT |
| 5.5m | MHWS |
| 3.9m | MHWN |
| 3.4m | AHD |
| 3.3m | Mean Sea Level |
| 2.7m | MLWN |
| 0.9m | MLWS |
| 0.0m | LAT |
| -0.14m | Lowest Recorded |

### MOORING & PEN INFORMATION

| Cyclone mooring location number | System type | Proof loading capacity | Proof load bearing angle | Length of 24mm stud link chain |
|---|---|---|---|---|
| CM1 | single stingray anchor | 25 tonnes | S 32° E | 44m |
| CM4 | single stingray anchor | 25 tonnes | S 28° W | 9m |
| CM5 | single stingray anchor | 25 tonnes | S 26° E | 9m |
| CM6 | single stingray anchor | 25 tonnes | S 50° W | 9m |
| CM7 | single stingray anchor | 25 tonnes | W 10° N | 9m |
| CM8 | tandem | 24 tonnes tandem | N 43° E | 10m link to tandem 27m to buoy |
| CM9 | single pile | N/A | N/A | connect to base of pile |
| CM11 | single stingray anchor | 18 tonnes | N/A | 4m |
| CM12 | single stingray anchor | 18 tonnes | N/A | 3m to buoy |
| CM13 | single stingray anchor | 18 tonnes | N/A | 5m to buoy |

### 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.

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# Tropical Cyclone - Community Information Sheet

# Point Samson (Johns Creek) Boat Harbour – 2023/24 Cyclone Season

## 1. Purpose of the Community Information Sheet

This Community Information Sheet has been developed to assist users of the Point Samson (Johns Creek) Boat Harbour 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 Karratha 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 Point Samson (Johns Creek) Boat Harbour, including some involving harbour users. The Incident Controller will be assisted by the appointment of a Harbour Controller in Point Samson.

## 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 11 and 16 are monitored by Port of Dampier
- 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.

## 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 chaffed 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 Point Samson (Johns Creek) Boat Harbour has a limited number of mooring pens and mooring positions. Every effort will be made to maximise the use of the Point Samson (Johns Creek) Boat Harbour, however Masters should be prepared (as part of their own Cyclone Contingency Plan) to seek alternate shelter if necessary.

Please note that the Point Samson (Johns Creek) Boat Harbour 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 Point Samson (Johns Creek) Boat Harbour for crew during a Cyclone and **all crews** must relocate to suitable shore based accommodation or the City of Karratha Cyclone Evacuation Centre. The City of Karratha Cyclone Evacuation Centre is located at the Karratha Leisureplex on the Karratha Dampier Road Karratha. 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 Point Samson (Johns Creek) Boat Harbour can be obtained from the DoT Karratha Office or at the following web address **https://www.transport.wa.gov.au/imarine/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-SES “BLUE ALERT” Declared***

- If en route to Point Samson, establish/maintain contact with the Incident Controller or relay through Port of Dampier.
- 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 SES YELLOW ALERT Declared***

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

***DFES SES “RED ALERT” 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 SES guidelines and procedures for a Tropical Cyclone.

***DFES-SES “ALL CLEAR”***

- 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/imarine/cyclone-community-information.asp**

**CYCLONE MOORING GUIDELINES**

## Section Contents

## 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 Advices are 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 mooring facilities in Johns Creek Boat Harbour 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 cyclone moorings have been designed for a thirty second gust wind speed of 69 m/sec which is equivalent to a Category 5 cyclone.

## 8.2 General Mooring Information

All vessels should plan to be secured in the harbour at least 24 hours before predicted Gale Force winds.

There are a number of cyclone moorings located around the harbour basin as shown on the Community Information Sheet. These comprise stingray anchors and studlink anchor chain. The capacity of each cyclone mooring is also shown on the Community Information sheet and reproduced in Table 3.

It is important to note that general mooring facilities within the harbour such as mooring piles have been designed for serviceability conditions only (i.e. maximum wind speed of 20 metres per second) and should therefore not be used for cyclone moorings.

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.

Bow and stern line loads will depend upon the mooring configuration, wind direction and vessel characteristics. Indicative loads for various mooring configurations and vessel sizes are given in Table 2.

***The Bow and Stern Line Loads tabulated 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).

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.***

Except for the pile marked CM9 near the careening pad all other piles are not to be used for cyclone moorings. The Service Jetty is also not to be used for cyclone mooring.

## 8.3 Mooring Arrangements

Vessels may be moored individually or in a group using the cyclone moorings provided. Indicative mooring loads based on a 4 point mooring system for various vessel sizes are shown in Table 2.

These have been determined by assuming a 30 second cyclonic wind gust of 69 m/sec which is equivalent to a Category 5 cyclone and based on typical vessel windage areas given in Table 4.4 of AS 3962.

The 30 second gust wind speed is based on an Average Recurrence Interval (ARI) of 200 years in accordance with Table 3.1 of AS 1170.2: 2011 for Cyclone Region D

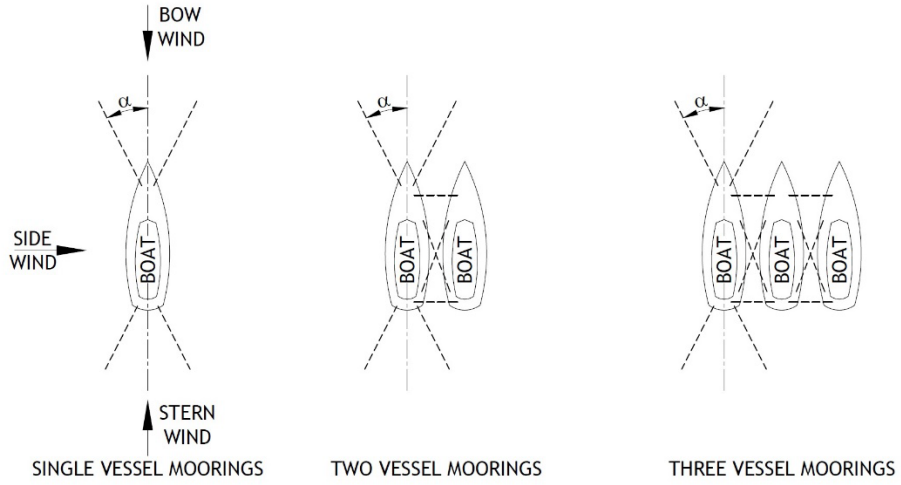


**Figure 1: Schematic Vessel Mooring Arrangements for the purpose of determining line loads**

| | SINGLE VESSEL MOORINGS | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | SIDE WIND | | | | | BOW/STERN WIND | | | | |
| VESSEL SIZE LOA (m) | TOTAL SIDE WIND LOAD (Tonnes) | BOW/STERN LINE LOADS FOR VARIOUS LINE ANGLES (α) | | | | TOTAL BOW WIND LOAD (Tonnes) | BOW/STERN LINE LOADS FOR VARIOUS LINE ANGLES (α) | | | |
| | | 30 | 45 | 60 | 75 | | 30 | 45 | 60 | 75 |
| 10 | 6 | 6 | 4 | 3 | 3 | 2 | 1 | 1 | 2 | 3 |
| 15 | 12 | 12 | 9 | 7 | 6 | 4 | 2 | 3 | 4 | 8 |
| 18 | 17 | 17 | 12 | 10 | 9 | 5 | 3 | 3 | 5 | 9 |
| 25 | 26 | 26 | 18 | 15 | 13 | 7 | 4 | 5 | 7 | 13 |

| | TWO VESSEL MOORINGS | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | SIDE WIND | | | | | BOW/STERN WIND | | | | |
| VESSEL SIZE LOA (m) | TOTAL SIDE WIND LOAD (Tonnes) | BOW/STERN LINE LOADS FOR VARIOUS LINE ANGLES (α) | | | | TOTAL BOW WIND LOAD (Tonnes) | BOW/STERN LINE LOADS FOR VARIOUS LINE ANGLES (α) | | | |
| | | 30 | 45 | 60 | 75 | | 30 | 45 | 60 | 75 |
| 10 | 7 | 7 | 5 | 4 | 4 | 3 | 2 | 2 | 3 | 6 |
| 15 | 15 | 15 | 10 | 8 | 8 | 8 | 5 | 6 | 8 | 15 |
| 18 | 21 | 21 | 15 | 12 | 11 | 10 | 6 | 7 | 10 | 19 |
| 25 | 31 | 31 | 22 | 18 | 16 | 13 | 8 | 9 | 13 | 26 |

| | THREE VESSEL MOORINGS | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | SIDE WIND | | | | | BOW/STERN WIND | | | | |
| VESSEL SIZE LOA (m) | TOTAL SIDE WIND LOAD (Tonnes) | BOW/STERN LINE LOADS FOR VARIOUS LINE ANGLES (α) | | | | TOTAL BOW WIND LOAD (Tonnes) | BOW/STERN LINE LOADS FOR VARIOUS LINE ANGLES (α) | | | |
| | | 30 | 45 | 60 | 75 | | 30 | 45 | 60 | 75 |
| 10 | 8 | 8 | 6 | 5 | 4 | 5 | 3 | 3 | 5 | 9 |
| 15 | 17 | 17 | 12 | 10 | 9 | 12 | 7 | 8 | 12 | 23 |
| 18 | 24 | 24 | 17 | 14 | 13 | 15 | 8 | 10 | 15 | 28 |
| 25 | 36 | 36 | 25 | 21 | 19 | 20 | 12 | 14 | 20 | 38 |

**Table 2: Indicative mooring line loads for various vessel sizes and configurations subject to category 5 cyclonic wind loading**

## 8.4 Cyclone Mooring Load Capacity

The following Table lists the location and capacity of the installed cyclone moorings at Johns Creek Boat Harbour.

| Cyclone Mooring Location Number | System Type | Proof Load Capacity | Proof Load Bearing Angle | Length of 24 mm stud link chain |
|---|---|---|---|---|
| CM1 | Single Stingray Anchor | 25 Tonnes | S 32° E | 44 m |
| CM4 | Single Stingray Anchor | 25 Tonnes | S 28° W | 9 m |
| CM5 | Single Stingray Anchor | 25 Tonnes | S 26° E | 9 m |
| CM6 | Single Stingray Anchor | 25 Tonnes | S 50° W | 9 m |
| CM7 | Single Stingray Anchor | 25 Tonnes | W 10° N | 9 m |
| CM8 | Tandem Stingray Anchor | 25 Tonnes | N 43° E | 10 m link to tandem then<br>27 m to buoy |
| CM9 | Single Pile | N/A | | Connect to base of Pile |
| CM11 | Single Stingray Anchor | 18 Tonnes | N/A | 4 m |
| CM12 | Single Stingray Anchor | 18 Tonnes | N/A | 3 m to buoy |
| CM13 | Single Stingray Anchor | 18 Tonnes | N/A | 5 m to buoy |

**Table 3: Cyclone Moorings Installed for Johns Creek**