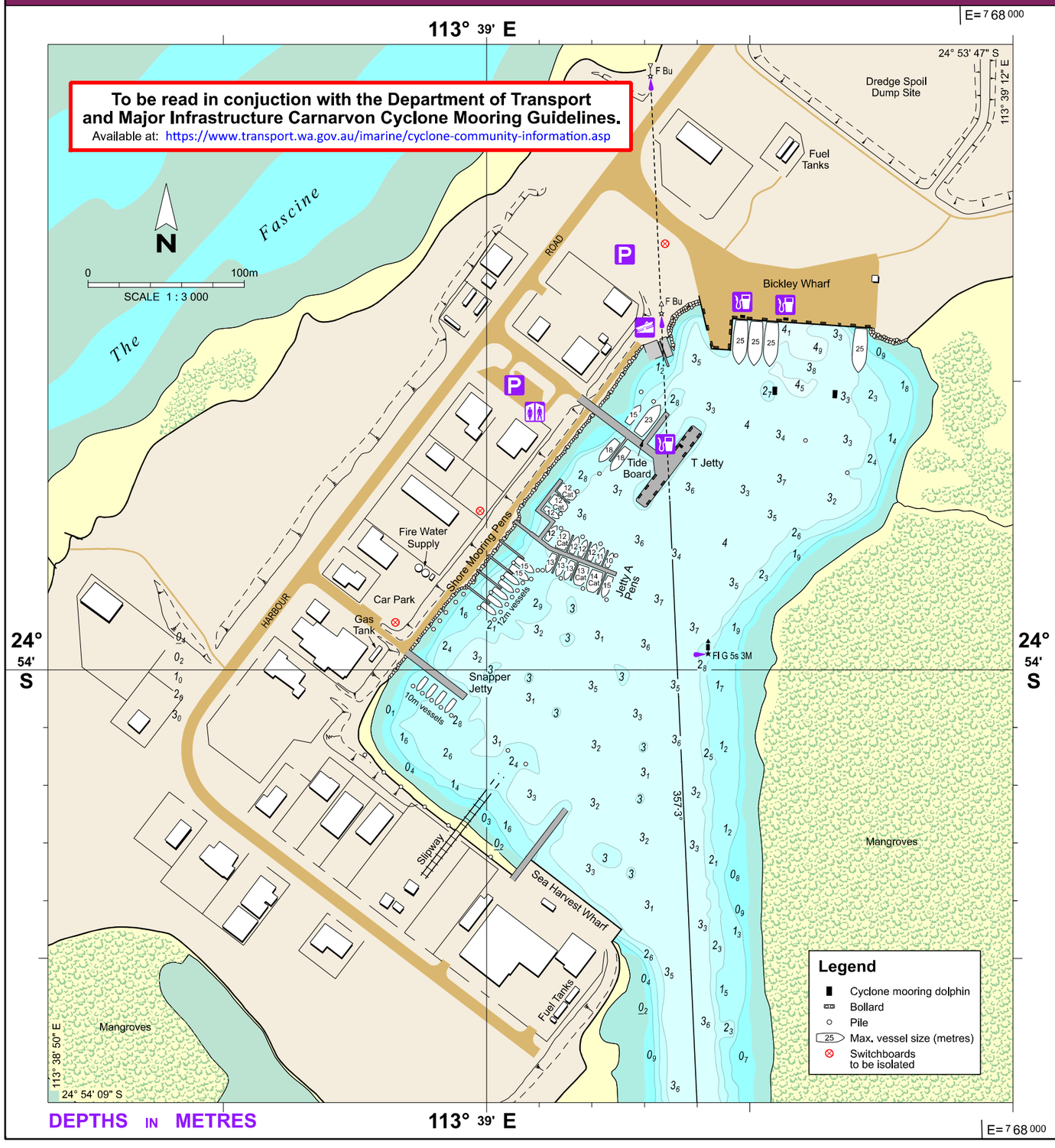
Government of **Western Australia**
Department of **Transport**
and Major Infrastructure

Community Information Sheet

Carnarvon Boat Harbour
2026/27 Cyclone Season



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/

NOTES

1. This plan is not to be used for navigation. Use Department of Transport and Major Infrastructure nautical chart Carnarvon WA982.
2. Positions on this plan are related to the Map Grid of Australia, Zone 49, based on the Geodetic Datum of Australia 2020 (GDA2020). For GPS use, this approximates WGS84.
3. Sounding Datum is Lowest Astronomical Tide (LAT) 2019 which is 0.9m below AHD (2007).
4. Hydrographic survey dated March 2026.
5. The waters of this boat harbour, and its approaches, form part of a declared Shipping and Pilotage Act Port. Vessel operations are also subject to controls and directions by the Shipping and Pilotage Act appointed Harbour Master.

KEY CONTACTS NUMBERS

DTMI Incident Control Centre:	P: 1300 966 459
During an "EMERGENCY WARNING":	P: 9956 6000
DFES Recorded Emergency Info	P: 133 337
SES Emergency Assistance	P: 132 500
WA Police Carnarvon:	P: 9941 7333
Shire of Carnarvon Office:	P: 9941 0000
Shire of Carnarvon Emergency Manager:	M: 0448 081 637
All Emergencies:	P: 000

SIGNIFICANT HEIGHTS

3.9m	T Jetty Deck
2.7m	Highest Recorded - Cyclone Hazel
2.7m	Land Backed Wharf
2.1m	Snapper Jetty Deck
2.0m	HAT
1.5m	MHWS
1.2m	MHWN
1.0m	Mean Sea Level
0.9m	AHD
0.9m	MLWN
0.6m	MLWS
0.0m	LAT
-0.3m	Lowest Recorded

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

Carnarvon Boat Harbour – 2026/2027 Cyclone Season

1. Purpose of the Community Information Sheet

This Community Information Sheet has been developed to assist users of the Carnarvon 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 and Major Infrastructure (DTMI) has a number of preparedness, response and recovery arrangements, including DTMI Cyclone Management Plans to manage the impact of a Tropical Cyclone on its facilities.

2. Activation of the DTMI Cyclone Management Plan

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

3. DTMI Appointed Incident Controller

An authorised DTMI Incident Controller will be appointed upon activation of the plan to initiate cyclone preparedness actions for the Carnarvon Boat Harbour, including some involving harbour users. The Incident Controller will be assisted by the appointment of a Harbour Controller in Carnarvon.

4. Communication Mediums

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

- HF 4125 kHz for 3 minute silent period only
- 4620 kHz (Fishing Channel)
- 4535 kHz (Sea Harvest)
- VHF Channel 16, 73 & 81
- 27MHz Channel 88
- VHF 74 Fishing

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 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 Carnarvon Boat Harbour has a limited number of mooring pens and mooring positions. Every effort will be made to maximise the use of the Carnarvon 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 Carnarvon 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 (Evacuation) Centre

There are no suitable onshore Cyclone rated shelters at the Carnarvon Boat Harbour for crew during a Cyclone and **all crews** must relocate to suitable shore based accommodation or the Shire of Carnarvon Evacuation Centre. The Shire of Carnarvon Evacuation Centre is located at the Carnarvon Civic Centre at 21 Robinson Street opposite the Post Office. Crews should bring clothing, toiletries and other personal effects with them to the evacuation 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 DTMI Incident Controller for mooring availability.

Mooring immediately adjacent to the Sea Harvest Wharf are managed by Sea Harvest. To ascertain the availability of any spare Sea Harvest harbour moorings, master’s should contact the company direct.

A Cyclone Mooring Guideline has been prepared by the DTMI, and is available, to be read in conjunction with this Community Information Sheet. The Cyclone Mooring Guideline for Carnarvon Harbour can be obtained from the DTMI Carnarvon Office or at the following web address **https://www.transport.wa.gov.au/imarine/cyclone-community-information.asp**

All vessels which have dedicated moorings/berthage should be securely moored at least 24 hours before forecasted Gale Force winds.

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 Carnarvon, establish/maintain contact with the Incident Controller.
- 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 Shire of Carnarvon– 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 and Major Infrastructure at the following web address:* **https://www.transport.wa.gov.au/imarine/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 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 pens and mooring facilities in Carnarvon 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 Snapper Jetty Pens, T Jetty Pens and Bickley Wharf moorings and the new Jetty A Pens have been designed for a thirty second gust wind speed of 69m/sec which is equivalent to a Category 5 cyclone.

The Shore Mooring pens have been designed for a thirty second gust wind speed of 38m/sec which is equivalent to a Category 2 cyclone. This wind speed could be exceeded in a Category 3, 4 or 5 Cyclone.

8.1.1 General Mooring Information

It is important to recognise that the Carnarvon Boat Harbour has a limited number of mooring pens and mooring positions. Every effort will be made to maximise the use of the harbour however, Masters should be prepared (as part of their own cyclone contingency plan) to seek alternate shelter if necessary.

The harbour cannot guarantee to provide secure shelter and safety for vessels and crews in all weather and storm surge conditions. Furthermore, there are no suitable onshore shelters at the harbour for crew during a cyclone.

All vessels which have dedicated moorings at the Sea Harvest Fishing Company Wharf, Snapper Jetty, T Jetty, Shore Mooring Pens, Jetty A Pens or Bickley Wharf should be securely moored at least 24 hours before predicted Gale Force winds. DTMI owns and manages the Snapper Jetty, Shore Mooring Pens, Jetty A Pens, T Jetty and Bickley Wharf.

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.

Mooring lines need to be of adequate strength, not chaffed and correctly tensioned. The mooring lines and arrangement must be in accordance with the boat manufacturer's recommendation. **Minimum Recommended Mooring Arrangements** are bow and stern lines plus spring lines.

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.

The Bow and Stern Line Loads listed in Tables in the following sections are Minimum Ultimate 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).

Tidal Storm Surge

Harbour users need to be aware that a significant positive storm surge may coincide with a high astronomical tide to result in an extreme water level. The effect of storm surge is most

severe when these extreme meteorological events occur in conjunction with high tide. It is reasonable to expect a positive tidal storm surge to result in a water level above the deck levels of some of the fixed jetties. For example, during Cyclone Hazel (14 March 1979) the water level observed was 2.6 metres above Chart Datum, which was 0.5 metres above the height of the Snapper Jetty.

If practicable, the Harbour Coordinator will monitor any significant surge.

8.2 Mooring Arrangements by Pens

8.2.1 Snapper Jetty Pens

The Snapper Jetty Pens have been designed for a 30 second wind gust speed of 69 m/sec which equates to a Category 5 Cyclone. These wind speeds could be exceeded in the event of a Category 5 Cyclone. The pens are suitable for vessels up to 10m LOA.

Minimum Recommended Mooring Arrangements are bow and stern lines plus spring lines.

Based on the recommendation above the likely line loads under severe cyclonic winds for single vessels moored in dedicated pens at the Snapper Jetty are given in Table 2 below.

	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 (a)				TOTAL BOW WIND LOAD (Tonnes)	BOW/STERN LINE LOADS FOR VARIOUS LINE ANGLES (a)			
		30	45	60	75		30	45	60	75
10	6	6	4	3	3	2	1	1	2	3

Table 2: Approximate Line Loads for vessels moored in the Snapper Jetty Pens when subject to a Category 5 Cyclone

8.2.2 Shore Mooring Pens

These pens are located between the Snapper Jetty and the T Head Jetty. They comprise 5 x 12 m pens on the southern side and 2 x 15m pens on the northern side. These pens were constructed approximately 30 years ago. In the opinion of DTMI the larger pens are only capable of withstanding cyclonic wind loads from Category 1 Cyclones while the smaller pens are capable of withstanding wind loads from a Category 2 Cyclone.

Minimum Recommended Mooring Arrangements are bow and stern lines plus spring lines.

Based on the recommendation above the likely line loads under severe cyclonic winds for single vessels moored in dedicated pens at the Shore Mooring Pens are given in Table 3 below.

	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
12	8	8	6	5	4	2	1	2	2	5
15	12	12	9	7	6	4	2	3	4	8

Table 3: Approximate Line Loads for vessels moored in the Shore Mooring Pens when subject to a Category 5 Cyclone

8.2.3 Jetty A Pens

Jetty A Pens are floating pens constructed in 2022. The pens are located between the Shore Mooring Pens and the T Jetty. Three Shore Mooring Pens were demolished to make way for the new Jetty A Pens.

Jetty A Pens have been designed for a 30 second wind gust speed of 69 m/sec which equates to a Category 5 Cyclone. These wind speeds could be exceeded in the event of a severe Category 5.

Jetty A comprises 1 x 10m pen, 1 x 11m pen, 3 x 12m catamaran pens, 5 x 12m pens, 3 x 13m pens, 1 x 13m catamaran pen, 1 x 14m catamaran pen and 1 x 15m pen.

Minimum Recommended Mooring Arrangements are bow and stern lines plus spring lines.

Based on the recommendation above the likely line loads under severe cyclonic winds for single vessels moored in dedicated pens at the Jetty A are given in Table 5 below.

	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
11, 12 &13	8	8	6	5	4	2	1	2	2	5
14 & 15	12	12	9	7	6	4	2	3	4	8

Table 4 : : Approximate Line Loads for vessels moored in the Jetty A floating pens when subject to a Category 5 Cyclone

8.2.4 T Jetty Pens

The T Jetty Pens are suitable for vessels up to 21 m in length and are designed to withstand winds associated with a Category 5 cyclone.

Minimum Recommended Mooring Arrangements are bow and stern lines plus spring lines.

Based on the recommendation above the likely line loads under severe cyclonic winds for single vessels moored in dedicated pens at the T Jetty are given in Table 5 below.

	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
12	8	8	6	5	4	2	1	2	2	5
15	12	12	9	7	6	4	2	3	4	8
18	17	17	12	10	9	5	3	3	5	9
21	21	21	15	12	11	5	3	4	5	10

Table 5: Approximate Line Loads for vessels moored in the T Jetty Mooring Pens when subject to a Category 5 Cyclone

8.3 Bickley Wharf

Mooring facilities at the Bickley wharf comprise bollards on the wharf and two (2) cyclone mooring dolphins. The mooring buoy located on the eastern bank has been removed from service.

It is assumed that vessels will moor stern-to at the wharf with stern lines attached to the bollards and bow lines attached to the mooring dolphins and/or the bollards on the western part of the wharf. Vessel Masters are responsible for their own mooring configurations.

Line loads under extreme cyclonic conditions for various mooring configurations shown in Figure 1 are given in Table 6. These are to be used as a guide only. Vessels rafted up in two or three vessel mooring configurations will result in the lee side vessels being shielded to a degree under the action of side winds.

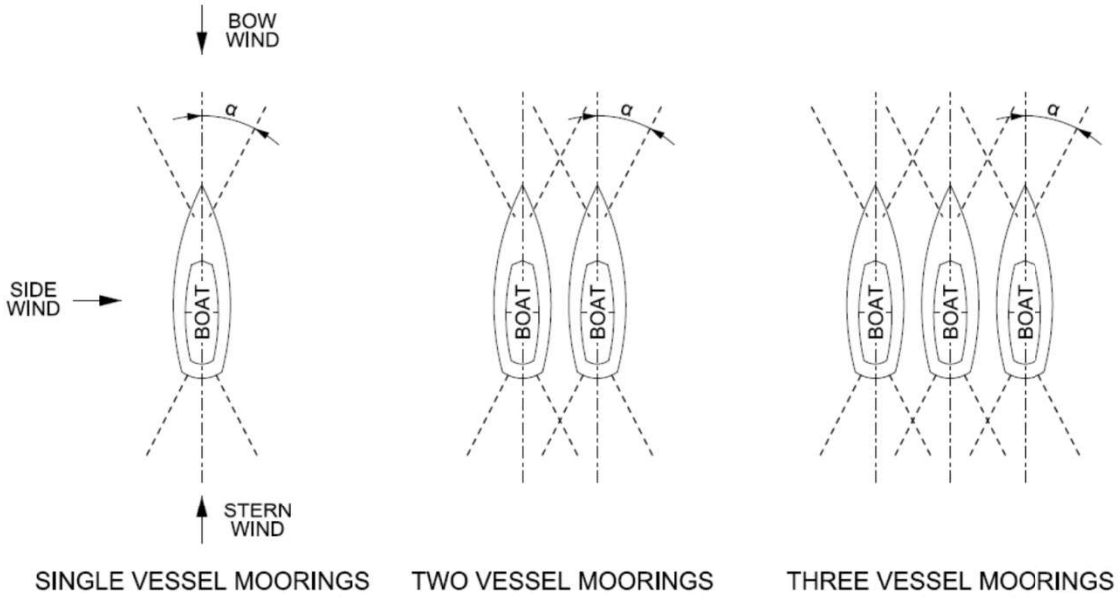


Figure 1 Schematic mooring configurations for the Bickley Wharf

	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	4	3	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	12	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	11	14	20	38

Table 6 Typical Mooring Line Loads for various mooring configurations at Bickley wharf in Category 5 Cyclonic conditions