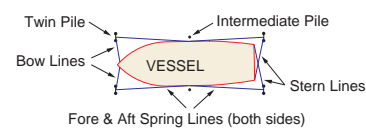


RECOMMENDED MINIMUM MOORING ARRANGMENTS (for Cyclone / Severe Weather)

CHARTER & TRAWLER PENS



Twin Pile Mooring Points have 100mm diameter Mooring Bar & 45mm diameter Mooring Link

Bow lines to be secured to, or passed through fairleads, as near as practical to the bow.
 Stern lines to be crossed and secured to the opposite stern quarter.
 Spring lines to be attached to vessel mid-ships.
 All lines (bow & stern or spring) are to be secured to a Mooring Link on the Mooring Bar at the Twin Pile Mooring Point. The second Mooring Link is for the vessel in the adjacent pen.
 Intermediate pen piles are not to be used for cyclone moorings.
 Vessel to be centrally located within Mooring, as shown.
Tabulated Line Loads are Minimum Safe Working Loads. A minimum Factor of Safety of 3 should be applied when selecting mooring lines (based on Breaking Load).
 For Example: A 25m vessel in a charter boat pen. Table on the drawing indicates a Bow & Stern Line Load of 16.8 tonnes. This is a Minimum Safe Working Load. When a Factor of Safety of 3 is applied, the mooring line needs to have a minimum breaking load of 50.4 tonnes (ie. 3x16.8).

Vessel Length Overall (m)	Overall Pen Size (m)	Bow & Stern Line Loads (tonnes)	Spring Line Loads (tonnes)
Trawler Pens			
25	27	16.8	5.5
20	27	16.4	4.4
16	27	14.0	3.5
Charter Boat Pens			
25	27	16.8	7.5
20	22	11.3	5.8
15	17	6.9	4.3
Cyclone Moorings - Positions 1 to 6			
20		15.4	

Mooring sequence shall be strictly in order from 1 to 6 for Service Wharf

Significant Heights

4.9m	Cyclone Vance water level
3.3m	Wharf and Charter Pen Deck
2.8m	HAT
2.3m	MHWS
1.7m	MHWN
1.5m	Mean Sea Level
1.4m	AHD
1.1m	MLWN
0.5m	MLWS
0.0m	LAT



EXMOUTH BOAT HARBOUR (Inner and Outer)

CYCLONE CONTINGENCY PLAN

November 2016 – April 2017

Coverage of the Plan

This November 2016 – April 2017 Exmouth Cyclone Contingency Plan covers the waters within the Exmouth Boat Harbour (Inner and Outer). The waters of the Exmouth Marina Village (Canals) are now covered by the Shire of Exmouth's Exmouth Marina Village Canal Boat Mooring and Management Plan and Standard Operating Procedures. For a copy of this document contact the Shire of Exmouth (08) 9949 3000.

Facilities within the canal adjacent to Base Marine are managed by Base Marine and any enquiries regarding those facilities need to be directed to that company on 9949 1433.

Purpose of the Plan

Within the limits of the Department of Transport's (Transport) responsibilities and authority, define procedures to: maximise the opportunity for vessels to shelter within the harbour; reduce the risk to life and vessels operating in the area; and protect as far as possible the harbour infrastructure and environment.

Activation of the Plan

The Plan is to be automatically activated once a Cyclone Watch or Warning has been issued for the Exmouth area. The initial activation will be an internal process at Transport generated by Transport's Manager Northern Facilities Operations (MNFO) involving preliminary basic actions.

The activation involving harbour users will commence on the issue of a Blue Alert for the Exmouth area.

Harbour Coordinator

The Harbour Coordinator will be appointed from the following people by the MNFO on the issue of a Blue Alert.

Transport MNFO Gascoyne	9947 8201	0427 099 207	9949 2078 facsimile
Stuart Fitzgerald (Transport RO Exmouth)	9949 4284	0447 856 774	9949 2078 facsimile
David Skene (Transport SRO Exmouth)	9947 8201	0418 910 027	9949 2078 facsimile

DoT Satellite Phone 0420 107 049
DoT after hours 0472 843 288

Contact details may change. If you are experiencing difficulties contact:

Exmouth Police 9947 8700 or Exmouth SES 9949 1488 or 0447 230 988. For medical or other emergency 000.

Harbour Coordinator's Role

Facilitate the coordination of activities within the harbour in accordance with this Plan.

Facilitate a flow of information between harbour users.

Provide a link with the Exmouth SES and Exmouth Police.

Responsibilities of Masters and Owners of Vessels

Masters and owners who choose to operate in cyclone prone areas during the cyclone season: do so at their own risk; need to be watchful for the development of severe weather; are responsible for ensuring their vessels have an onboard cyclone contingency plan; and, should have a current copy of this Plan onboard the vessel. Furthermore, masters and owners are responsible for: the safety of crew and vessel; the provision of mooring lines; and any damage that may be caused to other vessels and public facilities by their vessel.

This Plan in no way replaces the legal obligations of owners and masters of vessels, nor does it seek to over-ride the responsibility of a master to take appropriate precautions for the safety of the crew, or to interfere with the master's independent discretion.

In the general course of business no one is empowered under the plan to direct or instruct the master or owner of a vessel in such a way that their legal obligations to their crew and to their vessel are compromised. However in instances where the HC determines the actions of a vessel master endanger the lives of harbour users, the HC reserves the right to invoke legislative powers to give a direction to the vessel master to avoid any potential loss of life. The HC must fully consider the level of reasonableness in giving the direction.

The boat harbour is a sheltered anchorage only and cannot be guaranteed to be a safe haven.

Furthermore, there are no suitable onshore shelters at the harbour for crew during a cyclone. Refer to Exmouth Police or SES for information.

The movement of marine traffic in and out of the boat harbour is self managed. The Plan does not and is not intended to interfere with that status.

Communication with Harbour Coordinator

The public telephone network (including mobile and facsimile services) should be used as much as possible to coordinate activities. The Harbour Operation Centre (HOC) is located in the SES building in Exmouth (cnr Payne and Riggs Street). The telephone is 9949 1488, 0447 230 988, fax 9949 1514.

While the HOC will not be providing scheduled radio broadcasts (in line with industry consultation) frequencies will be monitored, while practical, through several local sources including the Exmouth VMRG (callsign is "Exmouth Marine Rescue") and MG Kailis:

"Exmouth Marine Rescue" VHF 16 and 21 HF 2182 kHz 27.88 and 27.90 MHz
MG Kailis "Learmonth Base" and "Exmouth Base" HF 4125 kHz

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 off shore. The closest transceiver is at Port Hedland and the callsign is "Coast Radio Hedland".

Important Note: Harbour Coordinators, Masters and Owners please consider your "DUTY OF CARE" responsibilities to remain safe and reduce risk of accidents or injury.

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. For example during Cyclone Vance (22 March 1999) a storm surge of 3.5 metres produced a storm tide of 4.9 metres above Chart Datum. This level was 1.6 metres above the height of the Charter Pen & Wharf deck. If practicable, the Harbour Coordinator will monitor any significant surge.

Cyclone Mooring Arrangements (Refer to Map on reverse side and Cyclone Mooring Guidelines handout)

The harbour is operating at reduced capacity and the limited number of mooring pens and mooring positions may be insufficient for the number of vessels seeking shelter. 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. Mooring priority will be given to vessels covered by an existing mooring agreement. Mariners should be aware of submerged mooring chains from seabed mooring piles in the southern portion of the harbour basin. The harbour basin seabed is unlikely to be suitable holding ground for vessels anchored in cyclonic weather.

Overview of the Plan

1. Cyclone Watch or Warning

MNFO activates internal processes within Transport awaiting the issue of a Blue Alert.

- Establish/Confirm availability of HOC in Exmouth SES building.

2. SES Stage BLUE

The MNFO appoints the Harbour Coordinator on the issue of the Blue Alert.

Harbour Coordinator's actions:

- Maintain a link with Police, SES and the Shire of Exmouth.
- "Close" the recreational Boat Ramp to outbound traffic.
- Ensure necessary activity for securing the harbour precinct.
- Confirm fuelling facilities and harbour precinct have been secured.

Masters and Owners duty:

- If en route to Exmouth, maintain contact with Harbour Coordinator.
- Plan to be secured in the harbour at least 24 hours before cyclone.
- Be aware of submerged mooring chains in southern portion of harbour basin.
- Moor vessel in accordance with Cyclone Mooring Guidelines. Contact Harbour Coordinator if unsure.
- Ensure sufficient fuel on board to clear the harbour after the cyclone and return.
- Secure all equipment or remove the equipment from the harbour precinct.

3. SES Stage YELLOW

Harbour Coordinator's actions:

- Switch off electrical power in accordance with Section 2.3 of main cyclone plan.
- Any vessel which is known to usually be in the area but has not been accounted for, should be notified to the Police.
- Seek appropriate shelter (e.g. HOC building) until SES declare the "All Clear".

Masters and Owners duty:

- Ensure vessel and area of responsibility have been secured.
- Provide details of personnel remaining on vessels during cyclone to Police and HC.

4. SES Stage RED

There are no actions defined for the Harbour Coordinator. Consider your own safety and observe standard SES procedures.

5. SES Stage "All Clear"

Harbour Coordinator's actions:

- When it is safe to do so (winds/rain have subsided), inspect harbour precinct to identify any situation(s) requiring high priority attention.

Masters/Owners duty:

- Confirm with the Harbour Coordinator, the safety of any person who remained on board.
- Ensure seabed mooring chains are correctly repositioned and mooring lines retrieved.
- Advise the Coordinator of any known hazards or damage to facilities.

Caution: Exercise care and proceed with caution when leaving moorings as navigation aids may be displaced or missing, and there may be floating/submerged hazards.

Acknowledgment

This Cyclone Contingency Plan has been prepared in consultation with the users of the Exmouth Boat Harbour. The Plan has the potential to preserve life and property. Your support is crucial to the effectiveness of the Plan.



Government of Western Australia
Department of Transport