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CONTENTS

ABBREVIATIONS & DEFINITIONS.....	3
1. INTRODUCTION.....	5
1.1. Kimberley Ports Authority Mooring Procedures	5
1.2. Kimberley Ports Authority	5
1.3. Disclaimer	6
2. PREAMBLE.....	6
3. BROOME WEATHER CONDITIONS.....	6
4. THE MOORING STANDARDS – OVERVIEW	7
5. RESPONSIBILITIES OF A MOORING OWNER.....	10
5.1. Application Process.....	10
6. MOORING DESIGN AND COMPONENTS.....	12
6.1. Mooring Classifications	12
6.2. Requirements.....	12
6.3. Mooring Overview	13
6.4. Storm Moorings Positions (indicative only)	13
6.5. Cyclone Moorings Positions (indicative only).....	14
7. MOORING INSTALLATION.....	15
8. MOORING INSPECTIONS.....	15
9. SALE, TRANSFER OR SURRENDER OF YOUR MOORING	16
10. REFERENCES.....	16
APPENDIX A – INSERT HEADER	17
APPENDIX B – APPROVED MOORING INSTALLERS/INSPECTORS	18
APPENDIX C – MOORING DESIGNERS/NAVAL ARCHITECTS	19

VARIATION RECORD:

Version No.	Version Date:	Brief Description of Change:
1.0	Unknown	Mooring Licence guidelines - original issue.
2.0	October 2008	Document name change to Mooring Licences Terms, Conditions & Owner Responsibilities and Mooring Standards, reduction of content (incorporated into Mooring Standards) and formatting style updated.
2.1	August 2009	Minor amendment.
2.2	September 2009	Document name change to BrPA Mooring Procedures and content amended.
1.0	August 2014	Re-issue procedures under Kimberley Ports Authority
2.0	October 2016	Amend Section 1 (g) and correct Harbourmaster to Harbour Master.
3.0	May 2020	Full review of document. Standards and Procedures were combined.



ABBREVIATIONS & DEFINITIONS

Except to the extent that such interpretation is excluded by, or inconsistent with the context in these Mooring Standards, the following apply:

ABBREVIATIONS

KPA	Kimberley Ports Authority	MA	Manual
HM	Harbour Master	MHWS	Mean High Water Springs
HAT	Highest Astronomical Tide	MHWN	Mean High Water Neaps
LOA	Length Overall (maximum length)		

DEFINITIONS

Cyclone Mooring	A mooring which must have minimum capability of holding a nominated vessel in line with wind standard AS/NZ 1170.2 for area C – as specified by the Mooring Designer/Naval Architect.
Mooring	A mooring located in gazetted KPA waters.
Mooring Designer/ Naval Architect	A person or organisation with appropriate professional qualifications to: <ul style="list-style-type: none"> • prepare the technical specifications of a mooring system including configuration and materials; • review and make recommendations on inspection reports; • ensure on-going suitability of mooring systems.
Mooring Inspector/ Installer	A person or organisation capable of installing a mooring to the Mooring Designer's/Naval Architect's specifications: <ul style="list-style-type: none"> • duly qualified for their range of business and licensed in Western Australia; • capable of conducting Mooring inspections above and or below water; • capable of producing measurements and records suitable for evaluation by the designated Mooring consultant/designer; and • has completed the KPA application process and has been approved to perform Mooring Inspections and Installations.



Mooring Permit	The document issued by KPA after it has been provided with a satisfactory inspection and condition report.
Mooring Owner	A person or company which seeks or holds a Mooring Permit in the Port of Broome.
Storm Mooring	A Mooring, other than a Cyclone mooring and capable of withstanding wind and weather up to (Beaufort force 10) 50 Knts or as specified by the Mooring Designer/Naval Architect.

1. INTRODUCTION

1.1. Kimberley Ports Authority Mooring Procedures

This document provides information to the persons and companies wishing to install and use Moorings in the Port of Broome (**Port**). It addresses Mooring design, installation and maintenance.

However, this document in no way absolves any Mooring User or Owner from their own duty of care to others, including but not limited to their employees, licensees, other Port users, visitors and KPA.

It is recommended that this document be read in conjunction with other KPA procedural documents, including the KPA Cyclone Contingency Plan.

KPA publications may be downloaded from the KPA website.

Kimberley Ports Authority's priority is:

SAFETY AND

PROTECTION OF THE ENVIRONMENT

1.2. Kimberley Ports Authority

The KPA is a Government Trading Enterprise that operates the Port under the jurisdiction of the Port Authorities Act 1999 and Port Authority Regulations 2001, with responsibilities to:

- facilitate trade within and through the Port and plan for future growth and development of the Port;
- operate the Port safely, efficiently and securely; and
- protect the Port environment.

In this role, KPA administers Port assets including moorings located within Port Mooring Zones.

Failure to comply with KPA Mooring standards may, without prejudice to the KPA's other rights, result in the removal of the Mooring and or legal action against the owner.

KPA CONTACT DETAILS:

Telephone: (08) 9194 3100

Fax: (08) 9194 3188

Email: info@kimberleyports.wa.gov.au

Web: www.kimberleyports.wa.gov.au



1.3. Disclaimer

Mooring Owners must obtain their own independent advice from duly qualified Mooring Consultants/Naval Architects, to ensure that their proposed Mooring will meet not only KPA requirements, but also provide a safe Mooring for their vessel.

KPA accepts no liability for any loss, harm, damage or delay of any kind whatsoever which may be suffered by a Mooring Owner as a consequence of the Mooring User relying on the information contained in these Mooring Standards.

2. PREAMBLE

KPA hosts a range of recreational and commercial vessels each year, many of which utilise Moorings as opposed to anchoring within Port limits. These Moorings may be recreational or commercial storm Moorings or cyclone Moorings. All Moorings within the Port are administered by KPA. KPA's aims are to promote fair and equitable access to Moorings and to provide efficient and effective management of waters within Broome Port Limits.

Each Mooring must be capable of safely holding the assigned vessel during a range of weather conditions. Mooring Owners must obtain guidance and advice from a duly qualified Mooring Designer/Naval Architect in order to safeguard the vessel owner's investment. Lists of several of the known designers, installers and inspectors are shown in the appendices to this document; however KPA makes no warranty that the companies and individuals listed are able to provide an adequate level of advice. Mooring Owners must make their own assessment of a Mooring consultant's abilities. KPA is the Administrator for the Licence and Permit only.

3. BROOME WEATHER CONDITIONS

The Port is centred at 18 degrees South and 122 degrees 13' East and lies within Australia's cyclone belt. Between three and five cyclones typically approach the North West coast during the season (November to April) and winds over 100 knots can be experienced along with associated sea conditions. The Bureau of Meteorology advises that tropical cyclones capable of strong winds, high seas and heavy rain can be experienced during the months from November to April, but are most common in January and February.

Typically during November to May the winds frequently blow in excess of 20 knots from the SW and occasional winds over 60 knots from the North East and East might be experienced during seasonal tropical storms. The SW winds might blow strongly for 3-5 days without ceasing.

During May to November the winds typically blow from E-SE, increasing in strength from the early morning and easing by late afternoon/early evening. Morning winds may exceed 30 knots.

Accordingly, vessel owners and operators in the region are expected to familiarise themselves with the risks associated with adequate securing and Mooring of vessels during adverse weather, including the vessel itself, personnel and responsibilities towards other vessels moored in the vicinity. Table 3-1 and 3-2 depict Significant Wave Heights and Indicative Tidal Heights respectively.



Table 3-1 Significant Wave Heights

LOCATION	SIGNIFICANT WAVE HEIGHT
Gantheaume Point	4.5m
Roebuck Bay	2.9m
NOTE: Maximum cyclone waves may be 1.6 - 2.0 times higher than significant wave height	

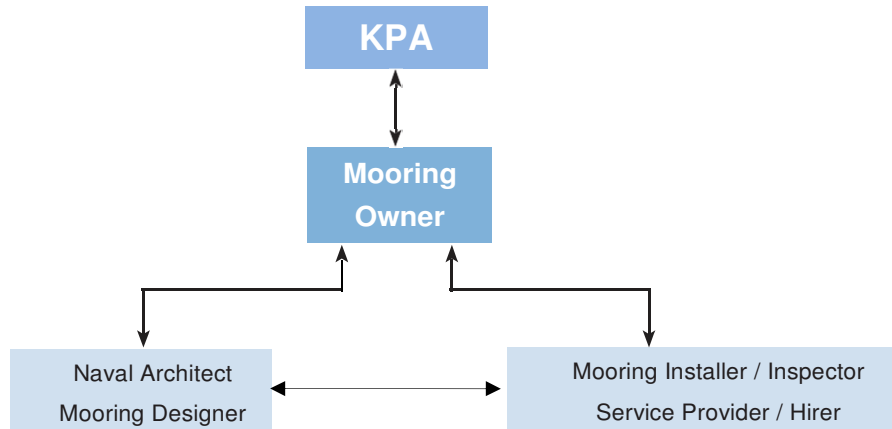
Table 3-2 Indicative Tidal Heights

DESCRIPTION	
Highest Astronomical Tide	10.56m
Mean High Water Springs	9.28m
Mean High Water Neaps	6.31m
NOTE: Storm Surge + Wind may add 3.5 metres to Sea Heights	

4. THE MOORING STANDARDS – OVERVIEW

1. Kimberley Ports Authority (**KPA**) requires mooring owners to comply with:
 - a) the procedures set out below;
 - b) the **KPA Port Standards and Procedures**, copies of which are available on KPA’s website;
 - c) the *Port Authorities Act 1999* and *Port Authorities Regulations 2001*, in particular Part 9; and
 - d) KPA Port and Terminal Handbook.
2. By accepting KPA’s offer of a Mooring site, the Owner agrees that the Owner has been granted a permit to use a part of the Port and is bound by KPA’s Terms and Conditions, including the Mooring Standards. The relationship between each party is as described in figure 2.1.

Figure 1



3. The procedures to be followed in relation to Moorings are as follows:
 - a) Owners wishing to establish a mooring within the Port are to make application to KPA using the Application for Mooring Site Permit form.
 - b) The Harbour Master may after consultation approve or reject the application at the Harbour Master's sole discretion.
 - c) The Mooring tackle is to be positioned using the Geographical Positioning System (GPS) and its position is to be expressed in Degrees, Minutes and Points of minutes using Datum WGS84. Accuracy is to be no less than plus or minus 5 meters of that position.
 - d) Once the original mooring application is approved by the Harbor Master, a KPA Licensed Mooring Installer/Inspector can set the Mooring.
 - e) A Mooring Permit is valid subject to:
 - a. the payment of the prescribed annual fee.
 - b. compliance by the Permit Holder with the Kimberley Ports Authority Mooring Standards.
 - c. the mooring passes its annual inspection.
 - f) Moorings must be inspected annually and as stated in the design report by the Mooring Designer/Naval Architect by an Approved Inspector each year prior to 1 May for vessels moored in Gantheaume Bay and 1 November for vessels moored in Roebuck Bay. Following the annual inspection, Owners must ensure all recommended maintenance work to the Mooring is completed. Owners must send the inspection reports, together with evidence of any repair work carried out, to the Harbour Master prior to 1 May each year for vessels moored in Gantheaume Bay and 1 November for vessels moored in Roebuck Bay. Failure to do so will result in the Licence and Permit being cancelled.
 - g) Only the registered vessel, or other approved authorised vessel as described on the permit appendix, may occupy the Mooring.
 - h) Damage caused to other vessels or property by the User or any other vessel which is using



the Mooring is the responsibility of the Owner.

- i) Owners must advise the Harbour Master if:
 - the Owner proposes selling the mooring;
 - the Owner proposes removing the mooring;
 - there is any change to the Owner’s contact details;
 - the mooring is damaged or shifts location; or
 - the Owner wishes to have an additional vessel registered to the Mooring.
- j) A Mooring owner, unless a KPA Licensed Inspector/Installer may not hire their Mooring.
- k) Vicarious ownership of mooring by Installer for management purposes is allowed.
- l) The practice of ‘sinking’ a mooring i.e. removing the mooring buoy and laying all tackle on the sea bed is discouraged by KPA and is to be phased out by 2022. In the past a number of moorings have been lost through this practice. If it is necessary to temporarily ‘sink’ a mooring then there must be a buoy and line attached, to indicate the position of the ground tackle. It is recommended braided line of just sufficient length to allow for spring tides be used to prevent excess rope floating on the surface. An inspection of the Mooring in accordance with KPA mooring standards must be carried out annually, and prior to the Mooring being used again.
- m) Once approved, a Mooring must be installed within three (3) months of approval date, otherwise the permit may be cancelled by KPA.
- n) The permit holder must as a minimum, hold any applicable insurance as outlined below:

INSURANCE	COVER
Contract Works	Reinstatement value of the works
Public and Product Liability	\$20,000,000
Professional Indemnity	\$10,000,000
Motor Vehicle Third Party Liability	\$20,000,000

4. Annual Renewals

- The Mooring Permit Owner may renew the Permit annually provided that the Mooring Owner has adhered to these procedures.
- Renewal notices will normally be advised in June each year electronically via tax invoice.
- Should Mooring Permits not be renewed or if Moorings are not inspected and reported by due date to KPA, then the Mooring Permit will be cancelled and reissued to other applicants by



authority of the Harbour Master. Affected Moorings must be removed or if not, will be disposed of by KPA at the Mooring Owners' expense.

5. RESPONSIBILITIES OF A MOORING OWNER

Mooring Owners must comply with KPA Mooring Standards to ensure the safety of all vessels and infrastructure within Port Waters.

5.1. Application Process

- Commercial and recreational boat owners or operators applying to moor a vessel within Port Limits must contact KPA for an application kit, which is available online, or by contacting KPA Operations Staff.
- Mooring Owners must detail the GPS position of the preferred location, which must be approved by the Harbour Master.
- No Mooring shall be placed in Port waters unless permitted by the Harbour Master and in compliance with these directions – a Mooring system set without prior authorisation of the Harbour Master may be removed immediately by the Harbour Master at owner's sole expense.
- Before placing a permitted Mooring in the water the Mooring tackle design and construction must be in accordance with mooring consultant/designer specifications and a copy of this specification provided to Harbour Master.

APPLICATION PROCESS



PROSPECTIVE MOORING OWNER APPROACHES KPA FOR NEW MOORING LOCATION. Consultation with KPA to determine whether Static or Dynamic Analysis is required, refer to section 6.2.



OWNER ENGAGES QUALIFIED NAVAL ARCHITECT/MOORING DESIGNER KPA requires the Owner to engage a Naval Architect for the lifetime of the mooring. Looking at the static analysis from the meeting, the NA/Designer provides not only the details but the inspection requirements over the life cycle of the mooring.



DESIGN IS FORWARDED TO KPA BY OWNER.

Once the Owner receives the Static or Dynamic Analysis this is sent to the KPA to be reviewed and kept on file.



KPA ACKNOWLEDGES DESIGN RECEIPT OF DESIGN AND ISSUES PERMIT.

At this point the design is complete, the KPA Harbour Master will now confirm that the Owner has 3 months to install the Mooring at the approved site.



OWNER PROCURES MOORING AND HAS LICENSED INSTALLER INSTALL THE MOORING as per Mooring Designer's/Naval Architect's specifications.



MOORING INSTALLER SIGNS OFF that the Mooring has been installed in the designated location as per the designer specifications and submit confirmation to KPA.



INSPECTIONS CARRIED OUT ANNUALLY and as required by the Naval Architect – minimum requirement is annually. Other inspections biennial, triennial or 5 yearly will be as the Mooring Designer/ Naval Architect requires.

For more information see our website:

<https://www.kimberleyports.wa.gov.au/Port-of-Broome/Community-Info/Moorings>



6. MOORING DESIGN AND COMPONENTS

6.1. Mooring Classifications

Moorings within KPA waters typically fall into two classifications:

- Storm Moorings, and
- Cyclone Moorings.

6.2. Requirements

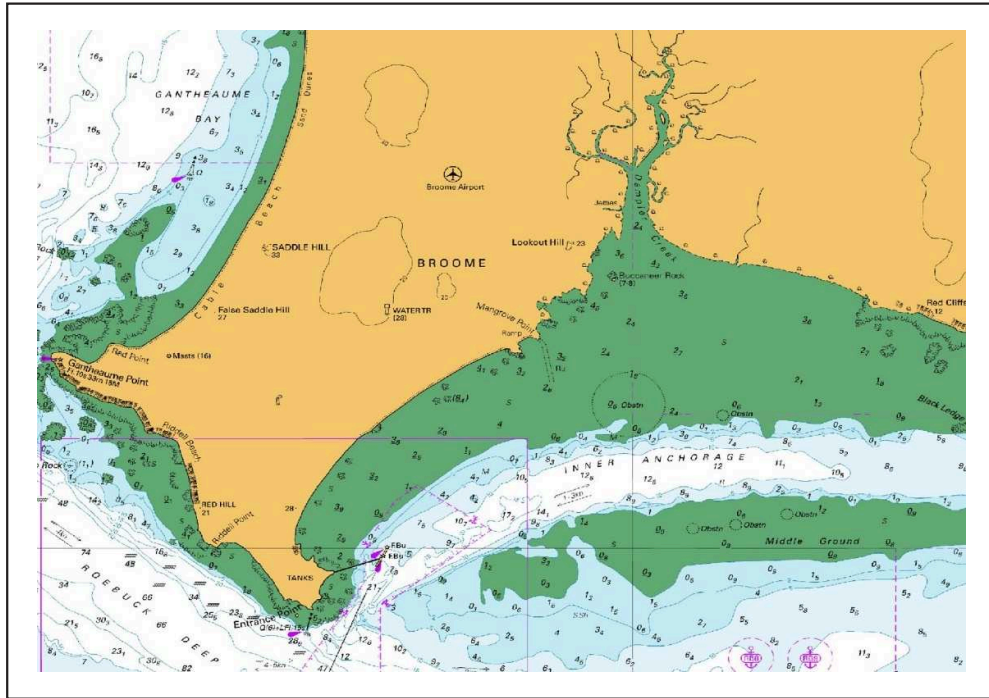
All Moorings must be designed, installed and maintained according to suitably qualified Mooring Consultant's/Naval Architect's design specifications.

KPA minimum requirements include:

- Cyclone Moorings are to be designed and certified by a qualified Mooring Designer/ Naval Architect and the vessel must be subject to a minimum of Static Analysis for vessels up to 15m. For vessels over 15m, Dynamic analysis will be required.
- Storm Moorings will be subject to Static Analysis from a qualified Mooring Designer/ Naval Architect. An owner may at any time provide a Dynamic Mooring analysis to KPA.
- All reports, both Static and Dynamic will include as a minimum:
 - Design Calculations and specifications;
 - Installation procedures including proof load;
 - Inspection and Maintenance requirements for the life of the mooring
 - E.g. Annual, Biennial, Triennial, 5 Yearly, or as required:
 - Component replacement requirements.
- Storm Mooring buoys are to be of a size determined by the Mooring Designer/Naval Architect, but not less than 500mm diameter and be bright orange or bright pink in colour.
- Cyclone Mooring buoys are to be of a size determined by the Mooring Designer/Naval Architect, but not less than 600mm diameter and be bright yellow in colour.
- Mooring Owners must ensure that their allocated Mooring number of a minimum 100mm height, is visible on the buoy. This will be positioned where it will always be clearly legible, free from marine growth, bird droppings and tackle and as much as possible, away from chaffing areas.

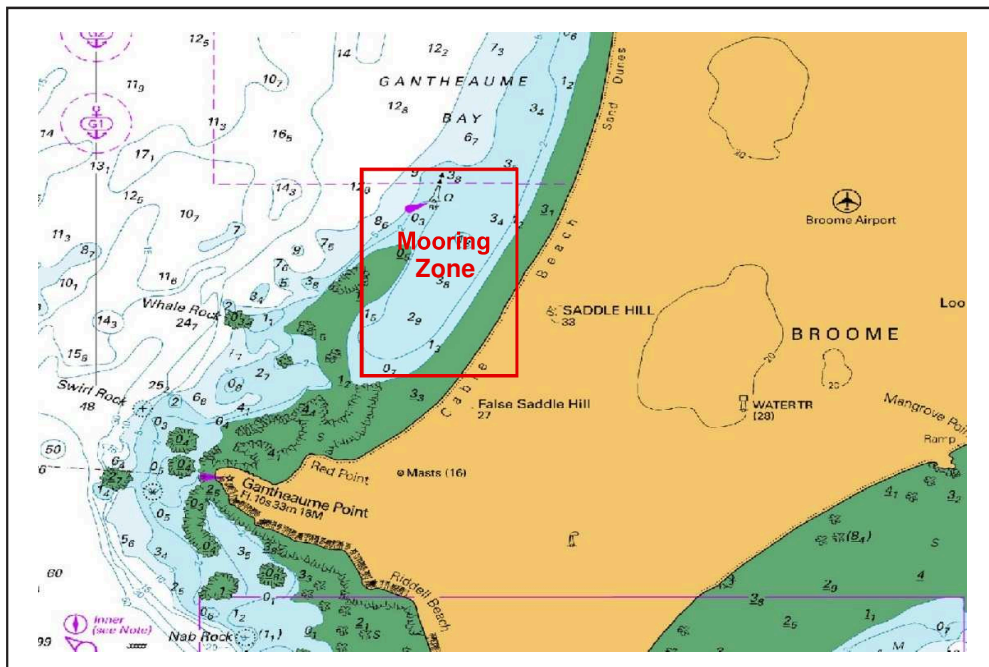


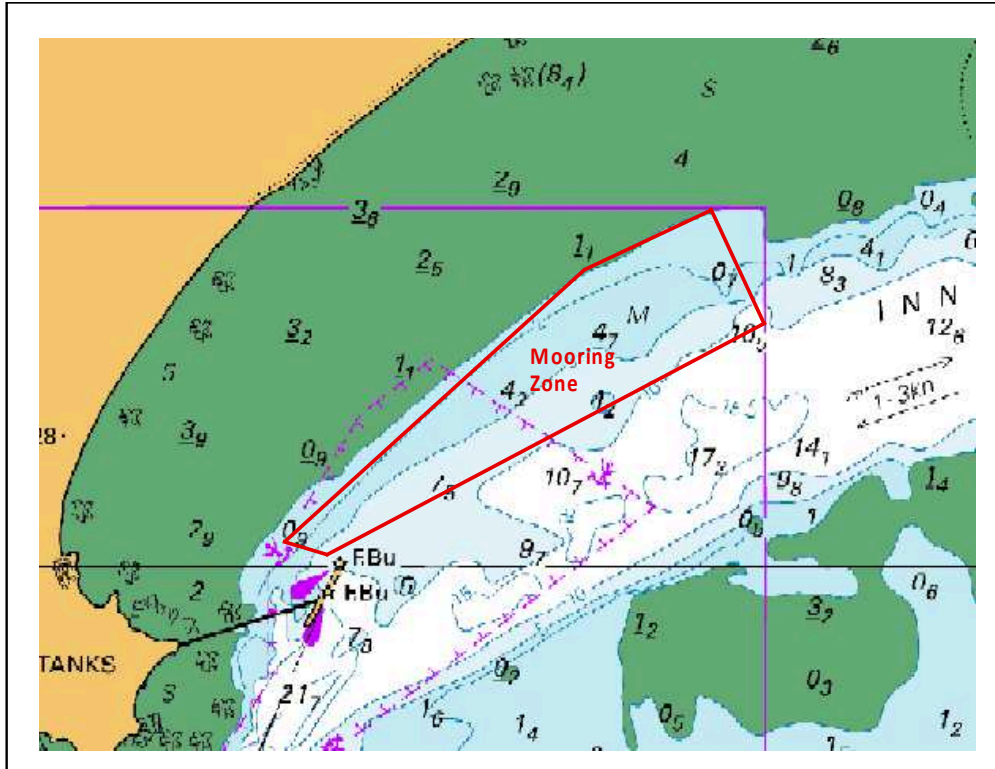
6.3. Mooring Overview



6.4. Storm Moorings Positions (indicative only)

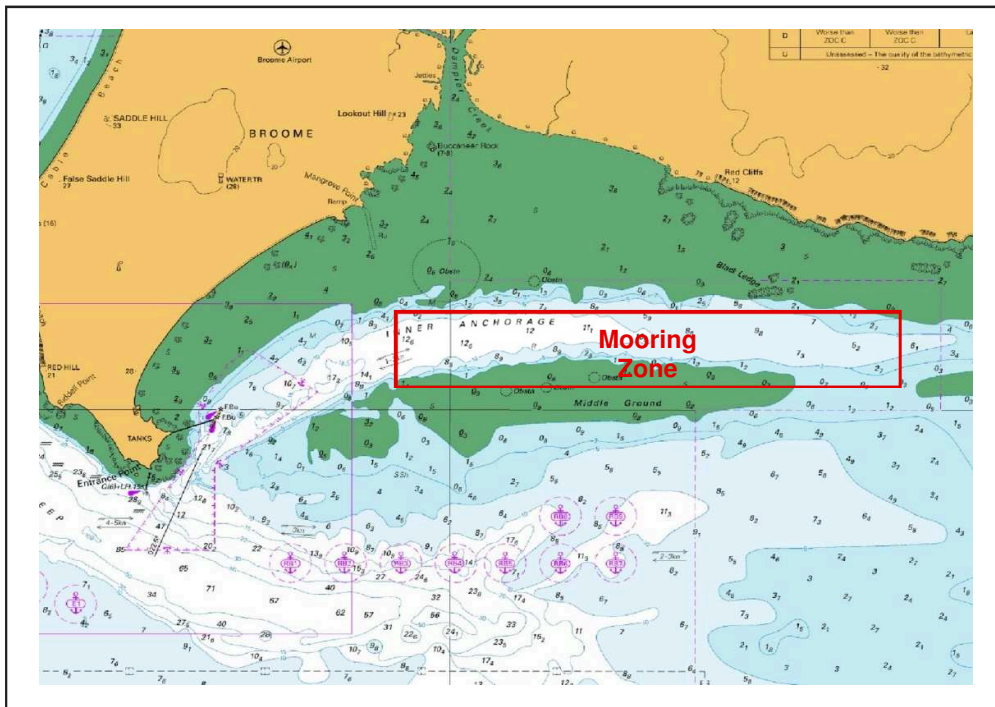
Storm Moorings are located at both Gantheaume Point and in Roebuck Bay and are used depending on the season.





6.5. Cyclone Moorings Positions (indicative only)

The majority of Cyclone Moorings are located at Black Ledge, although there are a small number of cyclone Moorings situated closer to the Broome wharf in Roebuck Bay.





7. MOORING INSTALLATION

- The mooring will be installed by a KPA licensed Mooring installation and Inspection Company for the Port.
- The Mooring must be installed to the Mooring Designer's/Naval Architect's design specifications.
- Upon installation, the Mooring must be inspected by a Mooring Inspector for structural integrity, disposition on the seabed and compliance with these procedures - the inspection report must be a written document containing photographs from diver inspection of the below water tackle and specified configuration.
- Final confirmation that the Mooring is set in the designated location, including GPS readout along with a photograph of the top mark and markings must be forwarded by the Mooring owner to the Harbour Master in conjunction with a copy of the full "Mooring Installation Report" as built.

8. MOORING INSPECTIONS

- a) The Mooring Owner must obtain an Annual Inspection of all Mooring components by a KPA Licensed Inspector/Installer prior to 1 November each year (in the case of Roebuck Bay Moorings) or 1 May (in the case of Gantheaume Bay Moorings).
- b) The frequency and scheduling of any other types of inspections shall be determined by the Mooring Owner's Naval Architect, with regard to inputs such as: Mooring type; location; usage; previous Mooring reports and climatic events.
- c) The Mooring Owner must forward any Inspection reports to the KPA and the Mooring Owner's Mooring Designer/Naval Architect together with:
 - evidence of engineering recertification and maintenance work;
 - table detailing measurements of components as per design and current inspection;
 - photographs;
 - evidence of a diver's inspection;
 - signed Owner declaration.
- d) Following any Mooring inspection, the inspector must submit a report to the Mooring Owner and a copy forwarded to the Harbour Master within fourteen (14) working days following inspection.
- e) In the event of a non-conformity, the Owner has thirty (30) days after receiving the revocation notice to rectify the non-conformity. The mooring cannot be used until this is rectified. If the mooring cannot be rectified within the 30 days, then the Owner must contact KPA.



- f) Upon suspension and/or revocation of a Mooring Permit, the Harbour Master may remove and store the Mooring tackle, and the costs associated with the removal and storage of the Mooring will become a debt payable by the Mooring Owner on KPA's demand, as outlined in the Act.
- g) An inspection will also be required when a Mooring:
 - a. is intended to be used by a vessel other than that currently permitted;
 - b. is intended to be configured differently;
 - c. has been dragged; or
 - d. after a significant weather event i.e. Cyclone
- h) Organisations wishing to be listed as Mooring Inspectors should apply in writing to the Harbour Master and provide details of their qualifications by 1 June each year.
- i) KPA will confirm by email when the mooring is approved for use, upon passing the inspection.
- j) All diving operations to be conducted in line with Australian Standards AS/NZ 2299.1 (2015).

9. SALE, TRANSFER OR SURRENDER OF YOUR MOORING

- a) In the event an owner wishes to sell or transfer their Mooring KPA must be notified and the 'Transfer of Existing Mooring Permit form must be completed.
- b) The new owner or transferee must comply with section 6 of this document and submit all Mooring Designer/ Naval Architect information before approval will be granted for the new owner transferee to use the Mooring.
- c) In the event an owner has no further use for the mooring they must notify KPA and complete the 'Surrender of Existing Mooring Permit' form and hand the Mooring over to KPA.
- d) At the discretion of the HM, the mooring owner may be requested to remove the mooring at their expense.

10. REFERENCES

Port Authorities Act 1999

https://www.legislation.wa.gov.au/legislation/statutes.nsf/main_mrtitle_732_homepage.html

Port Authorities Regulations Port Authorities regulations 2001

https://www.legislation.wa.gov.au/legislation/statutes.nsf/main_mrtitle_1932_homepage.html



APPENDIX A – INDEX OF FORMS

Application for New Mooring Site Permit	IFM35/176763
Application for Alternative Vessel on an Existing Mooring	IFM35/179761
Surrender of Existing Mooring Permit	IFM35/179765
Transfer of Existing Mooring Permit	IFM35/179766
Application to be a KPA Approved Licensed Mooring Service Provider	IFM35/179764
Application for Mooring Hire Permit	IFM35/179762



APPENDIX B – APPROVED MOORING INSTALLERS/INSPECTORS

KPA makes no representation or warranty as to the quality of the advice that Mooring Owners may obtain from the parties listed below. Mooring Owners should conduct their own due diligence and satisfy themselves as to the qualifications and expertise of the approved Mooring Installers/Inspectors listed.

HBR003/180330



APPENDIX C – MOORING DESIGNERS/NAVAL ARCHITECTS

KPA makes no representation or warranty as to the quality of the advice that Mooring Owners may obtain from the parties listed below. Mooring Owners should conduct their own due diligence and satisfy themselves as to the qualifications and expertise of the Mooring Designer/Naval Architects listed.

HBR003/182612