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# **PORT OF NGQURA: SPECIFICATION FOR SUPPLY AND INSTALLATION OF 10T-SWL CAST IRON BOLLARDS AT ACB TUG JETTY**

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## 1 INVITATION TO SUBMIT A QUOTATION

- Bidders are hereby invited to submit tenders for supply and installation of 10T–SWL cast iron bollards at ACB Tug Jetty repairs at Port of Ngqura.
- Bidder shall have a minimum CIDB grading of 2 CE or Higher

## 2 BACKGROUND

- The ACB Jetty is a reinforced concrete structure, primarily designed for the berthing of 70T bollard capacity tugs. It plays a critical role in the operations of the Port of Ngqura by facilitating the secure mooring of vessels.
- The superstructure has 32 Tee bollards, each with a Safe Working Load (SWL) of 10T. There has been a notice of failure of six (6) bollards as of April 2024, with two (2) additional bollards on the verge of failure.
- During routine inspections at the ACB Jetty, several bollards were found to have failed structurally at the base. Investigations revealed that the cause of failure was due to insufficient base thickness where the nut is seated, despite bolts and nuts remaining intact.
- This technical specification is for the supply and installation of new 10T bollards with a different thickness and bolt configuration in the Port of Ngqura that will assist in improving the safe mooring of vessels in the tug jetty.

## 3 COMPULSORY PRE-QUOTE SITE MEETING

- A compulsory site meeting must be attended by all potential bidders before they submit a quotation for this project as part of the procurement process. Bidders who submit documents without proof of attending the site meeting will be disqualified. The purpose of the meeting is to allow bidders to visit the project site to get a firsthand understanding of the site conditions, existing infrastructure, and any specific requirements related to the project.
- Measurements provided may be physically verified by the contractor on site during the compulsory site meeting.

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## 4 SCOPE OF WORKS

- This specification outlines the requirements for the supply of eight (8) and installation of eight cast iron marine bollards, including all anchors, bolts, nuts and everything else that is required, for mooring services each rated at 10T Safe Working Load (SWL) to ensure compliance. The bollards will be positioned in new locations near the existing, damaged bollard placements.

### 4.1 SUPPLY AND INSTALLATION OF NEW BOLLARDS



This includes site preparation, drilling new holes, securing the bollards, and ensuring alignment and positioning for effective mooring use.

### 4.2 TECHNICAL SPECIFICATION: DESCRIPTION OF WORK

#### 4.2.1 GENERAL ANCHOR BOLT SPECIFICATIONS:

- Diameter: M24 (26 mm in diameter) Galvanised
- Length: Galvanised anchor bolts are 500mm long.
- Embedment Depth: The embedment depth For M24: ~350mm (The slab depth is 400mm)
- Material: High-strength steel, Grade 10.9, is used to handle the load safely.
- Bolt Arrangement: The bolts are symmetrically positioned around the baseplate of the bollard to ensure even distribution of forces. The bollard to have seven (7) bolts.

#### 4.2.2 ANCHOR INSTALLATION

- Anchor installation should be in accordance with the manufacturer's specifications.

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- The concrete base must be clean of rust and not have any significant voids.
- The anchor hole should be hammer-drilled with a diamond core drill bit.
- If the drill hole is aborted, the hole should be filled with high strength mortar.

#### 4.2.3 REMOVAL OF EXISTING BOLLARDS

- Remove 8 existing bollards including the associated 32 threaded bolts and nuts (4 on each bollard).
- Removal includes complete extraction of embedded components.
- Care must be taken to minimize damage to surrounding concrete during removal.
- All voids, holes, or damaged areas resulting from the removal process must be filled with suitable high strength mortar.
- The surface of removal must be cleaned and repaired to good condition to match original surface.
- The surface must be structurally sound and level, ready for the installation of new bollards.
- All debris and removed materials must be disposed of in accordance with environmental and site regulations.

#### 4.2.4 EPOXY/RESIN ANCHOR INSTALLATION

- Fully threaded anchors must be used with resin/epoxy bond materials to achieve a bond between the anchors and the existing concrete.
- Clean the area first and then mark the positions of the holes on the jetty surface.

#### 4.2.5 TESTING/ QUALITY CHECK

- The bidder shall provide certification showing that the cast iron bollards can safely withstand a working load of 10T.
- A comprehensive test report must be submitted, detailing the methodology used for each test and include the results.
- A tug pulling test will be done after the installation of the cast iron bollards to assess the anchorage of the bollards. Should the anchorage fail, the contractor will be liable for the reinstallation of the bollard.
- All testing procedures must comply with relevant industry standards and guidelines.

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- The anchorage testing must be witnessed and/or verified by the client's representative or appointed engineer.

#### 4.2.6 PAINTING OF BOLLARDS

- Manipulate the paint under the brush to produce a uniform, even coat.
- Work the paint into corners and crevices.
- The paint is not allowed to be diluted with water. Should this be stipulated by the manufacturer, it must be done so with approval of the project manager.
- In the case that the painting of the bollards is happening off-site, arrangements must be made for the project manager to visit the workshop and witness the process.
- The supplier must also guarantee the performance of the paint system after completion of the project.
- Contrasting colours are required for each coat. The final coat must be yellow. All quotes should be based on the paints stipulated below.

PAINT SYSTEM	COATS	FILM THICKNESS (MICRONS)
Opti Rust Busta® OR Noxyde #	One coat with a stripe coat * in between coats	175 microns minimum dry
Opti Metal Coat or Peganox.	Topcoat yellow in colour	175 microns minimum dry

**Total dry film thickness: 250 microns minimum \* To be applied to all sharp edges, bolts, and nuts.**

## 5 GENERAL

### 5.1 TNPA PROJECT MANAGER

- The TNPA Project Manager will be the Transnet point of contact for any administrative, payment, or managerial matters related to this tender.

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- The name and contact details of the Project Manager will be made available to the Contractor upon award of this tender.

## 5.2 DURATION OF CONTRACT

- The duration of the contract will be agreed between the TNPA Project Manager and successful bidder.
- The contract duration encompasses the necessary time for procuring materials, labour, and any other associated lead team items.
- The contract duration starts when the purchase order has been issued to the Contractor.
- The contract completion date or, in other words, the Purchase Order expiry date shall be stated on the Purchase Order document provided to the Contractor.
- In the event of anticipated delays that could extend the completion of the service beyond the Purchase Order expiry date, the Contractor must immediately communicate this to the Project Manager to allow the Project Manager to seek the necessary approvals for amending the Purchase Order Expiry date, if merited to do so.
- Work related to the service being provided may only continue beyond the original Purchase Order expiry date upon obtaining official approval for the extension of the Purchase Order expiry date from the Project Manager. The Contractor must ensure compliance with this protocol before proceeding with any work after the initial expiry date.

## 5.3 DEFECTS LIABILITY PERIOD

- The Defects Liability Period serves to ensure the contractor delivers work of high quality and in adherence to agreed-upon specifications. Simultaneously, it functions as a guarantee or warranty for TNPA, providing assurance that the contractor is committed

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to promptly addressing and rectifying any deficiencies that may surface shortly after project completion.

- On completion of the Project, a 12-month Defects liability period shall apply on the workmanship.
- During this period, the contractor is obligated to rectify any defects, faults, or issues in workmanship or materials that become apparent after the project's completion.

#### 5.4 SITE

- The Port of Ngqura is located at the following address:

National Ports Authority  
Neptune Road  
Port of Ngqura  
6100

### 6 TNPA SHE REQUIREMENTS

- 6.1 Following the tender award, the successful Contractor is required to compile a safety file in strict accordance with the stipulations outlined in the Contractor Compliance File Assessment Checklist (provided below).
- 6.2 The Contractor is responsible for diligently completing the Contractor Compliance File Assessment Checklist and submit it for approval together with his safety file to the representative of the TNPA Port of Ngqura SHE Department within 3 days of receipt of award letter.
- 6.3 Upon approval of the Contractor Compliance Safety File with all applicable documents and the assessment checklist, the Contractor will be issued a Site Access Certificate.
- 6.4 Should the contractor safety file not comply in any way, the Contractor must rectify the missing information or documents within 7 days of receiving the letter of award or inform the project manager of any challenges that may result in delays. Failure to do so may result in termination of the award of business from Transnet.
- 6.5 The Contractor must at all times have their Site Access Certificate with them on-site, serving as authorisation for their work. Given the stringent security measures at the port,

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Contractors lacking a valid Cite Access Certificate may be instructed to vacate the port premises.

6.6 Subsequent to the issuance of the Cite Access Certificate, all employees of the Contractor must undergo induction by the TNPA SHE Department before commencing any work.

6.7 The Contractor Compliance File Assessment Checklist is provided below for reference. A dedicated copy of this checklist will be furnished to the Contractor to facilitate straightforward completion and submission post-tender award.

### CONTRACTOR COMPLIANCE FILE ASSESSMENT CHECKLIST

Date of inspection/ Evaluation: \_\_\_\_\_

Client	
Employer (Principal contractor)	
Registered name of the enterprise	
Trade name of the Enterprise	
Company Registration No	
SARS registration No(PAYE)	
UIF registration No	
COIDA registration no	
Relevant SETA for EEA purpose	
Industry sector	
Bargaining Council	
Contact person & position	
Contact number	
Site Address	



Postal Address	
Chief Executive Officer	
Chief Executive officer's email and contact number	
Construction Manager	
Health and Safety Representative	
Activities/ Service rendered	
Commencement date	
Completion date	
Site Phone	
Total number of employees on site:	
Female	
Male	
People with disabilities	

## 7 BILL OF QUANTITIES

This Bill of Quantities shall be read in conjunction with the specifications document and the Request for Quotation (RFQ) clauses. The rates provided shall be inclusive of supply of equipment, plant, fuel for plant, tools and labour costs.

ITEM NO.	DESCRIPTION	Unit	QTY	Rate	Total Amount
1.1	PRELIMINARY AND GENERAL				

ITEM NO.	DESCRIPTION	Unit	QTY	Rate	Total Amount
1.1.1	Preliminary and General (detailed breakdown to be provided upon request for such information).	Sum	1		
1.1.2	Contractor Safety File (to be submitted within 3 days of receiving letter of award and all missing information to be rectified within 7days of receiving letter of award.)	Sum	1		
1.2	Supply the new 10T cast iron bollards (Including all anchors, galvanized bolts, nuts, and all other material/tools required.)	Each	8		
1.3	Removal of existing bollards including the rusted threaded bolts and nuts, and filling of voids with high strength mortar.	Each	8		
1.4	Install the new 10T cast iron bollards.	Each	8		
1.5	Bollard testing certificate up to 10T – SWL.	Each	8		
1.6	<b>Sub-total</b>				

ITEM NO.	DESCRIPTION	Unit	QTY	Rate	Total Amount
1.7	Add 15% VAT				
1.8	TOTAL				