


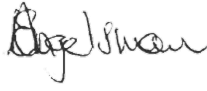


SCOPE OF WORK

SUPPLY OF SERVICES TO REFURBISH STACKER RECLAIMER 3 AT THE SALDANHA IRON ORE TERMINAL

APPROVAL ROUTING SLIP

Project Name : SR3, CV116
 Project Number : Z.5200191
 Scope Description : Supply of Services to Refurbish Stacker Reclaimer 3 at the Saldanha Iron Ore Terminal

| Signatories | | Signature | Date | Comments |
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PART C3: SCOPE OF WORK

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C3.1 EMPLOYER'S WORKS INFORMATION

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SECTION 1

1 Description of the works

1.1 Executive overview

The works that the Contractor is to perform involve conducting a major refurbishment on Stacker Reclaimer 3 and Tripper Car 3 at the Bulk Terminal of Saldanha (BTS). Stacker Reclaimer 3 and Tripper Car 3 is Bulk Material Handling Equipment (BMH).

The Stacker Reclaimer 3 and Tripper Car 3 asset at the Port of Saldanha which was commissioned in 2005 requires a major refurbishment.

The BTS has little operational redundancy when handling Iron Ore volumes up to 60mtpa with bulk material handling equipment reaching, and in some cases exceeding their mid-life refurbishment periods.

A major refurbishment is an opportunity to address equipment reliability issues.

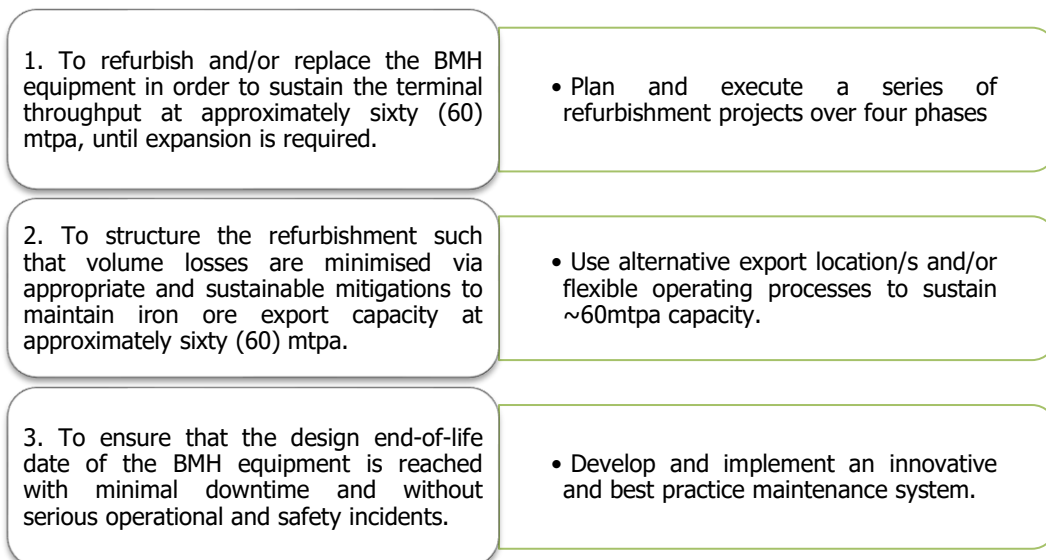
The refurbishment is required to ensure the optimal operational use and availability of the BMH equipment at the BTS. The goal of the refurbishment project is to ensure that the BMH equipment operates safely and reliably for the remainder of their operational life.

This refurbishment is not an equipment upgrade and no increase in volume throughput is required.

1.2 Employer's objectives

The Employer's objective is to sustain itself as the premier bulk export terminal for iron ore in South Africa. To achieve this strategic intent, the terminal needs to operate, maintain and sustain its BMH facilities and equipment in a safe, efficient and cost-effective manner.

The BTS has developed a Sustaining Programme which gives effect to its strategic intent and which outlines the following three strategic objectives and their deliverables:



1.3 Interpretation and terminology

The following abbreviations are used in this Works Information:

| Abbreviation | Meaning given to the abbreviation |
|--------------|-----------------------------------|
| AIA | Authorised Inspection Authority |



| Abbreviation | Meaning given to the abbreviation |
|---------------------|---|
| BBBEE | Broad Based Black Economic Empowerment |
| BMH | Bulk Material Handling |
| BTS | Bulk Terminal of Saldanha |
| CEMP | Construction Environmental Management Plan |
| CD | Compact Disc |
| CDR | Contractor Documentation Register |
| CDS | Contractor Documentation Schedule |
| CIRP | Contractor's Industrial Relations Practitioner |
| CMC | Construction Management Team |
| CRL | Contractor Review Label |
| CSHEO | Contractor's Safety, Health and Environmental Officer |
| CM | Construction Manager |
| DTI | Department of Trade and Industry |
| DGN | Drawing File |
| DWG | Drawings |
| EDMS | Electronic Document Management System |
| EO | Environmental Officer |
| HAW | Hazard Assessment Workshop |
| HAZOP | Hazard and Operability Study |
| HSSP | Health and Safety Surveillance Plan |
| INC | Independent Nominated Consultant |
| IP | Industrial Participation |
| IR | Industrial Relations |
| IPP | Industrial Participation Policy |
| IPO | Industrial Participation Obligation |
| IPS | Industrial Participation Secretariat |
| IRCC | Industrial Relations Co-ordinating Committee |
| JSA | Job Safety Analysis |
| Native | Original electronic file format of documentation |
| NDT | Non-Destructive Testing |
| NOSA | National Occupational Safety Association |
| OEM | Original Equipment Manufacturer |
| OHS | Occupational Health and Safety |
| OHSAS | Occupational Health and Safety Act of South Africa |
| PES | Project Environmental Specifications |
| PHA | Preliminary Hazard Assessment |
| PIRM | Project Industrial Relations Manager |
| PIRPMP | Project Industrial Relations Policy and Management Plan |
| PLA | Project Labour Agreements |
| PSIRM | Project Site Industrial Relations Manager |
| PSPM | Project Safety Program Manager |
| PSSM | Project Site Safety Manager |
| ProgEM | Programme Environmental Manager |
| ProjEM | Project Environmental Manager |
| QA | Quality Assurance |
| R&D | Research and Development |

| Abbreviation | Meaning given to the abbreviation |
|--------------|---|
| SANS | South African National Standards |
| SASRIA | South African Special Risks Insurance Association |
| SES | Standard Environmental Specification |
| SHE | Safety, Health and Environment |
| SHEC | Safety, Health and Environment Co-ordinator |
| SIP | Site Induction Programme |
| SOP | Standard Operating Procedure |
| SMP | Safety Management Plan |
| SSRC | Site Safety Review Committee |
| TIMS | Transnet Integrated Management System |
| TPT | Transnet Port Terminals |

2 Engineering and the *Contractor's* design

2.1 *Employer's* design

2.1.1 The *Employer* will not be conducting any design work on this project. The *Employer* herewith requests the *Contractor* to execute the refurbishment work in accordance with the original design of the OEM and to ensure that the original safe operational design life of twenty years is maintained, in line with the original designed throughput capacity.

2.2 Parts of the *works* which the *Contractor* is to design

2.2.1 The *Contractor* will not be designing any parts of the *works*.

2.3 Procedure for submission and acceptance of *Contractor's* design

2.3.1 The *Contractor* will not be designing any parts of the *works*, thus no applicable procedure for submission of design documentation.

2.4 Review and Acceptance of *Contractor* Documentation

The *Contractor* submits documentation as the '*Works* Information' requires to the *Project Manager* for review and acceptance.

In undertaking the '*Works*' (including all incidental services required), the *Contractor* shall conform and adhere to the requirements of the '*Contractor* Document Submittal Requirements' Standard included in Annexure 1 (Refer DOC-STD-0001).

2.5 Other requirements of the *Contractor's* design

2.5.1 The *Contractor's* design (if required) shall comply with the original OEM's design standards and specifications.

2.5.2 The *Contractor* grants the *Employer* a licence to use the copyright in all design data presented to the *Employer* in relation to the *works* for any purpose in connection with the construction, reconstruction, refurbishment, repair, maintenance and extension of the *works* with such licence being capable of transfer to any third party without the consent of the *Contractor*.

2.6 Design of Equipment

2.6.1 In the event of any design, the *Contractor* submits his design details of his proposed Equipment in terms of NEC3 ECC Clause 23 to the *Project Manager* for his acceptance.

2.7 Equipment required to be included in the works

2.7.1 It is the *Contractor's* responsibility to ensure that the correct equipment required to execute the Works is sourced as part of this tender. The Contractor to cater for at least the following equipment to complete the work:

- Craneage
- Scaffolding
- Generators
- Cherry Pickers
- Low bed truck for transport

2.8 As-built drawings, operating manuals and maintenance schedules

2.8.1 The *Contractor* provides the following:

- As-built drawings (electronic [dwg/dxf and pdf format] and 4 x hard copies)
- Operating manuals [electronic and 3 x hard copies)
- Maintenance manuals (electronic and 3 x hard copies)

2.8.2 As-Built/Final Documentation

In undertaking the 'Works' (including all incidental services required), the *Contractor* shall conform and adhere to the requirements of the 'Contractor Document Submittal Requirements' Standard included in Annexure 1 (Refer DOC-STD-0001).

The *Contractor* submits final documentation to the *Project Manager* within 1-month of handing-over the refurbished *Stacker Reclaimer 3 and Tripper Car 3* to the *Employer*. This final documentation is submitted as "Certified", "As-built", or "Finally Accepted" by the *Project Manager* or "Without Comment" documentation or documentation for which no further review is required. The final documentation is to eventually form part of the *Contractor* final Manuals or Data Books.

2.8.3 Installation, Maintenance and Operating Manuals and Data Books

In undertaking the 'Works' (including all incidental services required), the Supplier shall conform and adhere to the requirements of the 'Data Books and Manuals' Standard included under section 11 of Annexure 1, DOC-STD-0001.

3 Construction

3.1 Temporary works, Site services & construction constraints

3.1.1 *Employer's* Site entry and security control, permits, and Site regulations

The *Employer's* requirements, which the *Contractor* is to comply with, are stipulated in the Health & Safety Specification, Health & Safety Management Plan & Security Management Plan

The *Contractor* complies with the following requirements of the *Employer*:

- Access control procedures
- Medical and Induction procedures
- Legal appointments and training requirements

3.1.2 The *Contractor* complies with the following requirements of the *Employer*:

The *Contractor* shall visit the Site of the proposed works and acquaint themselves with the nature of the works, the conditions under which the work is to be performed, the means of access to the Site, and all further matters that may influence or affect the contract.

The *Contractor* shall be deemed to have allowed in their tender for any additional cost to be involved due to the foregoing, as no claims for any extras in connection with the position or nature of the works will be entertained.

The *Contractor* shall obtain the necessary work permit(s) from the authority having jurisdiction at the Site (i.e. TPT and/or TNPA) prior to commencing with any of the works on site.

3.1.3 Restrictions to access on Site, roads, walkways and barricades

The Contractor to use the roads in accordance with the Health and Safety Management Plan, Port Rules and National Road Traffic Regulations.

The battery limits for the site offices and laydown area and parking area are shown in the figure below.

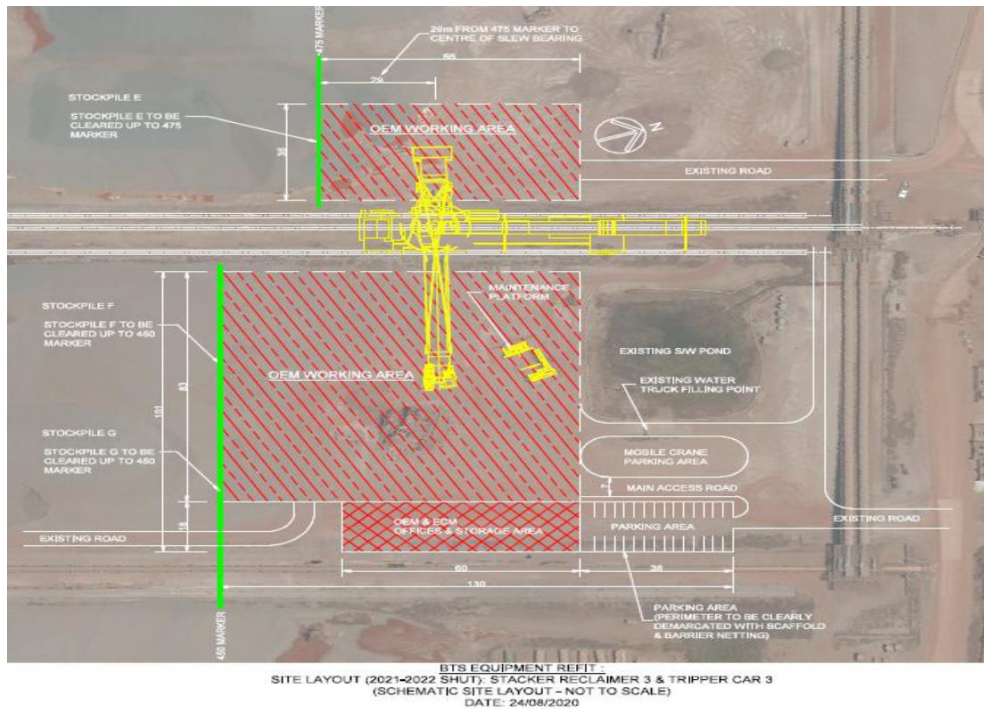


Figure 1 - Laydown area & site offices and parking

3.1.4 The Contractor complies with the following requirements of the Employer:

The Contractor shall comply with the standard conditions of entry and exit for all temporary permit holders, as defined by the Employer. It is the responsibility of the Contractor to ensure that all his employees are properly versed as to what these are.

Access and Permits within Port Boundary and TPT Property: Application letter must be typed on an official company letterhead, dated and signed by a senior company official or appointed official with the following information attached:

- Business to be undertaken in the Port
- Areas where access is required (be specific)
- Period required (duration) – maximum of 1 month (30 days)
- I.D number/s of the person/s requiring the permit/s

The Contractor shall arrange all necessary entry and other permits for all his staff. All Costs incurred in this regard shall be borne by the Contractor.

SAPS Name Clearance: Each of the Contractor's employees shall have a valid SAPS Name clearance certificate.

Vehicle permits: The Contractor shall submit a list of all vehicles entering and leaving the port area, to TNPA for issuing of vehicle permits. The list shall include the type, model and registration number of the vehicle, as well as the name of the designated driver.

Contractor's Materials, Plant and Equipment: All Contractor's Materials, Plant and Equipment brought into the port area shall be declared at the main security entrance. The same declaration by the Contractor to TPT security personnel shall apply for the abovementioned on TNPA property. The documentation for such Materials, Plant and Equipment shall be presented to the TNPA and TPT security persons respectively whenever these are removed again.

Employee's Equipment: Should the Contractor ever be required to take any of the Employer's Equipment out of the port boundaries, such Equipment shall be identified and declared in accordance with the TNPA gate pass procedures. The same shall apply on TPT property in accordance with their procedures.

Tool lists: All tools brought into the port area shall be declared at the TNPA main security entrance. Tools are to be assigned to a designated vehicle for further control during entrance and departure from the port area.

Material dispatch register to be maintained for all equipment leaving the Port.

Site Security Service Provider: A Transnet appointed service provider list is available from TPT Security.

The Site is located within the limits of the Port of Saldanha. Apart from when gaining entry or exit, the *Contractor* shall ensure that his staff members do not move about in areas where they are not permitted to be. This includes all areas outside the installation sites, the site office and access roads.

Staff members shall refrain from moving along private roads, including the Haul Road and service roads, without the necessary authorizations and permits. The *Contractor* shall provide adequate transport for all staff members between the installation sites and the site office, as well as transport to work and from work.

In addition, staff members shall refrain from coming close to or crossing the operational rail lines or conveyor line assemblies, unless travelling in a construction vehicle and crossing at an official demarcated crossing.

Staff members shall refrain from entering buildings currently occupied by the *Employer's* employees or third parties, unless required for specific work purposes.

3.1.5 People restrictions on Site; hours of work, conduct and records:

The *Contractor* complies with the following hours of work for his people (including Subcontractors) employed on the Site: The *Contractor* to allow and plan for his workforce to work on a 24/7 basis, for the scheduled refurbishment period. *Contractor* to obtain approval, to work the extended working hours, from the Department of Labour before commencement of site establishment. Labour plan should indicate that all workmen will get enough time-off as required by Law.

3.1.6 The *Contractor* keeps daily records of his people engaged on the Site and Working Areas (including Subcontractors) with access to such daily records available for inspection by the *Project Manager* at all reasonable times.

3.1.7 Health and safety facilities on Site

Health and Safety requirements for this project are stipulated in the Health and Safety Specification, Health and Safety Management Plan and TIMS Contractor Health and Safety Specification Guideline. Refer Annexures 2 and 11.

3.1.8 Environmental controls, fauna & flora, dealing with objects of historical interest

Environmental requirements for this project are stipulated in the Environmental Baseline Report and Environmental Risk Assessment. Refer Annexures 3 and 4.

3.1.9 Title to Materials from demolition and excavation

The *Project Manager* instructs the *Contractor* how to table, mark, set aside and/or dispose of such materials for the benefit of the *Employer* in accordance with NEC3 ECC Clause 73.1.

The *Contractor* has no title to materials from demolition, excavation or removal of existing equipment that are being replaced.

3.1.10 Cooperating with and obtaining acceptance of others

Successful completion of the contract depends on the effective interaction and co-operation of all Parties on Site. It is necessary to discuss the *Contractor's* proposed activities and short-term programme on a day-to-day basis with the *Project Manager*, to ensure effective co-operation and a smooth interface between the activities of the *Contractor* and Others working and operating in this area. This is in accordance with NEC3 ECC Clause 25.

Ongoing commercial activities by the *Employer* or third parties shall take precedence over any construction activities.

3.1.11 Publicity and progress photographs

Contractors must be in the possession of a valid photo permit, obtained from TNPA, to take any project specific photographs i.e., progress photos. No photos, other than those specific to the project, can be taken.

3.1.12 Advertisement and Media Communication

The *Contractor* does not advertise the contract or the project to any third party, nor communicate directly with the media (in any jurisdiction) whatsoever without the express written notification and consent of the *Project Manager*.

3.1.13 Contractor's Equipment

The *Contractor* keeps daily records of his Equipment used on Site and the Working Areas (distinguishing between owned and hired Equipment) with access to such daily records available for inspection by the *Project Manager* at all reasonable times.

3.1.14 Equipment provided by the Employer

The *Employer* will not be making equipment available for use by the *Contractor*.

3.1.15 Site services and facilities:

The position of existing supply connection points for electricity and water are to be indicated by the *Project Manager* to the *Contractor*. The *Contractor* is to make his own arrangements for the connection of such services to his Working Areas, for his use during construction.

An electrical connection point (220V and 380/525V) will be supplied by the *Employer* within 50 m the site yard. *Contractor* to supply cable and distribution board for welding and 220V. *Contractor* to complete installation of electrical connection and provide Certificate of Compliance (COC). The *Contractor* is to provide his own power in the event of a power failure or disruptions caused by other tie-in activities affecting the greater BTS normal power supply, and is to have a generator on standby, thus not causing any delays in the execution of the works.

The *Employer* will supply a water point, 50m from the site yard. It is the *Contractors* responsibility to distribute the water from this point onwards. There is no water-borne sewerage facility available. *Contractor* to provide drinking water for all employees, inclusive of sub-contractors under his control.

The cost of meters, connections, and all other usage costs associated with the provision of services are for the *Contractor's* account.

The *Contractor* is to supply his own compressed air if required to execute the works.

The *Employer* does not provide any security for the works for the duration of the contract and will not be responsible for any damage and/or losses incurred by the *Contractor* in this regard.

Wherever the *Employer* provides facilities (including, inter alia, temporary power, water, waste disposal, etc) for the *Contractors* use within the Working Areas and the *Contractor* adapts such facilities for use, then the *Contractor* makes good and provides full reinstatement to the land (including all apparatus of the *Employer* and Others in, on or under the land) and surrounding areas to its original standard upon dismantling of such facilities and hand-back to the *Employer*.

3.1.16 The Employer provides the following facilities for the Contractor:

An area for the *Contractor's* Site Establishment will be made available, free of charge, to the *Contractor* for the duration of the contract. The *Contractor* establishes his offices, lay down area, stores, and parking area in this location.

The *Contractor* ensures that the Site establishment area has a suitable security fence and the necessary access gates and control. The *Contractor* does not encroach in any way on any operational area outside the fencing footprint. This prohibition includes foot traffic. To ensure this, the temporary site fence must be erected before any other work can start.

All preparation and fencing are to be done by the *Contractor* for his account. The Site establishment area is to be clearly signposted and compliant with the relevant safety regulations and restrictions that might be in place until the *Contractor* has de-established from the site. The *Project Manager*, or his duly appointed representative, must accept the Site establishment layout prior to erection.

3.1.17 Facilities provided by the *Contractor*:

Ablution facilities: There is no water-borne sewerage facility available. The *Contractor* provides, maintains, moves to new positions as required and finally removes portable chemical toilets of sufficient number at his cost. Toilets are to be properly constructed and placed in suitable positions and maintained in a clean and sanitary working condition. The *Contractor* makes his own arrangements with the Local Authority for the disposal of night soil at his cost. The *Contractors* ablution facilities will be shared with the TPT/CMC Team.

Housing and Accommodation: Housing on Site, at the *Contractor* camp or in the Port area is not permitted. The *Contractor* is to supply suitable accommodation, off-site, for his workforce.

Offices for *Contractor*: The *Contractor* is to provide his own suitable temporary office facilities, to be placed within the confines of the identified site camp, for the use of his Project Team. Suitable eating/changing facilities to be provided for the *Contractors* workforce.

Temporary Lighting and Fencing: The *Contractor* provides temporary lighting and fencing around every section occupied by them during the refurbishment works period. Such fencing demarcates and secures the construction area and is erected before work commences and is removed only upon Completion of the works. The *Contractor* includes for all costs such as lighting and fencing, including access control into and out of these restricted areas. The *Project Manager's* acceptance is to be obtained for the use of any temporary lighting on the Site due to the impact that this may have on vessel traffic and operations in the harbour and/or interference with surrounding operations. See Annexure 8, Security Management Plan, for detail and specifications. The lighting must be sufficient so that the works can be executed safely during night shifts.

***Contractor's* responsibility:** Unless expressly stated as a responsibility of the *Employer* in this document, site services and facilities and all residual requirements for the provision of facilities and all items of Equipment necessary for the *Contractor* to provide the Works, remain the responsibility of the *Contractor*.

Giving notice of work to be covered up: The *Contractor* notifies the *Project Manager* in writing of any elements of the works which are to be covered up, not less than 24 (twenty-four) hours prior to proposed covering up.

3.1.18 The *Contractor* provides the following facilities for the *Project Manager* and *Supervisor*:

The *Contractor* is to provide a suitable temporary office for the TPT project team (6 workstations with chairs). The *Contractors* ablution facilities will be shared with the TPT project team.

3.1.19 Wherever the *Contractor* provides facilities (either his own or for the *Project Manager* and/or *Supervisor*) and all items of Equipment, involving, *inter alia*, offices, accommodation, laboratories, Materials storage, compound areas etc, within the Working Areas, then the *Contractor* makes good and provides full reinstatement to the land (including all apparatus of the *Employer* and Others in, on or under the land) and surrounding areas to its original standard, upon dismantling of such facilities and items of Equipment.

3.1.20 Unless expressly stated as a responsibility of the *Employer* as stated under 3.1.15 Site services and facilities, all residual requirements for the provision of facilities and all items of Equipment necessary for the *Contractor* to Provide the Works remains the responsibility of the *Contractor*.

3.1.21 The *Contractor* inspects the existing adjoining works / premises / properties / with which the works interfaces in conjunction with the *Project Manager* prior to starting his own work where it is considered that the *Contractor* may be held liable for damage caused to the existing plant or equipment. A detailed photographic report will be required.

3.1.22 The control of noise, dust, water, and waste from the activities by the *Contractor* as part of this Contract, shall be the responsibility of the *Contractor*. The *Contractor* shall comply with the TIMS Contractor Environmental and Sustainable Specification Guideline. Refer Annexure 10.

3.1.23 The *Contractor* complies with the local bylaws and other statutory regulations with regards to the control of noise, dust, water, and waste control.

3.1.24 The *Contractor* complies with the following constraints in the execution of the works: Full Port operations shall be maintained to the areas not affected by the *Contractors* works. At all other times, the *Contractor* shall ensure that he does not interfere or restrict any of the port operations at any time, during the refurbishment period.

- 3.1.25 The *Contractor* shall be responsible for the commissioning of the scope of works, so that it can be handed over to BTS Engineering/Operations for them to reintegrate it in the existing BTS operational system.

3.2 Completion, testing, commissioning, and correction of Defects

- 3.2.1 The *work* to be done by the Completion Date

The site erection methodology and work method shall be as agreed between the *Project Manager* and the *Contractor*, considering the interface requirements with other Site activities by Others, and the demands of the Port Operations during the Contract period.

On or before the Completion Date the *Contractor* shall have done everything required to provide the Works which are to be done before the Completion Date. The *Project Manager* cannot certify Completion until all the Works have been done and are free of Defects, which would have, in his opinion, prevented the *Employer* from using the works and Others from doing their work.

- 3.2.2 The *Contractor* is permitted to carry out the following *works* after Completion:

The Contractor is permitted to carry out performance testing of the works immediately after Completion which consists of BTS operating the machine stacking and reclaiming product for a total of 40 hours under fully designed load.

- 3.2.3 Use of the *works* before Completion has been certified:

Use of the *works* by the *Employer* before Completion has been certified shall not be required.

- 3.2.4 The *Contractor* provides the following commissioning activities to bring the *works* in use in liaison with the *Employer*:

Stage 1 – Pre-commissioning / Completion

The Stage 1 activities are all those activities that take place prior to Cold Commissioning including Mechanical/Electrical(E), Control and Instrumentation (C&I) and Physical completion ready to be subjected to functional testing, Punch listing (defect list) and completion of all Category A and B punch items. Mechanical/E, C&I and physical completion includes running the conveyor selection routes, flushing, hydro testing, pressure testing and other test necessary before being integrated into functional modules. Check direction of motors, check wiring connections, establish electrical power supplies at end users, and ensure that mechanical connections are tight and safe etc.

Stage 2 – Cold Commissioning

Cold Commissioning activities are those required to bring any plant system, stream, module, unit from the status of mechanical completion to the point where Hot Commissioning may commence under the supervisory control of the relevant contractor and the issue of Cold Commissioning Certificate. This will entail running the system, Module or Unit under no load conditions and where applicable, on automatic control with stimulations as required.

The activities cover a very wide range and include checks on electrical, motors, control and safety systems as well as running the plant under simulated conditions without load.

Perform all activities to ensure handover and issuing of Cold Commissioning certificate

Stage 3 – Hot Commissioning (System Integration and Load Tests)

This stage of Commissioning consists of placing of the Works into operation by BTS, TPT Projects team, Contractors and Equipment Suppliers, using the operating and maintenance personnel of BTS. Hot Commissioning includes performance testing of the Works in terms of the Contract.

For detail on commissioning requirements see Annexure 5, Commissioning Plan

- 3.2.5 Start-up procedures required to put the *works* into operation

The *Contractor* shall assist with the start-up procedures required to put the works into operation.

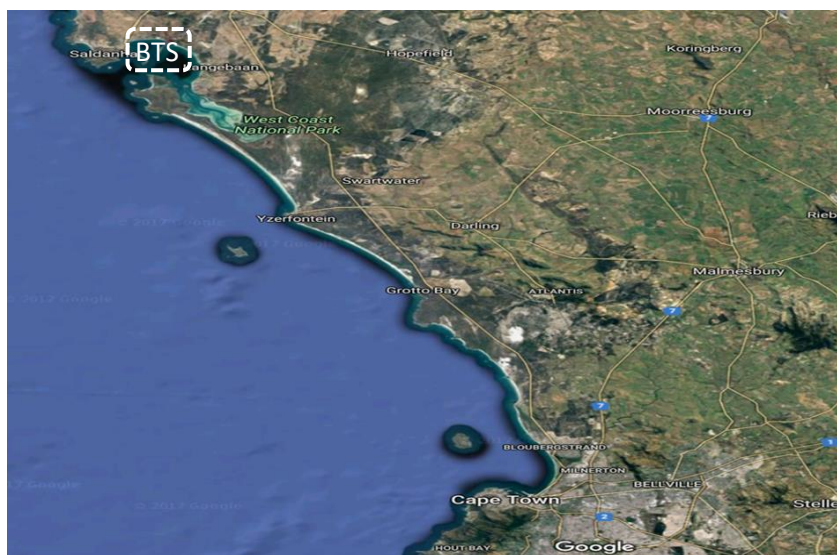
- 3.2.6 The *Employer* shall take over the Plant as soon as the Works have successfully passed any required Performance/Acceptance Test with only Category 'C' Punch List Items remaining with a commitment to complete the Category 'C' Punch List Items by an agreed date during the Defects Correction/Warranty Period and following the application by Contractor for a Completion Certificate, a Completion Certificate will be issued.

- 3.2.7 The *Contractor* ensures that the *Project Manager* has a full and accurate dossier of As-built documents that represent the combined Structural, Mechanical, Electrical and, Controls and Instrumentation status of the completed works (to include Plant within the works), to present to the *Employer*, as appropriate at the earlier of take-over or Completion.
- 3.2.8 The *Contractor* ensures that the *Project Manager* has a full and accurate dossier of Maintenance and Operating Manuals at the earlier of take-over or Completion of any new equipment that replaced old equipment as part of the refurbishment, where the new equipment is of a different or newer technology or design.
- 3.2.9 The *Contractor* modifies and updates As-built documents as necessary prior to Completion.
- 3.2.10 Access given by the *Employer* for correction of Defects shall be arranged by the *Project Manager*, and if such correction requires the Plant and Materials to be shut down, the timing and period of the shutdown shall be scheduled to suit the Port Operations. For the period of shutdown to correct defects, the *Contractor* shall take over the Plant and Materials, and accept all risks that were assumed as part of the original Contract for the period until handing over the Plant and material to the *Employer* after correcting the defects.
- 3.2.11 The *Contractor* complies with the following constraints and procedures of the *Employer* where the *Project Manager* arranges access for the *Contractor* after Completion: Security access requirements, restrictions to areas which do not form part of the site, safety precautions that need to be taken as part of the Site Management Plan, and safety inductions of staff.
- 3.2.12 The *Contractor* performs the following performance tests after Completion of the works:
- Operational tests without material during Cold Commissioning.
 - Endurance/Proofing test of 40 hours under full designed load as a complete operating system.
 - A Hot Commissioning Certificate will be signed-off by BTS on completion of endurance tests, with handover to BTS.
- 3.2.13 The *Contractor* facilitates training workshops with the *Employer's* nominated staff on any new technology introduced on the plant after Completion of the works.

4 Plant and Materials Standards and Workmanship

4.1 Site Location & General Layout

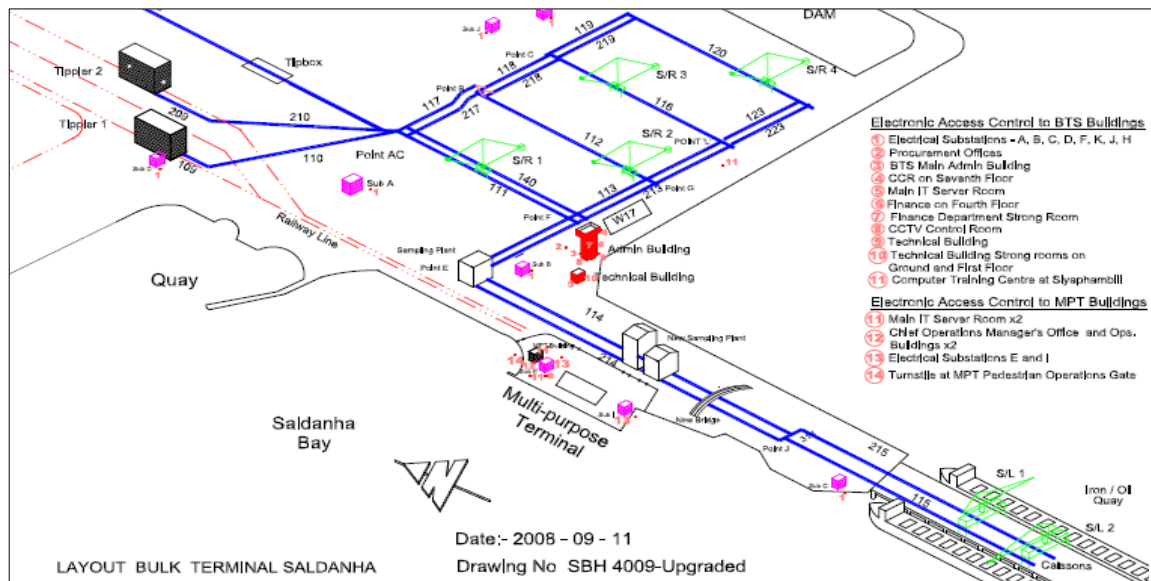
The Port of Saldanha is located about 120km to the north of Cape Town in the Western Cape of South Africa. The Port operates 24/7, 355 days of the year (an annual 10-day shutdown is used to conduct heavy maintenance) exporting circa 60mtpa of Iron Ore via the Bulk Terminal Saldanha (BTS).



Location Diagram



General Layout



Schematic layout of the Saldanha Bulk Terminal

4.2 Scope of Works Background

During the scope finalization of the mid-life refurbishment the following were taking into consideration:

- Installation of technological improvements,
- carry out structural repairs,
- implement large scale corrosion protection,
- renew the integrity of electrical components of the asset,
- refurbish components or systems that are normally only exposed to maintenance services, e.g., gearboxes, to ensure life expectancy and maintain reliability,
- upgrade components that have become obsolete, and
- replace components where interchangeability with replacement parts is not possible without equipment outage.

The scope of the mid-life refurbishment in relation to Stacker Reclaimer 3 & Tripper Car 3 was categorized into three (3) engineering disciplines, namely: mechanical, structural and, electrical, control and instrumentation as follows:

- Mechanical - includes components or systems such as the open gear systems, gearboxes, hydraulic systems, and rotating and moving parts (e.g., trunnions, car-clamps).
- Structural - includes wear liners, supporting structures (if required) and areas of possible structural damage (cracking deformation wear). Additionally, includes maintenance detection (e.g., non-destructive testing for fatigue fracturing) of areas where access to certain structures that is not normally possible while equipment is in service.

- Electrical, control and instrumentation (EC&I) - includes panels and drives that is approaching the end of their useful life, or has become obsolete or, where newer technologies can be incorporated.

4.3 Scope of Works

The scope of works (SOW) that the *Contractor* is to perform for the mid-life refurbishment of Stacker Reclaimer 3 & Tripper Car 3 can be summarised as follows:

4.3.1 Site establishment

Supply, transportation, off-loading and placement of all temporary offices, equipment and all other infrastructure required for execution of the *works*. Timeous finalizing of all training, medicals, permits, and other documentation required, to commence with the execution works.

4.3.2 Execution of SOW activities

Execution of all SOW activities planned for the mid-life refurbishment and listed under 4.3.7 below.

4.3.3 Management & resources

Site and HQ Management, Site Supervision, SHEQ Management, Site labour to work 24/7 or less depending on the programme's requirements within labour laws Compliance with the Department of Labour (DoL) with an approved mandate for extended working hours (If required), PPE, security-requirements, site equipment, craneage, vehicles, general tools, jacking tools/trestles, scaffolding, lighting, and others.

4.3.4 Commissioning

Pre-, Cold-, and Hot Commissioning, on completion of the refit shut work, to ensure that *works* is handed over to the *Client* in "Safe for Operation" mode. See Annexure 5, Commissioning Plan for detailed requirements.

4.3.5 Project close out

Project close out to be formally documented to cover all aspects of safety, training, as-built / red-line drawings, user manuals and updated maintenance procedures. All close out documentation to be handed over to the Client in hard copy format, as well as in electronic format.

4.3.6 Site de-establishment Removal from site of all temporary offices and infrastructure, equipment, tools etc., belonging to the *Contractor*. Clear the site and hand back to the *Client*

4.3.7 Scope of works (Technical Scope)

The following table lists the technical scope to be executed.

Note: For all structural, Mechanical and Electrical scope – refer to WCS Reports.

- SR3 E, C & I Condition Assessment
- SR3 Mechanical Condition Assessment
- SR3 Structural Condition Assessment

Table 1 - SCOPE

| EQUIPMENT REFIT PROJECT (PHASE 4) | | | | |
|--|--|------------|--------------------------|---|
| STACKER RECLAIMER 3 | | | | |
| Item | DESCRIPTION | Sum | WCS Report | Report Item No. |
| 1 | <p>For the 2024 Shut: Preliminary and General, project management and overhead costs, all labour, cramage, equipment, vehicles, tools, access requirements, assessing free issue equipment, civils works for site establishment and execution of works, also including meeting the requirements of Health and Safety, Environmental, Quality, Construction Management, Execution and Commissioning, as stipulated in the Scope of Work. To cater for site establishment and de-establishment for the 2024 Shut.</p> <p>Contractor to provide a detailed cost breakdown for this item.</p> | Sum | | |
| 2 | <p>For the 2025 Shut: Preliminary and General, project management and overhead costs, all labour, cramage, equipment, vehicles, tools, access requirements, assessing free issue equipment, civils works for site establishment and execution of works, also including meeting the requirements of Health and Safety, Environmental, Quality, Construction Management, Execution and Commissioning, as stipulated in the Scope of Work. To cater for site establishment and de-establishment for the 2025 Shut.</p> <p>Contractor to provide a detailed cost breakdown for this item.</p> | | | |
| 3 | <p>Training</p> <p>Any training/ familiarization of installed equipment.</p> <p>The Contractor facilitates training workshops with the Employer's nominated staff on any new technology introduced on the plant after Completion of the works.</p> | Sum | | |
| 4 | <p>SR3 & TC3 high pressure Cleaning</p> <p>Contractor to clean SR3 and Tripper Car 3 by means of high-pressure water in preparation for Corrosion Protection activities.</p> | Sum | Structural | Note 2 |
| 5 | <p>Drive/Idle wheel bogie assemblies for Stacker Reclaimer</p> <p>Remove eight (8) existing assemblies and replace it with assemblies that will be free issued.</p> <p>Refurbish the eight (8) assemblies that were removed and return as spares. Refurbishment to include new shaft, motor, gearbox, seal kit, wheels, bearings, and travel brakes.</p> | Sum | Mechanical Electrical | Item no. 1, 2, 3, 4, Item no. 9, 14, 15 |
| 6 | <p>Single Idle Wheel assemblies for Tripper Car</p> <p>Remove four (4) existing single idle wheel bogie assemblies and replace it with assemblies that will be free issued.</p> <p>Refurbish four (4) single idle wheel bogie assemblies that were removed for the TC and return as spares.</p> | Sum | Mechanical | Item no. 1, 2, 3, 4 |

| EQUIPMENT REFIT PROJECT (PHASE 4) | | | | |
|-----------------------------------|---|-----|---|---|
| STACKER RECLAIMER 3 | | | | |
| Item | DESCRIPTION | Sum | WCS Report | Report Item No. |
| 7 | <p>Double Idle Wheel assemblies for Tripper Car</p> <p>Remove five (5) existing double idle wheel assemblies and replace it with spares that will be free issued.</p> <p>Refurbish the five (5) double idle wheel assemblies that were removed for the TC and return as spares.</p> | Sum | Mechanical | Item no. 1, 2, 3, 4 |
| 8 | <p>Wheel assemblies for SR</p> <p>Supply and replace sixty-four (64) wheel assemblies for the SR inclusive of wheels, bearings and shaft.</p> <p>For all bogies and wheels – Refer drawings 700399, 700403, 700404, 700405, 700406, 700407, 700449, 700459, 700460, 700527</p> | Sum | Mechanical | Item no. 1, 2, 33 |
| 9 | <p>Centralised Automatic Lube System</p> <p>Refurbish entire lubrication system (Slew Bearing, Travel Bogey & Pivot, Bucket Wheel, Tripper Car)</p> <p>For further information, refer to document "SR3 Lubrication system", Annexure 21</p> | Sum | Mechanical | Item no. 9, 27 |
| 10 | <p>Travel Brakes</p> <p>Supply and replace thirty-two (32) travel brakes Drive unit - 7.5kW For further information, refer to drawing 700404</p> | Sum | Electrical | Item no. 13, 14 |
| 11 | <p>Slew Drive Assembly</p> <p>Replace the three (3) complete slew drives (including alignment), inclusive of drives, shafts, gearboxes, motors, reducers and pinions, and spillage covers for the motors. These will be free issued.</p> <p>Also supply three (3) new complete slew drives (including alignment), inclusive of drives, shafts, gearboxes, motors, reducers and pinions, and spillage covers for the motors, as spares.</p> <p>For further information, refer to drawings 700418, 700421, 700422, 700425, 701650</p> | Sum | Structural Mechanical Electrical | Item no. 1, 3 Item no. 21-29 Item no. 7 |
| 12 | <p>Set of Weather Protection Enclosures</p> <p>Weather protection enclosures e.g. weather proof outdoor crates must be supplied to store the following components of a spare bucket wheel: motor, bucket wheel chute, bearings, and plumber blocks. The enclosures will be stored in an outdoors open area assigned by BTS at the terminal's stores.</p> | Sum | Structural Mechanical | Item no. 6 Item no. 19, 20 |



| EQUIPMENT REFIT PROJECT (PHASE 4) | | | | |
|-----------------------------------|--|-----|--------------------------|----------------------------|
| STACKER RECLAIMER 3 | | | | |
| Item | DESCRIPTION | Sum | WCS Report | Report Item No. |
| 13 | <p>Hose Reel</p> <p>Supply and replace the complete hose reel including the VSD, funnel system and hose.</p> <p>Hose Reel to be of 3:2:3 configuration.</p> <p>Include for Midpoint sump upgrade (Pump, Cage/Civils, piping as per SR1 and SR2).</p> <p>For further information, refer to Refer to drawing: A4870000.</p> | Sum | Mechanical | Item no. 37 |
| 14 | <p>Operator Cab (Stainless steel Cab)</p> <p>Replace the existing operator cabin with a new larger stainless-steel cabin with space to allow for main chair and ordinary training chair. Any additional supporting structure required must be included. The Levelling System must also be refurbished.</p> <p>A detailed engineering design must be issued to the Project Manager for acceptance prior to start of manufacturing of the operator's cabin.</p> <p>For further information, refer to document Annexure 22, "Cabin Refurbishment 12092018" and Annexure 23, "Technical Spec Operator's Cab", and the current Cabin Drawings 700451, 700452 1-4.</p> <p>The New Operator's Cab must consist of a Stainless-Steel Exterior and meet the following specifications and requirements:</p> <ul style="list-style-type: none"> The cab shall be designed to mount on the existing cab support. The existing cab support structure to be water blasted and inspected after removal of the existing cab. Allowance should be made for possible structural replacements, and corrosion protection, new SS bolts, washers, and other miscellaneous items for installation of the new SS cab. The cab shall have a unitized frame consisting of structural tubing. Four (4) lifting lugs shall be incorporated into the top of frame. The floor shall be framed in 4" x 6" tubing, the walls 2" x 4" tubes with 4" x 4" tubes at the corners and door frames. The outside skin shall be 11-gauge stainless steel, commercial quality flat sheets. All seams shall be continuously welded to the structural frame. All seams between plates shall be continuously welded to form a waterproof surface. Upon completion of the welding process, the surface shall be finished with a random brushed pattern (no paint on the exterior skin). Roof shall be designed for a 4.7880259 kPa live load. The inside skin shall be carbon steel, commercial quality flat sheets. Sheets shall be mechanically fastened to the structural frame. Interior floor covering shall be smooth plate, plug welded to the floor frame. | Sum | Structural Electrical | Item no. 1 Item no. 11, |



EQUIPMENT REFIT PROJECT (PHASE 4)

STACKER RECLAIMER 3

| Item | DESCRIPTION | Sum | WCS Report | Report Item No. |
|------|---|-----|------------|-----------------|
| | <ul style="list-style-type: none"> • Floor covering shall be an Industrial Grade rubber matt at least 3.175mm thick. • The floor shall have wire-ways with removable covers installed for electrical wiring. The wire-ways shall at a minimum interconnect the operator's chair, the cab distribution panel to a NEMA 4X junction box mounted on the outside of the cab. • The cab shall be fully insulated. • Windows shall be fixed type, insulated windows. The windows shall be removable from the interior. All windows shall be sealed and caulked prior to shipment. • The door shall have at least a 1-3/4" thick panel, 24-gauge pre-painted galvanized steel skin, 16-gauge pre-painted galvanized steel jambs, 4" x 4" stainless steel NRP hinges, full perimeter weather stripping, thermal break of header/threshold to prevent ice build-up on threshold, thermal break of panel and jambs to prevent frost build up in interior of cabin. The jamb shall be mechanically fastened to the structural frame. The door shall include an insulated tempered glass window, automatic door closer and standard lockset with lever handles. • The cab shall incorporate an operator's chair with integrated controls and a trainee chair. • Operator's chair shall be mounted in the cab. The chair shall have controls that are currently located in the cab consoles integrated into the arm consoles. The new controls will be prewired to terminals in a new cab junction box. • At a minimum once the Work is complete the cab and controls shall perform as per the original design and performance specifications. • The operator's cabin must be equipped with an HMI which shall be mounted near the operator on articulating arms to be adjustable to the needs of the various operators. • The cab shall have a 100A, 230 single phase distribution panel, equipped with four 20A duplex receptacles and capacity for 20 circuit breakers. • Cab shall have a switch operated ceiling light. • HVAC system shall be designed to maintain a temperature inside the cabin of between 66- and 78-degrees Fahrenheit (18.89- and 25.56-degrees Celsius), irrespective of the ambient temperature. The Operator must be able to set the desired cabin temperature. The ambient temperature range is -10 to 105 degrees. • The cab shall have a combination HVAC system. • The cab shall have a windshield wiper and washing system. • The cab shall be painted in accordance with Transnet Specifications. | | | |



| EQUIPMENT REFIT PROJECT (PHASE 4) | | | | |
|-----------------------------------|---|-----|------------|-----------------|
| STACKER RECLAIMER 3 | | | | |
| Item | DESCRIPTION | Sum | WCS Report | Report Item No. |
| | <ul style="list-style-type: none"> The cab shall incorporate an operator's chair which must be as per the specification under Item 14 below and priced separately under Item 14 on the Pricing data Sheet. | | | |
| 15 | <p>Operators Chairs</p> <p>A total of two (2) new operator chairs must be provided. Of these, one must be installed in the new operator's cabin of SR3 specified under Item 14 above and one chairs must be provided as a spare.</p> <p>In addition, two (2) complete sets of spares are to be supplied.</p> <ul style="list-style-type: none"> The operator's cabin shall incorporate an operator's chair with integrated controls. The installation and commissioning of the chair must be included. The operators chair to meet the following requirements: <ul style="list-style-type: none"> Ergonomic operators chair with integrated controls and equipped with the following features: <ul style="list-style-type: none"> Full body contoured seat with replaceable cushions and dual slides Fore and aft adjustment range +/-4" each slide Independent back rest and seat height adjustments 80-degree adjustable back rest for reclining Seat cushion tilt adjustment 3-11 degrees to reduce thigh pressure Seat cushion depth adjustable forward 2.4" in 5 increments to accommodate larger operators. Manually adjustable armrest Console mounted adjustable armrest All new pushbuttons, selector switches, pilot lights, master switches and potentiometers wired to terminal blocks inside the new chair mounts control consoles <p>The chair shall be easily adjustable in terms of moving it forwards and backwards so that each operator can position the chair</p> | Sum | | |

| EQUIPMENT REFIT PROJECT (PHASE 4) | | | | |
|--|---|------------|--------------------------|-------------------------------|
| STACKER RECLAIMER 3 | | | | |
| Item | DESCRIPTION | Sum | WCS Report | Report Item No. |
| | <p>according to their personal preference so that they don't need to sit on the edge of the chair.</p> <p>It shall be constructed under ISO 9001 quality standard.</p> <p>The following materials will be used; Sheet steel DC01, DD11 or equal - Steel profiles S235JR or equal - Stainless steel 304</p> <p>The operator seat shall include:</p> <ul style="list-style-type: none"> - Rotation table for rotating seat - Heavy duty bearing - Locking device for one fixed position - Black leather upholstery - 3-Point seatbelt - Consoles with left- and right-hand side, rotatable and tiltable. - A USB mini-joystick (1 piece) to be provided on the right-hand console in place of the track ball with 3-Axis (4 directions + rotation knob), open coulisse, 2 pushbuttons on top of lever and USB output. - The design of the cabin and its mounting must be approved by an appropriate professional engineer. | | | |
| 16 | <p>S/R T Bar Festoon</p> <p>Supply and replace S/R T Bar Festoon with new system.</p> <p>Festoon system to include all festoon curved tracks, support brackets, cable trolleys, festoon cables, tow chains, and junction boxes.</p> <p>For further information, refer to document "Technical Spec Tow Bar Festoon", Annexure 24</p> | Sum | Electrical | Item no. 19-23 |
| 17 | <p>Slew Cable Carrier</p> <p>Supply and install grating and replace drag chain with festoon and canopy.</p> <p>For Further information, refer to drawings:</p> <ul style="list-style-type: none"> - 639-18694-B2_Rev0 - Presentation-Circular festoon | Sum | Electrical | Item no. 41 |
| 18 | <p>Main Power Cable Reel</p> <p>Supply and replace Main Power Cable Reel with new system.</p> <p>For Further information, refer to document "Main Power reel", Annexure 25</p> | Sum | Electrical Mechanical | Item no. 24-27 Item no. 36 |
| 19 | <p>Slew Drive VFD's</p> | Sum | Electrical | Item no. 4, 5, 6, 34-36 |



| EQUIPMENT REFIT PROJECT (PHASE 4) | | | | |
|-----------------------------------|---|-----|------------|-------------------------|
| STACKER RECLAIMER 3 | | | | |
| Item | DESCRIPTION | Sum | WCS Report | Report Item No. |
| | Supply and replace Slew Drive VFD's (complete set) with new complete Slew Drive VFD assembly (Active Front End). For Further information, refer to document "Technical Spec Slew VFD's & SR3 VFD's" | | | |
| 20 | Travel Drive VFDs Supply and replace Travel Drive VFDs with new complete Travel Drive VFD assembly For Further information, refer to document "Technical Spec travel VFD's & SR3 VFD's" | Sum | Electrical | Item no. 4, 5, 6 |
| 21 | Bucket wheel VFD Replace Bucket Wheel Drive VFD assembly with new set. For Further information, refer to document "Technical Spec Bucket Wheel VFD's & SR3 VFD's" | Sum | Electrical | Item no. 4, 5, 6 |
| 22 | VFD spares Supply the following VFD spares: <ul style="list-style-type: none"> • One (1) set for Bucket Wheel VFD • Two (2) sets for Slew Drive • One (1) set for Travel Drive For Further information, refer to document "SR3 VFD's" | Sum | Electrical | Item no. 4, 5, 6, 34-36 |
| 23 | Main PLC Utilise the existing enclosure. Supply and replace the main PLC with a new PLC including the following: <ul style="list-style-type: none"> • One (1) Siemens or equivalent PLC system with all the necessary power supplies, processor, I/O, communications modules, and customer terminal blocks, required to replace the existing PLC that is currently installed • One (1) door mounted HMI computer/display • All the other miscellaneous relays, terminals, wiring, nameplates, and all other components. • Everything needed to supply power to the enclosure contents. • Door switch operated LED light fixture and duplex outlet. | Sum | Electrical | Item no. 37-40 |

| EQUIPMENT REFIT PROJECT (PHASE 4) | | | | |
|-----------------------------------|---|-----|--------------------------|---|
| STACKER RECLAIMER 3 | | | | |
| Item | DESCRIPTION | Sum | WCS Report | Report Item No. |
| 24 | <p>Corrosion Protection (SR and Tripper car)</p> <p>Corrosion protection, as per corrosion protection paint specification, to be applied to all corroded areas of the Stacker Reclaimer 3 and Tripper Car. Contractors to allow for 350 square meters corrosion protection, to be re-assessed on site.</p> <p>The Boom Tip to be excluded.</p> | Sum | Structural | Items no. 1, 2, 9, 11 |
| 25 | <p>Shipping Containers</p> <p>Supply Six (6) 12ft shipping containers to be supplied to house spares</p> | Sum | Mechanical | Items no. 41 |
| 26 | <p>Structural/weld repairs/NDT's of critical areas/Bolt replacement, excluding the Boom Tip</p> <p>NDT's to be taken of the boom as per Drawing 'NDT Requirement' Allow for eighty (80) full penetration weld repairs.</p> <p>Structural Repairs to be done as per WCS Structural Report.</p> <p>Make an allowance for the supply and replacement of 200 bolts with specification of hex bolt DIN 931, grade 10.9, M20x2.5x100. The inspection certificates for these bolts must be provided.</p> <p>Allow for average plate thickness of 20mm.</p> <p>Allow for weld length of 400mm.</p> <p>Include all labour and equipment needed to execute these works.</p> <p>Procedure to be followed:</p> <ul style="list-style-type: none"> • Clean area with high pressure water & brush to bare metal. • Visual Inspection. • Wall thickness testing. (UT) • Crack testing. (MPI) • Assess and determine repair scope. (Area under compression or tension) • Prepare WPS for weld repairs. • Submit repair procedure for client approval. • Perform repair as per approved procedure. • NDT testing to confirm acceptance. • Release for corrosion protection. <p>Refer to drawing: NDT Requirement. Refer to WCS Structural Report for all structural repairs.</p> | Sum | Structural | Item no. 1, 2, 3, 4, 5, 8, 9, 10, 13, 14, 15. Note 1 & 3 |
| 27 | <p>Boom Conveyor Drive Train set</p> <p>Replace existing Boom Conveyor Drive Train set. Supply and install a complete Boom Conveyor Drive Train set.</p> <p>A set will include two motors, with two gearboxes and the couplings.</p> <p>Refer to drawings: Boom Conveyor Drive</p> | Sum | Mechanical Electrical | Item no. 5-8 Item no. 8 |

| EQUIPMENT REFIT PROJECT (PHASE 4) | | | | |
|-----------------------------------|---|-----|--------------------------|--------------------------------|
| STACKER RECLAIMER 3 | | | | |
| Item | DESCRIPTION | Sum | WCS Report | Report Item No. |
| 28 | <p>Boom Conveyor Drive Train sets</p> <p>Supply two (2) complete Boom Conveyor Drive Train sets as spare.</p> <p>A set will include two motors, with two gearboxes and the couplings.</p> <p>Refer to drawings: Boom Conveyor Drive</p> | Sum | Mechanical Electrical | Item no. 5-8 Item no. 8 |
| 29 | <p>Incline Conveyor Drive Train set</p> <p>Replace existing Incline Conveyor Drive Train set. Supply and install a complete Incline Conveyor Drive Train set.</p> <p>A set will include two motors, with two gearboxes and their couplings.</p> <p>Refer Drawings: Incline Conveyor Drive</p> | Sum | Mechanical Electrical | Item no. 5-8, 35 Item no. 8 |
| 30 | <p>Incline Conveyor Drive Train sets</p> <p>Supply two (2) complete Incline Conveyor Drive Train set as spare.</p> <p>A set will include two motors, with two gearboxes and their couplings.</p> <p>Refer Drawings: Incline Conveyor Drive</p> | Sum | Mechanical Electrical | Item no. 5-8, 35 Item no. 8 |
| 31 | <p>Boom and Incline Conveyor Drive Pulleys set</p> <p>Supply and install one (1) set.</p> <p>A set will include one boom drive pulley and one incline drive pulley.</p> <p>Refer Drawings: Drive Pulley IC Model Incline & Drive Pulley BC Model Boom</p> | Sum | Mechanical | Item no. 11 |
| 32 | <p>Boom and Incline Conveyors Drive Pulleys sets</p> <p>Supply two (2) sets as spares.</p> <p>A set will include one boom drive pulley and one incline drive pulley.</p> <p>Refer Drawings: Drive Pulley IC Model Incline & Drive Pulley BC Model Boom</p> | Sum | Mechanical | Item no. 11 |
| 33 | <p>Simocode Modules in the Gantry MCC</p> <p>Supply and replace all the existing obsolete Simocode Modules in the Gantry MCC with new Simocode Pro V units or similar.</p> | Sum | Electrical | Item no. 37-40 |
| 34 | <p>Replace Air conditioning within Gantry E-House, Extend/Seal Roof and relocate Condenser</p> <p>Air conditioning units to meet following specifications:</p> <p>E-House: 2 x 60,000 BTUS (3PH/400v)</p> <p>Slew deck: 2 x 36,000 BTU (1PH/220v)</p> | Sum | Electrical | Item no. 4, 5, 6 |

| EQUIPMENT REFIT PROJECT (PHASE 4) | | | | |
|-----------------------------------|--|-----|------------|------------------|
| STACKER RECLAIMER 3 | | | | |
| Item | DESCRIPTION | Sum | WCS Report | Report Item No. |
| | Seal the E-House roof for water ingress and extend by 1m to protect local control station. The gantry E-House Condenser must be relocated to an area that is not subjected to falling material when the SR is in operation. | | | |
| 35 | Operators Fire Escape Install a fire escape point to the operator's cabin. Insert connection/anchor point onto cabin platform as per SR2 considering the loads and structural support required. | Sum | | |
| 36 | Refurbish Dust Suppression System The Dust Suppression System to be refurbished with a new pump. For Further information that need to be complied with, refer to the document "Dust Suppression Scope". | Sum | Mechanical | Item no. 40 |
| 37 | Replacement of Local Maintenance Stations / Calipers / Chains Include for replacement of seven (7) local maintenance pushbutton stations. Include replacement of the calipers and chains used for lockouts. | Sum | Electrical | Item no. 32 & 33 |
| 38 | HT Switchgear power relays (set) Supply and replace all power relays with new relays. Set of six (6). Refer to C & I Condition Assessment Report, Annexure 13 | Sum | Electrical | Item no. 12 |

4.4 Site related items to be supplied with responsibility for providing

The table below lists site related items to be supplied and the party responsible for their supply. Note, this list may not be exhaustive, and any additional items required will be assumed to be for the Contractor to supply and must be allowed for in his tender price.

| ITEM DESCRIPTION | SLD: IOT/CLIENT SUPPLY | PRINCIPLE CONT. SUPPLY |
|--|------------------------|------------------------|
| Client special & task specific PPE requirements | | X |
| Suitable Accommodation and meals for the Site Crew | | X |
| Permits from DOL for working overtime, Sundays, and extended hours | | X |
| Application to DOL for permit to Execute the Works. Contractor to supply required documentation. | X | X |
| Provide a suitable area for Site Establishment | X | |
| Supply of water within 50m from Site Yard | X | |

| ITEM DESCRIPTION | SLD: IOT/CLIENT SUPPLY | PRINCIPLE CONT. SUPPLY |
|--|------------------------|------------------------|
| All Containers and Mobile Offices/Eating- & Ablution Facilities for all Contractors' Workforce. | | X |
| Supply Mobile Office for TPT/CMC Team (6 workstations with chairs). | | X |
| Power Supply (220V and 380/525V) within 50 m of point of Work. Contractor to supply cable and distribution board for welding and 220V. Contractor to complete installation and provide COC. Contractor to provide backup generator in the event of power disruptions | X | X |
| Contractor to provide power in the event of a power failure. Standby generator to be provided. | | X |
| Adequate area lighting for safe execution of work during night shifts | | X |
| Compressed Air within 50m from point of work | | X |
| Containers for the disposal of scrap metal, cleaning tags and other waste materials in demarcated area. (Contractor responsible for correct sorting of waste and Client for disposal/removing from site). | X | |
| Remove all components which were replaced with new/refurbished components to the identified laydown area | | X |
| All Support structures (inclusive of load testing and engineers sign-off), barricading, safe access, signage, and scaffolding required. | | X |
| All lubrication requirements, on existing equipment, outside of the Contractors scope (Oil, grease etc. as per OEM Specification). | X | |
| All new and refurbished components to be delivered fully lubricated/filled with oil and ready for commissioning after installation. | | X |
| Responsibility for conveyor belt cutting/splicing. | | X |
| Fire extinguishers, radios and other items required for Commissioning | | X |
| Cleaning of Machine of all excess material and other debris | | X |
| Qualified Operator available as and when required (24-hour notification required from Contractor) | X | |
| All fencing around Contractor's site yard and lay down areas, traffic control with signage/ flagmen and security control. | | X |
| All Lock-out equipment: Locks, calibres, and tags (Contractor & Client to provide own) | X | X |
| Existing conveyors, medium voltage cable, cable racks etc. to be protected from the construction works and when hot work is done. | | X |

4.5 Construction / Execution / Commissioning

The *Contractor* is to ensure that aspects applicable to construction / execution process, as described in the Commissioning Plan, Annexure 26 are included.

4.6 Method Statements

Method Statements to be prepared for all major activities to be executed on site, as identified by the *Contractor*. These method statements shall include detailed Risk Assessment, with planned mitigations to ensure safe execution, using the correct Equipment, Tools and Competent and well-trained Workforce. To be submitted with the tender documentation.

Note to tenderers:

Method statement - The tenderers must sufficiently demonstrate the approach/methodology that he/she will employ to cover the scope of the project.

5 List of Drawings

5.1 As-Built Drawings

The *Contractor* must submit as-built drawings to the Employer on completion of the Works.

5.2 Drawings issued by the *Employer*

The following list of drawings applicable to the Works will be issued by the *Employer* at or before the start Contract Date. Some drawings may contain both Works Information and Site Information.

Drawings - Bucket Wheel & Chute

- 5M6143714d
- 700454C
- 700455_D_1-5
- 700456_B_1-2
- 700457_C_1-8
- 701192_A_1
- 707320_A_1

Drawings - Conveyor Drive Trains Pulleys

- Boom Conveyor Drive
- DRIVE PULLEY-BC-Model Boom
- DRIVE PULLEY-IC-Model Incline
- Incline Conveyor Drive

Drawing - Hose Reel

- A4870000-SR02Cable-200911

Drawings - Idler Support Frames

- 700432_C_1-6
- 700464_E_1-3
- PTP031_15_0842_001
- PTP031_15_0843_001
- PTP031_15_0844_001

Drawings - Operators Cabin

- 700451_B_1-5
- 700452_A_1-4
- 700452_A_2-4
- 700452_A_3-4
- 700452_A_4-4

Drawings - Slew Cable Carrier Festoon

- 639-18694-B2_Rev0
- Presentation-Circular festoon

Drawings - Slew Drive Reducers

- 700418_E_1-17
- 700421_A_1
- 700422_E_1-5
- 700425_B_1-2
- 701650_B_1

Drawing - Travel Brakes

- 700404_B_1

Drawings - Wheels for SR



- 700399_B_1-3
- 700403_C_1-2
- 700404_B_1
- 700405_B_1
- 700406_B_1
- 700407_B_1
- 700449_B_1
- 700459_A_1
- 700460_C_1-3
- 700520_B_1
- 700527_A_1

6 List of Annexures

6.1 Annexures issued by the Employer

6.1.1 This is the list of annexures issued by the Employer at or before the Contract Date and which apply to this contract.

| Annexure | Document Name | Document Description |
|----------|---|--|
| 1 | Contractor Documentation Submittal Requirements | DOC-STD-0001 Rev.03 |
| 2 | Health and Safety Management Plan | Z.5200160 - HSMP |
| 3 | Environmental Baseline Report | Z.5200160 - EBR |
| 4 | Environmental Risk Report | Z.5200160 - ERR |
| 5 | Commissioning Plan | Z.5200160 - CP |
| 6 | Quality management plan | Z.5200160 - QMP |
| 7 | Construction Management Plan | Z.5200160 - CMP |
| 8 | Security Management Plan | Z.5200160 - SMP |
| 9 | Communication Management Plan | Z.5200160 - CMR |
| 10 | TIMS - Contractor Environmental and Sustainable Specification Guideline | TRN-IMS-GRP-GDL-014.4 |
| 11 | TIMS - Contractor Health and Safety Specification Guideline | TRN-IMS-GRP-GDL-014.3 |
| 12 | TIMS - Contractor Quality Specification Guideline | TRN-IMS-GRP-PROC-GDL 014.6 |
| 13 | SR3 E, C & I Condition Assessment | WCS Report |
| 14 | SR3 Mechanical Condition Assessment | WCS Report |
| 15 | SR3 Structural Condition Assessment | WCS Report |
| 16 | Dust Suppression Scope | SR1 & SR3 Work Specification |
| 17 | SR3 VFD's | 400V Systems for Travel Drives, Slew Drives and Bucket Wheel |
| 18 | Technical Spec Bucket Wheel VFD | Technical Specification (Stacker Reclaimer 2) |
| 19 | Technical Spec Slew VFD's | Technical Specification (Stacker Reclaimer 1) |

| Annexure | Document Name | Document Description |
|----------|---|--|
| 20 | Technical Spec Travel VFD's | Technical Specification (Stacker Reclaimer 1) |
| 21 | SR3 Lubrication System | Lubrication System Scope |
| 22 | Operators Cabin - Cabin Refurbishment 12092018 | Operations Requirements |
| 23 | Operators Cabin - Technical Spec Operator's Cab | Technical Specification (Stacker Reclaimer 1) |
| 24 | Technical Spec Tow Bar Festoon | Technical Specification (Stacker Reclaimer 1) |
| 25 | Main Power Reel | Detailed Scope – Stacker Reclaimer 2 - Supply Cable Reel |
| 26 | Commissioning Plan | Z.5200160-CP |

6.1.2 Standard Transnet Specifications

| Document Name | Document Description |
|-------------------------------------|----------------------|
| Quality Management | EEAM-Q-009 |
| Gen Electric Equipment | EEAM-Q-012 |
| Commissioning | EEAM-Q-013 |
| General Requirements and Conditions | EEAM-Q-016 |
| Tests on Electrical Equipment | EEAM-Q-020 |
| Electronic Equipment | EEAM-Q-021 |
| Belt Conveyors and Assoc Equipment | EEAM-Q-001 |
| Specification – Hydraulic Equipment | EEAM-Q-002 |
| Structural Steelwork | EEAM-Q-006 |
| Corrosion Protection | EEAM-Q-008 |
| Gears–Shafts–Bear–Brakelube-V Belts | EEAM-Q-004 |

SECTION 2

7 Management and start up

7.1 Management meetings

Regular meetings of a general nature may be convened and chaired by the *Project Manager* as follows:

| Meetings during execution phases: | Frequency | Attendance by: |
|---|--|---|
| Daily coordination, feedback and planning meeting | Daily | Teams from TPT, CMC, TPT Client and Contractor |
| Weekly SHE Meetings | Weekly | CMC, Project Manager, Contractors Management Teams, Client Team |
| SHE Pre-mobilisation Meeting (Once-off) | Within one Week prior to site establishment by Contractor and his sub-contractors. | CMC, Project Manager, Contractors Management Teams, Client Team |
| Site Handover meeting (Once-off) | On completion of Site Establishment. | CMC, Project Manager, Contractors Management Teams, Client Team |
| Meetings during commissioning phases: | Frequency | Attendance by: |
| Daily coordination and planning meeting | Daily | Commissioning teams from TPT, CMC and Contractor |

All meetings will take place at the Port of Saldanha premises except for cases where arrangements have been made to conduct the meetings via telecon. It is a requirement that the *Contractor* provide the scribe for these meetings. All the necessary costs associated with these meetings and taking of minutes (inclusive of distribution and document control) must be part of the Preliminaries and Generals cost.

Meetings of a specialist nature may be convened as specified elsewhere in this Works Information or if not so specified by persons and at times and locations to suit the Parties, the nature, and the progress of the *works*. Records of these meetings are to be submitted to the *Project Manager* by the person convening the meeting within five days of the meeting.

All meetings are to be recorded using minutes or a register prepared and circulated by the person who convened the meeting. Such minutes or register are not to be used for the purpose of confirming actions or instructions under the contract as these are to be done separately by the person identified in the *conditions of contract* to carry out such actions or instructions.

7.2 Documentation control

In undertaking the '*Works*' (including all incidental services required), the *Contractor* shall conform and adhere to the requirements of the 'Contractor Documentation Submittal Requirements' Standard included in Annexure 1 (refer DOC-STD-0001).

The *Contractor* is to ensure that the latest versions of the required application software and a suitable 'IT' Infrastructure are in place to support the electronic transmission of documentation.

All electronic submissions that are submitted via email to be submitted to wcdoccontrol@transnet.net

7.3 Safety risk management

- 7.3.1 The *Contractor* is to comply with the Health and Safety Specification and Health and Safety Management Plan. Refer to Annexure 11, TIMS - Contractor Health and Safety Specification Guideline.
- 7.3.2 The *Contractor* ensures that its Subcontractors comply with the requirements of the Health and Safety Specification and Health and Safety Management Plan.
- 7.3.3 The *Contractor* to compile a Health and Safety Plan to cover all SHEQ legislative- and other legal requirements. Health and Safety Plan to be submitted with tender, for approval by *Employer* and *Employer's* appointed Health and Safety Agent.
- 7.3.4 *Contractor* to prepare a detail HAZOP study and Site/Task Specific Risk Assessment (HIRA), prior to carrying out any operation on the Site and/or Working Area to the approval of *Project Manager*. Refer to Annexure 11, TIMS - Contractor Health and Safety Specification Guideline.
- 7.3.5 *Contractor's* Health & Safety Plan, method statements, HAZOP & HIRA studies and other documentation required, to be approved by *Employer*.
- 7.3.6 *Contractor* to obtain timely approval, from the Department of Labour to work extended working hours.
- 7.3.7 *Contractor* to provide proof of "Medical Fitness" and "Training Certification" for all employees. All *Contractor's* and Subcontractor's personnel working on Site are required to undergo medical and drug tests.
- 7.3.8 Prior to site establishment all the *Contractor's*- as well as all Sub-Contractor's employees will undergo a Health and Safety induction course and other required safety training.
- 7.3.9 The *Contractor* performs the *works* having due regard to the HSSP.
- 7.3.10 The *Contractor* complies with the requirements of the SSRC with respect to his own activities and others on the Site and Working Areas.
- 7.3.11 The *Contractor* makes the Health and Safety Specification and Health and Safety Management Plan available to its employees and Subcontractors in the *language of this contract* and other local languages as required.
- 7.3.12 The roles and responsibilities of the various personnel acting on behalf of the *Project Manager* with respect to health and safety issues are as stated in the paragraphs following:
- 7.3.13 The *Contractor* shall provide a full time Safety Officer on Site and in Working Areas who will cover all activities including overtime and weekend work. Proof of valid SACPCMP registration as Construction Health and Safety Officer is a requirement for all the construction safety officers that will be assigned to the project. The valid certificates must be submitted before any site activities commence and the validity must be maintained throughout the period/s that any work is undertaken on site.
- 7.3.14 The *Contractor* shall transport personnel in a safe manner from the access boom to the Site. Walking between the main entrance gate and the Site is prohibited. No transport of employees on the back of an open LDV or vehicle is allowed.
- 7.3.15 No alcohol is permitted on Site and Transnet property. The Employer has zero tolerance on Site. Employees found under the influence will be removed from Site and will not be allowed on Site again.
- 7.3.16 All Equipment, cranes and Plant is to be inspected by the *Employer* before commencement of work.
- 7.3.17 Constant supervision is required on Site during execution of works. The presence of appointed supervision is therefore always required on Site.

7.4 Environmental constraints and management

- 7.4.1 In undertaking the *works* (including all incidental services required), the *Contractor* is to fully comply with all the requirements of the documents listed below including the development and implementation of any required Environmental Management Plan (EMP) or Environmental Method Statements (EMS).

- Environmental Baseline Report
- Environmental Risk Report

7.4.2 The *Contractor* shall ensure that his management, foremen and the general workforce, as well as all suppliers and visitors to Site have attended the BTS Induction Program, prior to commencing any *work* on Site. If new personnel commence work on the Site during construction, the *Contractor* shall ensure that these personnel undergo the Induction Programme and are made aware of the environmental specifications on Site.

7.5 Quality assurance requirements

7.5.1 In undertaking the *works* (including all incidental services required), the *Contractor* is to follow the requirements of the items listed below.

7.5.2 The *Contractor* shall execute the works in accordance with the requirements of the Quality Management Plan.

7.5.3 The *Contractor* submits his Quality Management System documents to the *Project Manager* as to include details of:

- Quality Plan for the contract
- Quality Policy
- Index of Procedures to be used
- A schedule of internal and external audits during the contract
- A Typical Quality Control Plan (QCP) (for each task)
- Typical data book index

7.5.4 Due consideration must be given to the deliverables required to execute and complete the contract as per ISO 9001 Quality Management Standard.

7.5.5 The *Contractor* is to provide QCP's and Method Statements for all scope items to the Project Manager and CMC, for review and approval, at least one week prior to the execution of the *works*.

7.5.6 The *Contractor* is to provide QCP's and quality checklists for refurbishment items/components being manufactured off site, as per the discretion of the Project Manager.

7.5.7 The *Contractor* develops and maintains a comprehensive register of documents that will be generated throughout the contract including all quality related documents as part of its Quality Plan.

7.5.8 The *Contractor* shall provide a suitably qualified full-time dedicated resident Quality Manager for all aspects of the works including Site activities, with a staff adequate to perform the requirements of his Quality Plan and Quality Management System.

7.5.9 The *Contractor* is to notify the CMC Quality Manager for inspections at least 24hrs in advance.

7.5.10 The nominated individual shall be fully conversant with quality management on major construction projects and the maintenance of an appropriate ISO 9001 Quality Management System or accepted equivalent. The Contractor shall submit the CV of his quality manager to the Project Manager, for review, complete with a proposed organogram clearly indicating reporting levels and the number of resources dedicated to quality assurance and quality control.

7.6 Programming constraints

7.6.1 The *Contractor* shows on each programme he submits to the *Project Manager*, the requirements of the project requirements including, H&S, environmental, quality, construction etc.

7.6.2 The *Contractor* shows on each programme he submits to the Project Manager, the requirements, as well as the order and timing of all operations and refurbishment activities.

7.6.3 The *Contractor* presents his first programme and all subsequently revised programmes (see NEC3 ECC Clauses 31.2 and 32.1) in hard copy format and in soft copy format. (Both in PDF and MS Projects format).

7.6.4 The *Contractor* shall appoint a full-time planner, with adequate relevant experience to perform the requirements as specified. The appointed planner shall be fully conversant in planning on major construction projects and have a full understanding and knowledge of the *works* and *logic*, to plan the *works*.

- 7.6.5 The *Contractor* uses MS Project for his programme submissions.
- 7.6.6 The *Contractor* shows on his Accepted Programme and all subsequently revised schedules, the critical path or paths and all necessary logic demonstrating sequence of operations.
- 7.6.7 The *Contractor's* programme shows duration of operations in working days and shall be realistic and based on quantities and applied resources. The calendars used are based 24 hours, 7 days operation or as prescribed by the *Project Manager*.
- 7.6.8 The *Contractor's* schedule/programme shall be structured in such a manner to be able to show the following levels:
- Level 1 Master Schedule – defines the major operations and interfaces between engineering design, procurement, fabrication and assembly of Plant and Materials, transportation, construction, testing and pre-commissioning, commissioning, and Completion.
 - Level 2 Project Schedule – summary schedules 'rolled up' from Level 3 Project Schedule described below
 - Level 3 Project Schedule – detailed schedules generated to demonstrate all operations identified on the programme from the starting date to Completion. The activities will be assigned a code and there will be heading describing the works to be performed. The *Project Manager* notifies any subsequent layouts and corresponding filters on revised programmes.
 - Level 4 Project Schedule – detailed discipline speciality level developed and maintained on daily basis by the *Contractor* relating to all operations identified on the programme representing the daily/hourly activities by each discipline. This schedule to cover 3-day look-ahead activities and to be submitted to PM on daily basis.
- 7.6.9 The *Contractor* shows on each revised programme he submits to the *Project Manager* a resource histogram showing planned progress versus actual, deviations from the Accepted Programme and any remedial actions proposed by the *Contractor*.
- 7.6.10 The *Contractor* to submit a, daily, high level schedule report at the end of the dayshift, covering progress on all activities for the past 24 hours and clearly indicated the items that running late and are behind schedule and planned actions to get these items back on schedule. This high-level action schedule will be discussed in the daily morning meetings
- 7.6.11 The *Contractor* submits schedule/programme report information to the *Project Manager* at weekly intervals, or as per request from the *Project Manager*.
- 7.6.12 The *Contractor's* weekly programme narrative report includes:
- Status report - narrative which includes status and performance of operations on the site and Working Areas; summary of progress achieved during the reporting period; status and performance of operations outside the Working Areas; critical action items (top 10) and deviations from the Accepted Programme and action plan to rectify.
 - Progress statistics - progress as a percentage of overall works and show progress for "this period" and "progress to date". To calculate this percentage the Contractor uses a spreadsheet to calculate earned progress of on activities which have been weighted using man-hours.
 - Project milestone table - reflecting previously and currently forecasted versus accepted milestones.
 - Level 4 Project Schedule - showing the current forecast dates base-lined against the latest Accepted Programme and showing both a Total Float and Variance column.
 - Weekly look-ahead Schedule - showing the current forecast dates base-lined against the latest Accepted Programme and showing both a Total Float and Variance column.
 - Manpower Histogram - reflecting actual, forecasted and planned activities.
 - S-curves - reflecting the actual percentage complete versus the planned percentage for the overall contract utilising the earned values as calculated by the detailed progress report.
- 7.6.13 The *Employer* (including the agents of the Employer) operates on Site 24-hours per day, 7 days per week
- 7.6.14 *Employer's* schedule
- The *Employer* requires execution to be aligned to the Sept/Oct Annual Industry Iron Ore Shut period and the utilisation of available maintenance windows by the *Contractor* leading up to the Shut period. Maintenance windows are normally weekly 12-hour slots which may or may not be confirmed by the *Employer* a week prior depending on operational and technical priorities of the



Terminal. Therefore, the *Contractor* to plan batches of work that can be started and completed within a 12-hour window as far as possible with prior agreement with the *Employer*.

- 2024 Execution period (5 weeks: 1 Sep – 6 Oct 2024*)
- 2025 Execution period (5 weeks: 1 Sep – 6 Oct 2025*)

The following is applicable to the project plan:

2024 Shut Period Execution Schedule

| | |
|--|-------------------|
| Site access/establishment for shut period | 15 August 2024* |
| Start of execution of Scope of Works | 1 September 2024* |
| Completion of scope or works with handover to operations for hot commissioning | 1 October 2024* |

2025 Shut Period Execution Schedule

| | |
|--|-------------------|
| Site access/establishment for shut period | 15 August 2025* |
| Start of execution of Scope of Works | 1 September 2025* |
| Completion of scope or works with handover to operations for hot commissioning | 1 October 2025* |

Note: *Dates subject to change

7.6.15 *Contractor's* schedule (returnable)

The *Contractor* is to prepare and submit together with this tender, a Level 2 schedule, for a 24 hour / 7 days' work week. The *Contractors* schedule is to be aligned to the *Employers* information listed in the section above.

The schedule to make provision for the following for each of the two shut periods:

- 2-week site establishment period.
- Pre, Cold and Hot commissioning on completion of the work shown in the schedule.

A detailed Level 4 schedule to be submitted at execution, which show all necessary links/critical path, to be updated daily during shut execution period.

7.7 Contractor's management, supervision and key people

7.7.1 The *Contractor* is to submit a detailed resource plan to cover the following:

- Organogram showing the entire planned site team, including the Sub-Contractors, with line of reporting, covering all disciplines.
- Commissioning Plan including organogram, names with qualification and legal appointments; proposed commissioning schedule indicating preparation for commissioning and close out.
- List and detail on all Sub- and Specialist Contractors planned to be utilised for the project. Also indicate planned/intended SOW of these sub-contractors, size of workforce, with timeframe of involvement.
- Human Resource Management plan. *Contractor* to provide a comprehensive Human Resource Management plan to cover all industrial relations (IR) and human resource (HR) activities.
- *Contractor* to indicate and confirm that the management team, supervisory, and execution team allocated for this project will be dedicated to this project only and will not be involved with any other work during the same time as this project. Any dual responsibilities by any of the team members, with any involvement on any other work during the shut execution, must be clearly indicated.
- List of all equipment, crantage, vehicles, tools, site infrastructure and others.

- 7.7.2 The *Contractor* is to submit a comprehensive and detailed organogram that shows the structure and composition of their management structure involved in the *works*, inclusive of the key staff/professionals.
- 7.7.3 The *Contractor* to assign well qualified personnel as listed in the table below who have the necessary skills, experience and qualifications required to carry out the services identified in this Scope of Works.

| Key Person Role | Requirement |
|---|---|
| | More experience than indicated below will translate in a higher score during tender evaluations. |
| Project Manager | Proof of valid SACPCMP registration for either the Project Manager or Construction Manager is a requirement. A valid certificate for at least one of the two roles must be submitted with the tender and the validity must be maintained for the duration of the contract. Require at least 5 years relevant experience. |
| Construction Manager | Proof of valid SACPCMP registration for either the Project Manager or Construction Manager is a requirement. A valid certificate for at least one of the two roles must be submitted with the tender and the validity must be maintained for the duration of the contract. Require at least 5 years relevant experience. |
| Health & Safety Officers x 3 (To ensure support 24/7) | SACPCMP – All three resources are registered as a Health and Safety Officers with at least 2 years relevant experience. |
| Quality Manager | BTech Quality Management with at least 2 years relevant experience. |
| Schedule Manager/Planner | At least 2 years relevant experience. |
| Commissioning Manager | A relevant valid technical qualification (mechanical, structural, electrical and/or control & instrumentation) above NQF level 4 with at least 5 years relevant experience. |
| Administration/Document Controller | At least 2 years relevant experience. |

- 7.7.4 Minimum requirements of people employed on the *Site*
- All statutory requirements relating to employees mobilised on site
 - Health and Safety compliance as specified elsewhere
- 7.7.5 The *Contractor* is responsible for managing industrial relations in accordance with their Human Resource Management Plan.

7.8 Training workshops and technology transfer

- 7.8.1 The *Contractor* facilitates the following requirements for training workshops:
- A safety pre-mobilisation workshop
 - Contractor employee safety training programmes

7.9 Contract change management

- 7.9.1 No additional requirements apply to ECC Clause 60 series.

7.10 Provision of bonds and guarantees

- 7.10.1 The form in which a bond or guarantee required by the conditions of contract (if any) is to be provided by the *Contractor* is given in Part 1 Agreements and Contract Data, document C1.3, Sureties.
- 7.10.2 The *Contractor* provides a bond or guarantee as required by the conditions of contract concurrently with the execution by the Parties of the form of agreement for the ECC contract.

7.11 Records of Defined Cost, payments & assessments of compensation events kept by Contractor

- 7.11.1 The *Contractor* keeps the following records available for the *Project Manager* to inspect:
- Records of Equipment used and people employed outside the Working Areas (if applicable); and
 - Records of all expenses incurred and equipment, material, parts and resources used as a result of Compensation Events or that leads to Compensation Events.

8 Procurement

8.1 Code of Conduct

Transnet aims to achieve the best value for money when buying or selling goods and obtaining services. This however must be done in an open and fair manner that supports and drives a competitive economy. Underpinning our process are several acts and policies that any supplier dealing with Transnet must understand and support. These are:

- The Transnet Procurement Procedures Manual (PPM);
- Section 217 of the Constitution - the five pillars of Public PSCM (Procurement and Supply Chain Management): fair, equitable, transparent, competitive and cost effective;
- The Public Finance Management Act (PFMA);
- The Broad Based Black Economic Empowerment Act (B-BBEE); and
- The Anti-Corruption Act.

This code of conduct has been included in this contract to formally apprise Transnet Suppliers of Transnet's expectations regarding behaviour and conduct of it's Suppliers.

Prohibition of Bribes, Kickbacks, Unlawful Payments, and Other Corrupt Practices

Transnet is in the process of transforming itself into a self-sustaining State Owned Enterprise, actively competing in the logistics industry. Our aim is to become a world class, profitable, logistics organisation. As such, our transformation is focused on adopting a performance culture and to adopt behaviours that will enable this transformation.

1. *Transnet will not participate in corrupt practices and therefore expects its suppliers to act in a similar manner.*
 - Transnet and its employees will follow the laws of this country and keep accurate business records that reflect actual transactions with and payments to our suppliers.
 - Employees must not accept or request money or anything of value, directly or indirectly, to:
 - Illegally influence their judgement or conduct or to ensure the desired outcome of a sourcing activity;
 - Win or retain business or to influence any act or decision of any decision stakeholders involved in sourcing decisions; or
 - Gain an improper advantage.
 - There may be times when a supplier is confronted with fraudulent or corrupt behaviour of Transnet employees. We expect our Suppliers to use our "Tip-offs Anonymous" Hot line to report these acts. (0800 003 056).
2. *Transnet is firmly committed to the ideas of free and competitive enterprise.*

- Suppliers are expected to comply with all applicable laws and regulations regarding fair competition and antitrust.
 - Transnet does not engage with non-value adding agents or representatives solely for the purpose of increasing B-BBEE spend (fronting)
3. *Transnet's relationship with suppliers requires us to clearly define requirements, exchange information and share mutual benefits.*
- Generally, Suppliers have their own business standards and regulations. Although Transnet cannot control the actions of our suppliers, we will not tolerate any illegal activities. These include, but are not limited to:
 - Misrepresentation of their product (origin of manufacture, specifications, intellectual property rights, etc);
 - Collusion;
 - Failure to disclose accurate information required during the sourcing activity (ownership, financial situation, B-BBEE status, etc.);
 - Corrupt activities listed above; and
 - Harassment, intimidation or other aggressive actions towards Transnet employees.
 - Suppliers must be evaluated and approved before any materials, components, products or services are purchased from them. Rigorous due diligence is conducted and the supplier is expected to participate in an honest and straight forward manner.
 - Suppliers must record and report facts accurately, honestly and objectively. Financial records must be accurate in all material respects.

Conflicts of Interest

1. *A conflict of interest arises when personal interests or activities influence (or appear to influence) the ability to act in the best interests of Transnet.*
- Doing business with family members
 - Having a financial interest in another company in our industry

8.2 The Contractor's Invoices

- 8.2.1 When the *Project Manager* certifies payment (see ECC Clause 51.1) following an assessment date, the *Contractor* complies with the *Employer's* procedure for invoice submission.
- 8.2.2 The invoice must correspond to the *Project Manager's* assessment of the amount due to the *Contractor* as stated in the payment certificate.
- 8.2.3 The invoice states the following:
Invoice addressed to Transnet SOC Ltd;
Transnet SOC Limited's VAT No: 4720103177;
Invoice number;
The *Contractor's* VAT Number; and
The Contract number.
The invoice contains the supporting detail.
- 8.2.4 The invoice is presented either by post or by hand delivery.
- 8.2.5 Invoices submitted by post are addressed to:
Transnet SOC Ltd
Private Bag X4
Gallo Manor
2052
For the attention of The Contract Administrator, Transnet Port Terminals

8.2.6 Invoices submitted by hand are presented to:

Transnet Pot Terminals
Kingsmead Office Park
Stalwart Simelane (Stranger) Street
Durban, South Africa
4001

For the attention of The Contract Administrator, Transnet Port Terminals

8.2.7 The invoice is presented as an original.

8.3 People

8.3.1 Minimum requirements of people employed on the Site

- All statutory requirements relating to employees mobilised on site
- Health and Safety compliance as specified elsewhere

8.3.2 The *Contractor* is responsible for managing industrial relations in accordance with his Human Resource Management Plan.

8.4 Subcontracting

8.4.1 The *Contractor* does not appoint or bring Subcontractors onto Site without the prior acceptance of the *Project Manager* and all Subcontractors are required to conform to the requirements as set out herein, as if they were employees of the *Contractor*.

8.4.2 Where the *Contractor* employs a Subcontractor, who constructs or installs part of the *works* or who supplies Plant and Materials for incorporation into the *works* which involves a Subcontractor operating on the Site and/or Working Areas, then the *Contractor* ensures that any such Subcontractor complies with the various requirements, listed under Section 7. The subcontract documentation places back-to-back obligations on the Subcontractor which reflect the *Contractor's* obligations listed under Section 7.

8.4.3 The *Contractor* ensures that all compliance requirements placed on him by the *Employer* are transferred to the Subcontractor.

8.4.4 The *Contractor* does not deviate from the accepted Subcontractor's list without prior acceptance of the *Project Manager*.

8.4.5 The *Contractor* ensures that the recommended Subcontractor is appointed timeously in accordance with the works programme.

8.4.6 The *Contractor* appoints his Subcontractors under the NEC3 Engineering Contract Subcontract, unless accepted otherwise by the *Project Manager*.

8.4.7 The *Contractor* ensures that the health and safety and environmental requirements placed on him under this contract are transferred to any Subcontracts.

8.4.8 The *Contractor* ensures that the quality assurance requirements placed on him under this contract are transferred to any Subcontracts.

8.4.9 Quality system requirements are to be applied on all Subcontracts to the point where the acceptability of supplies can be demonstrated solely by the conduct of inspection and/or examination of goods upon receipt at the designated point of delivery.

8.4.10 The *Contractor's* Quality Plan to include or reference the Quality Plans of Subcontractors.

8.5 Plant and Materials

8.5.1 The *Contractor* provides Plant and Materials for inclusion in the *works* in accordance with the relevant SABS / SANS / BSI / International codes, unless otherwise stated elsewhere in the *Works Information* provided by the *Employer*. All Plant and Materials are new, unless the use of old or refurbished goods and/or Materials are expressly permitted as stated elsewhere in this *Works Information* or as may be subsequently instructed by the *Project Manager*.

- 8.5.2 Where Plant and Materials for inclusion in the *works* originate from outside the Republic of South Africa, all such Plant and Materials are new and of merchantable quality, to a recognised national standard, with all proprietary products installed to manufacturers' instructions.
- 8.5.3 The *Contractor* replaces any Plant and Materials subject to breakages (whether in the Working Areas or not) or any Plant and Materials not conforming to standards or specifications stated and notifies the *Project Manager* and the *Supervisor* on each occasion where replacement is required.
- 8.5.4 The *Contractor* provides all other Plant and Materials necessary for the *works* not specifically stated to be provided "free issue" by the *Employer*.
- 8.5.5 *Contractor's* procurement of Plant and Materials. The delivery of the Plant and Materials shall be made to the nominated delivery address, and the *Project Manager* shall be notified that the Plant and materials have been delivered and are available to be inspected by the *Supervisor*. All equipment procured as part of this Contract shall be guaranteed against latent defects and faulty workmanship for a period of at least **12 months from date of commissioning, or 18 months from date of delivery**, whichever expires first. All information relating to plant and materials procured shall be obtained from the vendor, and collated, where relevant, in the Operating and maintenance Manuals.
- 8.5.6 First fills are included in the scope of this Contract on all new and refurbished components, and the *Contractor* shall provide all lubricant, hydraulic fluids, and other fills required for the efficient operation of each equipment item as part of this Contract.
- 8.5.7 At the request of the *Project Manager* and before commencing with the commissioning on the plant and Materials, the *Contractor* provides a list of all critical / strategic spares to be kept by the *Employer* for the Plant and Materials, and the *Employer* shall select the specific items for purchasing as part of this Contract at the discretion of the *Project Manager*, at the prices quoted (i.e. prices indicated in this contract document) by the *Contractor*.

8.6 Tests and inspections before delivery

- 8.6.1 The *Contractor* submits to the Supervisor details to certify that tests and inspections have been carried out on Plant and Materials by others which include all new components, assemblies and sub-assemblies included in this Contract, as per the Commissioning Plan, Annexure 26.
- 8.6.2 The *Contractor* shall identify to the Supervisor all equipment items, sub-assemblies, and fully assembled sections of equipment to be tested, before it is released for shipment to site and installation. The shop testing shall be witnessed by the Supervisor or his nominee prior to releasing it for shipment, and a release certificate shall be issued by the Supervisor once the equipment has been tested successfully.

8.7 Marking Plant and Materials outside the Working Areas

- 8.7.1 The *Contractor* prepares and marks items of Plant and Materials outside the Working Areas, that has been paid for by the *Employer*, either with a metal plate, fixed to each loose equipment item, assembly, or sub-assembly, with the following words written in permanent ink on the tag, or by permanent marker written on the material as follows;
- Item: (description of item)
 - Property of Transnet Ltd
 - Project description and No.
- 8.7.2 The Contractor is to take digital photographs for issuing to the Supervisor as proof of marking.

8.8 Contractor's Equipment (including temporary works).

- 8.8.1 The *Contractor* provides the *Project Manager* with details of any specialised *Contractor's* Equipment to be procured as part of this *Contract* for the execution of the works. The *Contractor* will provide any specialised equipment required for routine maintenance of the works as part of this contract.

8.9 Preparation of post Completion contracts

8.9.1 Prior to Contract Completion, the *Contractor* provides to the *Employer* costs for providing the following assistance to the Employer post Completion:

Full maintenance of the Plant and Materials that is fabricated and erected as part of this Contract. The maintenance shall include, inter alia, the following;

- Regular weekly and monthly inspections of the machine
- Regular maintenance activities as required, at the specified intervals, on the machine
- Attendance to call-outs and emergency repairs required to maintain the operability of the machine, 24 hours per day/ 7 days a week.