



Transnet National Ports Authority

Tender Number: TNPA/2024/04/0009/61844/RFP

DESCRIPTION OF WORKS: FRAMEWORK CONTRACTS FOR CIVIL ENGINEERING WORKS IN VARIOUS TNPA PREMISES – EASTERN REGION - (3 YEARS)

Transnet National Ports Authority

an Operating Division **TRANSNET SOC LTD**

[Registration Number 1990/000900/30]

REQUEST FOR PROPOSAL (RFP)

FRAMEWORK CONTRACTS FOR CIVIL ENGINEERING WORKS IN VARIOUS TNPA PREMISES – EASTERN REGION - (3 YEARS)

(Works in the cidb Grade 4CE, 5CE and Grade 6CE category)

RFP NUMBER	: TNPA/2024/04/0009/61844/RFP
ISSUE DATE	: 18 APRIL 2024
NON COMPULSORY BRIEFING	: 03 MAY 2024
CLOSING DATE	: 16 MAY 2024
CLOSING TIME	: 16H00
TENDER VALIDITY PERIOD	: 12 WEEKS FROM CLOSING DATE

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INVITATION AND NOTICE TO TENDER



SECTION 1: SBD1 FORM

PART A

INVITATION TO BID

YOU ARE HEREBY INVITED TO BID FOR REQUIREMENTS OF TRANSNET NATIONAL PORTS AUTHORITY, A DIVISION TRANSNET SOC LTD							
BID NUMBER:	TNPA/2024/04/000 9/61844/RFP	ISSUE DATE:	18 April 2024	CLOSING DATE:	16 May 2024	CLOSING TIME:	16h00
DESCRIPTION	Framework Contracts for Civil Engineering works in various TNPA premises – CENTRAL REGION (Works in the cidb Grade 4CE, 5CE and Grade 6CE category)						
BID RESPONSE DOCUMENTS SUBMISSION							
RESPONDENTS ARE TO UPLOAD THEIR BID RESPONSE PROPOSALS ONTO THE TRANSNET SYSTEM AGAINST EACH TENDER SELECTED (<i>please refer to section 2, paragraph 3 for a detailed process on how to upload submissions</i>): https://transnetetenders.azurewebsites.net							
BIDDING PROCEDURE ENQUIRIES MAY BE DIRECTED TO					TECHNICAL ENQUIRIES MAY BE DIRECTED TO:		
CONTACT PERSON	Siphiwo Qangani		CONTACT PERSON	Siphiwo Qangani			
TELEPHONE NUMBER	None		TELEPHONE NUMBER	None			
FACSIMILE NUMBER	None			FACSIMILE NUMBER	None		
E-MAIL ADDRESS	TNPATenderenquiries3@transnet.net			E-MAIL ADDRESS	TNPATenderenquiries3@transnet.net		
SUPPLIER INFORMATION							
NAME OF BIDDER							
POSTAL ADDRESS							
STREET ADDRESS							
TELEPHONE NUMBER	CODE		NUMBER				
CELLPHONE NUMBER							
FACSIMILE NUMBER	CODE		NUMBER				
E-MAIL ADDRESS							
VAT REGISTRATION NUMBER							
SUPPLIER COMPLIANCE STATUS	TAX COMPLIANCE SYSTEM PIN:		OR	CENTRAL SUPPLIER DATABASE UNIQUE REGISTRATION REFERENCE NUMBER: MAAA			
B-BBEE STATUS LEVEL VERIFICATION CERTIFICATE	TICK APPLICABLE BOX] <input type="checkbox"/> Yes <input type="checkbox"/> No		B-BBEE STATUS LEVEL SWORN AFFIDAVIT	[TICK APPLICABLE BOX] <input type="checkbox"/> Yes <input type="checkbox"/> No			
[A B-BBEE STATUS LEVEL VERIFICATION CERTIFICATE/ SWORN AFFIDAVIT (FOR EMES & QSEs) MUST BE SUBMITTED IN ORDER TO QUALIFY FOR PREFERENCE POINTS FOR B-BBEE]							



<p>1 ARE YOU THE ACCREDITED REPRESENTATIVE IN SOUTH AFRICA FOR THE GOODS /SERVICES /WORKS OFFERED?</p>	<p><input type="checkbox"/>Yes <input type="checkbox"/>No</p> <p>[IF YES ENCLOSE PROOF]</p>	<p>2 ARE YOU A FOREIGN BASED SUPPLIER FOR THE GOODS /SERVICES /WORKS OFFERED?</p>	<p><input type="checkbox"/>Yes <input type="checkbox"/>No</p> <p>[IF YES, ANSWER QUESTIONNAIRE BELOW]</p>
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QUESTIONNAIRE TO BIDDING FOREIGN SUPPLIERS

- IS THE ENTITY A RESIDENT OF THE REPUBLIC OF SOUTH AFRICA (RSA)? YES NO
- DOES THE ENTITY HAVE A BRANCH IN THE RSA? YES NO
- DOES THE ENTITY HAVE A PERMANENT ESTABLISHMENT IN THE RSA? YES NO
- DOES THE ENTITY HAVE ANY SOURCE OF INCOME IN THE RSA? YES NO
- IS THE ENTITY LIABLE IN THE RSA FOR ANY FORM OF TAXATION? YES NO

IF THE ANSWER IS “NO” TO ALL OF THE ABOVE, THEN IT IS NOT A REQUIREMENT TO REGISTER FOR A TAX COMPLIANCE STATUS SYSTEM PIN CODE FROM THE SOUTH AFRICAN REVENUE SERVICE (SARS) AND IF NOT REGISTER AS PER 1.3 BELOW.

**PART B
TERMS AND CONDITIONS FOR BIDDING**

1. TAX COMPLIANCE REQUIREMENTS

- 1.1 BIDDERS MUST ENSURE COMPLIANCE WITH THEIR TAX OBLIGATIONS.
- 1.2 BIDDERS ARE REQUIRED TO SUBMIT THEIR UNIQUE PERSONAL IDENTIFICATION NUMBER (PIN) ISSUED BY SARS TO ENABLE THE ORGAN OF STATE TO VERIFY THE TAXPAYER’S PROFILE AND TAX STATUS.
- 1.3 APPLICATION FOR TAX COMPLIANCE STATUS (TCS) PIN MAY BE MADE VIA E-FILING THROUGH THE SARS WEBSITE WWW.SARS.GOV.ZA.
- 1.4 BIDDERS MAY ALSO SUBMIT A PRINTED TCS CERTIFICATE TOGETHER WITH THE BID.
- 1.5 IN BIDS WHERE UNINCORPORATED CONSORTIA / JOINT VENTURES / SUB-CONTRACTORS ARE INVOLVED, EACH PARTY MUST SUBMIT A SEPARATE TCS CERTIFICATE / PIN / CSD NUMBER.
- 1.6 WHERE NO TCS IS AVAILABLE BUT THE BIDDER IS REGISTERED ON THE CENTRAL SUPPLIER DATABASE (CSD), A CSD NUMBER MUST BE PROVIDED.

NB: FAILURE TO PROVIDE / OR COMPLY WITH ANY OF THE ABOVE PARTICULARS MAY RENDER THE BID INVALID.

SIGNATURE OF BIDDER:

CAPACITY UNDER WHICH THIS BID IS SIGNED:
(Proof of authority must be submitted e.g. company resolution)

DATE: _____



Part T1: Tendering Procedures

T1.1 TENDER NOTICE AND INVITATION TO TENDER

SECTION 1: NOTICE TO TENDERERS

1. INVITATION TO TENDER

Responses to this Tender are requested from persons, companies, close corporations or enterprises [hereinafter referred to as a Tenderer] which are in **cidb Grade 4 CE, 5CE, 6CE or Higher**.

DESCRIPTION	Framework Contracts for Civil Engineering works in various TNPA premises – EASTERN REGION (Works in the cidb Grade 4CE, 5CE and Grade 6CE works category)
TENDER DOWNLOADING	This Tender may be downloaded directly from the National Treasury eTender Publication Portal at www.etenders.gov.za and the Transnet website at https://transnetetenders.azurewebsites.net (please use Google Chrome to access Transnet link) FREE OF CHARGE.

NON COMPULSORY TENDER CLARIFICATION MEETING	<p>A non-compulsory RFP briefing will be conducted via Microsoft Teams on 03 May 2024 at 10h00 EASTERN REGION for a period of ± 2 hours. A second briefing session for tenderers which did not make it in the morning session will take place in the same day, 03 May 2024, starting from 15h00 to 17h00.</p> <p>The briefing session will start punctually, and information will not be repeated for the benefit of Respondents joining late. Tenderers must join the briefing meeting session via this Microsoft Teams link below. Join the 10:00am session on the link below. If you are using a computer or laptop device, press the CTRL button, hold and click over the “join the meeting now” bold names below. If you are using a smartphone, click on the “Join the Meeting now” bold words below:</p> <p>Join the meeting now</p> <p>OR Use the Meeting ID address: Meeting ID: 378 777 573 21 Passcode: EQS7ci</p> <p>Join the 15h00 session on the link below. If you are using a computer, press Ctrl button and hold and click over the “join the meeting now” below. If you are using a smartphone, click on the “Join the Meeting now” bold words below:</p> <p>Join the meeting now</p> <p>OR Use the Meeting ID address: Meeting ID: 360 091 703 207 Passcode: 2cyEH6</p>
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	<p>Despite the briefing session being non-compulsory, Transnet nevertheless encourages all Respondents to attend. Transnet will not be held responsible for any Respondent who did not attend the non-compulsory session and subsequently feels disadvantaged as a result thereof.</p> <p>Any addenda to the RFP or clarifications will be published on the National Treasury e-tender portal and Transnet website. Bidders are required to check the e-tender portal or Transnet website prior to finalising their bid submissions for any changes or clarifications to the RFP.</p> <p>Transnet will not be held liable if Bidders do not receive the latest information regarding this RFP with the possible consequence of either being disadvantaged or disqualified as a result thereof.</p>
CLOSING DATE	<p>16h00 on 16 May 2024</p> <p>Tenderers must ensure that tenders are uploaded timeously onto the system. If a tender is late, it will not be accepted for consideration.</p>

2. TENDER SUBMISSION

Transnet has implemented a new electronic tender submission system, the e-Tender Submission Portal, in line with the overall Transnet digitalization strategy where suppliers can view advertised tenders, register their information, log their intent to respond to bids and upload their bid proposals/responses on to the system.

a) The Transnet e-Tender Submission Portal can be accessed as follows:

Log on to the Transnet eTenders management platform website

(<https://transnetetenders.azurewebsites.net>);

- Click on "ADVERTISED TENDERS" to view advertised tenders;
- Click on "SIGN IN/REGISTER – for bidder to register their information (must fill in all mandatory information);
- Click on "SIGN IN/REGISTER" - to sign in if already registered;
- Toggle (click to switch) the "Log an Intent" button to submit a bid;
- Submit bid documents by uploading them into the system against each tender selected.
- **Tenderers are required to ensure that electronic bid submissions are done at least a day before the closing date to prevent issues which they may encounter due to their internet speed, bandwidth or the size of the number of uploads they are submitting. Transnet will not be held liable for any challenges experienced by bidders as a result of the technical challenges. Please do not wait for the last hour to submit. A Tenderer can upload 30mb per upload and multiple uploads are permitted.**
- **Tenderers may only use alphabetical and/ or numerical characters to name their electronic files. Use of any other characters may result in the document being corrupted during upload.**

- b) The tender offers to this tender will be opened as soon as possible after the closing date and time. Transnet shall not, at the opening of tenders, disclose to any other company any confidential details pertaining to the Tender Offers / information received, i.e. pricing, delivery, etc. The names and locations of the Tenderers will be divulged to other Tenderers upon request.
- c) Submissions must not contain documents relating to any Tender other than that shown on the submission.

3. CONFIDENTIALITY

All information related to this RFP is to be treated with strict confidentiality. In this regard Tenderers are required to certify that they have acquainted themselves with the Non-Disclosure Agreement. All information related to a subsequent contract, both during and after completion thereof, will be treated with strict confidence. Should the need however arise to divulge any information gleaned from provision of the Works, which is either directly or indirectly related to Transnet's business, written approval to divulge such information must be obtained from Transnet.

4. DISCLAIMERS

Tenderers are hereby advised that Transnet is not committed to any course of action as a result of its issuance of this Tender and/or its receipt of a tender offer. In particular, please note that Transnet reserves the right to:

- 4.1. This tender is only for the construction works in the **cidb Grade Level 4 to Grade Level 6 category**, and projects from the framework contract in this range will not exceed the tender value of **cidb Grade 6**.
- 4.2. Shortlist and approve a minimum of **two (2)** and/or a maximum of the **fifteen (15)** highest scoring Tenderers to enter into a Framework Contract, unless objective criteria justify the shortlisting of another tenderer. Overlooking a preferred tenderer could be done where a contractor appears in all classes of works and stands a chance of being shortlisted in all or majority of cidb grades.
- 4.3. Not necessarily accept the lowest priced tender or an alternative Tender;
- 4.4. Approach the open market if the quoted rates (for award of work) are deemed unreasonable;
- 4.5. Should the Tenderers be awarded business on strength of information furnished by the Tenderer, which after conclusion of the contract is proved to have been incorrect, Transnet reserves the right to terminate the contract;
- 4.6. Request audited financial statements or other documentation for the purposes of a due diligence exercise;



- 4.7. Not accept any changes or purported changes by the Tenderer to the tender rates after the closing date;
 - 4.8. Verify any information supplied by a Tenderer by submitting a tender, the Tenderer/s hereby irrevocably grant the necessary consent to the Transnet to do so;
 - 4.9. Conduct the evaluation process in parallel. The evaluation of Tenderers at any given stage must therefore not be interpreted to mean that Tenderers have necessarily passed any previous stage(s);
 - 4.10. Unless otherwise expressly stated, each tender lodged in response to the invitation to tender shall be deemed to be an offer by the Tenderer. The Employer has the right in its sole and unfettered discretion not to accept any offer.
 - 4.11. Not be held liable if tenderers do not provide the correct contact details during the clarification session and do not receive the latest information regarding this RFP with the possible consequence of being disadvantaged or disqualified as a result thereof.
 - 4.12. Transnet reserves the right to exclude any Tenderers from the tender process who has been convicted of a serious breach of law during the preceding 5 [five] years including but not limited to breaches of the Competition Act 89 of 1998, as amended. Tenderers are required to indicate in tender returnable on T2.2-18], [**Breach of Law**] whether or not they have been found guilty of a serious breach of law during the past 5 [five] years.
 - 4.13. Transnet reserves the right to perform a risk analysis on the preferred tenderer to ascertain if any of the following might present an unacceptable commercial risk to the employer:
 - *unduly high or unduly low tendered rates or amounts in the tender offer;*
 - *contract data of contract provided by the tenderer; or*
 - *the contents of the tender returnables which are to be included in the contract.*
5. Transnet will not reimburse any Tenderer for any preparatory costs or other work performed in connection with this Tender, whether or not the Tenderer is awarded a contract.

6. NATIONAL TREASURY’S CENTRAL SUPPLIER DATABASE

Tenderer are required to self-register on National Treasury’s Central Supplier Database (CSD) which has been established to centrally administer supplier information for all organs of state and facilitate the verification of certain key supplier information. The CSD can be accessed at <https://secure.csd.gov.za/>. Tenderer are required to provide the following to Transnet in order to enable it to verify information on the CSD:

Supplier Number:

M	A	A	A																
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and

Unique registration reference number

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

<p style="text-align: center;">Transnet urges its clients, suppliers and the general public to report any fraud or corruption to TIP-OFFS ANONYMOUS: 0800 003 056 OR Transnet@tip-offs.com</p>
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T1.2

TENDER DATA

T1.2 TENDER DATA

The conditions of tender are the Standard Conditions of Tender as contained in Annex C of the CIDB Standard for Uniformity in Engineering and Construction Works Contracts. Board Notice 423 of 2019 in Government Gazette No 42622 of 8 August 2019 (see www.cidb.org.za).

The Standard Conditions of Tender make several references to Tender data for detail that apply specifically to this tender. The Tender Data shall have precedence in the interpretation of any ambiguity or inconsistency between it and the Standard Conditions of Tender.

Each item of data given below is cross-referenced in the left-hand column to the clause in the Standard Conditions of Tender to which it mainly applies.

Clause	Data
C.1.1	<p>The <i>Employer</i> is</p> <p>Transnet SOC Ltd (Reg No. 1990/000900/30) Transnet's Supply Chain Management Policy, in conjunction with Transnet's Preferential Procurement Policy will be applicable to this tender.</p>
C.1.2	<p>The tender documents issued by the <i>Employer</i> comprise:</p> <p>Part T: The Tender</p> <p>Part T1: Tendering procedures T1.1 Tender notice and invitation to tender T1.2 Tender data</p> <p>Part T2: Returnable documents T2.1 List of returnable documents T2.2 Returnable schedules</p> <p>Part C: The contract</p> <p>Part C1: Agreements and contract data C1.1 Form of offer and acceptance C1.2 Contract data (Part 1 & 2)</p> <p>Part C2: Pricing data C2.1 Pricing instructions C2.2 Bill of Quantities</p> <p>Part C3: Scope of work C3.1 Works Information</p> <p>Part C4: Site information C4.1 Site information</p>
C.1.3	<p>Interpretation</p>
C.1.3.3	<p>For the purposes of these conditions of tender, the following definitions apply:</p>

- **bidder** - The cidb prescripts use the terms “tender” and “tenderer” in preference to “bid” and “bidder”. For ease of reference, Transnet has kept the word “bid” in most documents instead of “Tender”. In some parts of this RFP, the term bidder is used. The words tenderer and bidder are used inter-changeably. Similarly, the terms ‘bid’ and ‘tender’ or ‘tenderer’ and ‘bidder’ and their derivatives are meant to have the same meaning in the context they are used.
- **call off** – a call off is just another way of ‘placing an order’ from framework contractors. A call off contract is an individual contract that falls under a framework agreement.
- **equalization of rates or prices** – means the determination of a median or the averaging of rates, prices or costs of activities, items or work in the Bill of Quantities submitted by bidders. This exercise is done by only considering compliant tenders submitted, and excluding outliers in the determination since they tend distort the calculation. How this is applied is explained in this example: Let us say, there are 11 compliant tenders with the following prices (for example, the laying of precast concrete beam): Tenderer 1 submits a rate = R8 000, Tenderer 2 = R9 000, Tenderer 3 = R11 000, Tenderer 4 = R13 000, Tenderer 5 = R14 000, Tenderer 5 = R16 000, Tenderer 6 = R17 000, Tenderer 6 = R18 000, Tenderer 7 = R20 000, Tenderer 8 = R21 000 and Tenderer 9 = R25 000. For purposes of calculation of the average prices, rates or cost, the two lowest rates/prices – Tenderer 1 = R8 000 and Tenderer 2 = R9 000 – and the two highest – Tenderer 8 = R21 000 and Tenderer 9 = R25 000 – are set aside (excluded). Averaging or equalizing these prices would then mean adding all the rates or prices of the compliant bids (Tenderer 3 to Tenderer 7) and dividing them by the number of compliant tenderers. The equalized rate or price will therefore be R15 571. In conclusion, TNPA will then communicate with all recommended tenderers (including the four which are outliers, if they are part of the recommended tenders) to confirm the correctness of the equalized rate or price per item or activity, and also solicit whether these tenderers accept the equalized rate or price to be used for purposes of a framework contract or not . For ease of reference, Transnet has kept the word “Averaging of rates or prices” in the document instead of “Equalization of rates or prices”, and these words are used interchangeably.



- **framework agreement:** “An agreement between an employer and one or more contractors, the purpose of which is to establish the terms governing orders to be awarded during a given period, in particular with regard to price and, where appropriate, the quantity envisaged” (SANS/ISO 10845-1:2015). For ease of reference, Transnet has used the word “Framework Contract” in the document instead of “Framework Agreement”, and where each appears in the RFP, it would carry the same meaning and both words are used inter-changeably.
- **mini – competition or multi bidding** in this document means a tender competition between the Service Providers in the Framework contract conducted in accordance with Transnet policies; it means an invitation to submit a Quotation or Proposal issued by the TNPA pursuant to fulfilment of scope of works.
- **respondent** - In some parts of this RFP, the word ‘respondent’ is used to describe service providers participating in this tender. The words ‘respondent’, ‘tenderer’ and ‘bidder’ have the same meaning and are used inter-changeably.
- **RFQ** – Request for Quotation. A request for price offers from contractors in the framework contract.
- **task-order** contract means a contract for services that does not procure or specify a firm quantity of services (other than a minimum or maximum quantity) and that provides for the issuance of orders for the performance of tasks during the period of the contract.

C.1.4	The Employer’s agent is:	Senior Procurement Specialist
	Name:	Siphiwo Qangani
	Address:	eMendi Building N2 Neptune Road Off Klub Road, Port of Ngqura Port Elizabeth 6100
	E – mail	TNPATenderenquiries3@transnet.net

C.2.1 Only those tenderers who satisfy the following eligibility criteria are eligible to submit tenders:
Stage One - Eligibility criteria

1. Eligibility in terms of the Construction Industry Development Board:

-
- a) Only those tenderers who are registered with the cidb, or are capable of being so prior to the evaluation of submissions, in a contractor grading designation equal to or higher than a contractor grading designation determined in accordance with the sum tendered or a value determined in accordance with Regulation(s) 25(1A), 25 (1B) or 25(7A) of the Construction Industry Development Regulations, designation of **4CE or higher** class of construction work, are eligible to have their tenders evaluated.
- b) **Joint Ventures (JV)**
Joint ventures are eligible to submit tenders subject to the following:
1. every member of the joint venture is registered with the **cidb**;
 2. the lead partner has a contractor grading designation of not lower than one level below the required class of construction works under consideration and possesses the required recognition status; and
 3. the combined Contractor grading designation calculated in accordance with the Construction Industry Development Regulations is equal to or higher than a Contractor grading designation determined in accordance with the sum tendered for a **4CE or higher** class of construction work or a value determined in accordance with Regulation(s) 25(1A), 25(1B) or 25(7A) of the Construction Industry Development Regulations
- The tenderer shall provide a copy of its signed joint venture agreement.
- c) Is registered in terms of the Companies Act, 2008 (Act 71 of 2008) or Close Corporation Act, 1984, (Act No. 69 of 1984) or, if a partnership, has a partnership agreement (buy and sell agreement for participating partners in this tender) in place that enables the partnership to automatically continue to function in the event of death or withdrawal of one of the partners.
- d) Tenderers which possess the cidb Grade level 7 or higher are only allowed to submit in one framework contract per class of work in a region. That is, a cidb Grade level 7, 8 or 9 contractor may elect to participate only in the cidb level 4-6 framework contract or cidb level 7-9 framework contract. Not in both. The tenderer may however participate in other regions in another cidb level, as per tender requirements.

Any tenderer that fails to meet the stipulated eligibility criteria will be regarded as an unacceptable tender.

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- C.2.7 A non-compulsory RFP briefing will be conducted via Microsoft Teams on **03 May 2024 at 10h00** for a period of ± 2 hours. A second briefing session for tenderers which did not make it in the morning session will take place in the same day, **03 April 2024**, starting **from 15h00 to 17h00**.

The briefing session will start punctually, and information will not be repeated for the benefit of Respondents joining late. Tenderers must join the briefing meeting session via this Microsoft Teams link (next). Join the 10:00am session. If you are using a computer or laptop device, press the **CTRL** button, and hold and click over the "join the meeting now" bold names next, and if you are using a smartphone, click on the "Join the Meeting now" bold words below: [**Join the meeting now**](#)

OR

Use the Meeting ID address:

Meeting ID: **378 777 573 21**

Passcode: **EQS7ci**

Join the **15h00** session on the link below. If you are using a computer, press **Ctrl** button and hold and click over the "join the meeting now" below. If you are using a smartphone, click on the "Join the Meeting now" bold words below:

[Join the meeting now](#)

OR

Use the Meeting ID address:

Meeting ID: **360 091 703 207**

Passcode: **2cyEH6**

Despite the briefing session being non-compulsory, Transnet nevertheless encourages all Respondents to attend. Transnet will not be held responsible for any Respondent who did not attend the **non-compulsory** session and subsequently feels disadvantaged as a result thereof.

Any addenda to the RFP or clarifications will be published on the e-tender portal and Transnet website. Bidders are required to check the e-tender portal or Transnet website prior to finalising their bid submissions for any changes or clarifications to the RFP.

C.2.10 Pricing the tender offer

- Include in the rates, prices, and the tendered total of the prices (if any) all duties, taxes except Value Added Tax (VAT), and other levies payable by the successful tenderer, such duties, taxes and levies being those applicable fourteen (14) days before the closing time stated in the tender data.
- Show VAT payable by the employer separately as an addition to the tendered total of the prices.
- Provide rates and prices that are fixed for the duration of the contract, which will be adjusted in line with annual inflation as detailed in the Pricing Instructions and conditions of contract identified in the contract data.
- Bill of Quantities covering the broad scope of work is attached. The Tenderer is expected to price each item provided, except where instructed otherwise. The rates provided by the tenderer will be verified for their reasonableness. Transnet reserves the right to adjust the final prices once the tenderer has been found to have complied with all other tender conditions.
- Tenderers must take note that there is a possibility that some items, activities, line items or descriptions (i.e., items of the Scope of work) may appear in more than one section of the Bill of Quantities (BoQ), tenderers will be expected to price each item of the BoQ. In the event the tenderer submits a rate or price



which differs from the other for the same item, TNPA will consider the rate or price of the tenderer which is the lowest. That price, cost or rate will be one used for purposes of establishing a framework contract

- Transnet also reserves the right to balance the rates and prices offered for any activity by compiling an averaged set of common rates and/ or prices (equalizing of prices) that would apply across the board to all the Service providers for that region and Type of works or services during the execution of this framework.
- If Transnet opts to execute the aforementioned right, tenderers will be provided an opportunity to accept or reject the calculated average (equalized) price and provide own rates or prices, on condition that the offer is not above market related rates for any type of service or works selected. Tenderer(s) who reject(s) the calculated average (equalized) price or who refuse to have their rates lowered through negotiations may not be included on this framework contract.
- There will be contract price adjustment (CPA) / escalation of prices, once a year, on the anniversary of the framework contract.
- There are no designs accompanying this RFP, the scope of works and Bill of Quantities provided is largely based on historical information and anticipated future demands.

C.2.12 No alternative tender offers will be considered.

C.2.13.3 Each tender offer shall be in the **English Language**.

C.2.13.5 The *Employer's* details and identification details that are to be shown on each tender offer are as follows:

C2.15.1

The tender documents must be uploaded with:

- **Name of Tenderer:**
- **Contact person and details:**
.....

The Tender Number: TNPA/2024/04/0009/61844/RFP

The Tender Description: FRAMEWORK CONTRACTS FOR CIVIL ENGINEERING WORKS IN VARIOUS TNPA PREMISES – EASTERN REGION - (3 YEARS)

Documents must be marked for the attention of: **Employer's Agent: Sipiwo Qangani**

C.2.13.9 Telephonic, telegraphic, facsimile or e-mailed tender offers will not be accepted.

C.2.15 The closing time for submission of tender offers is:
Time: **16H00** on the **16 May 2024**.
Location: The Transnet e-Tender Submission Portal:
(<https://transnetetenders.azurewebsites.net>);

NO LATE TENDERS WILL BE ACCEPTED

C.2.16 The tender offer validity period is **12 weeks** after the closing date. Tenderers are to note that they may be requested to extend the validity period of their tender, on the same terms and conditions, if Transnet’s internal evaluation and governance approval processes has not been finalised within the validity period.

- C.2.23 The tenderer is required to submit with his tender:
1. A valid Tax Clearance Certificate issued by the South African Revenue Services and/or **Tenderers also to provide Transnet with a TCS PIN to verify Tenderers compliance status.**
 2. A **valid B-BBEE Certificate** issued in terms of the amended Construction Sector Codes (CSC000) from a Verification Agency accredited by the South African Accreditation System [**SANAS**]. The certificate must bear a visible logo and description of “SANAS” and an “amended Construction Sector Codes” (CSC000) description to score B-BBEE points. In the case of a Joint Venture, a consolidated valid B-BBEE certificate prepared as such must be submitted; or a **sworn affidavit** confirming annual turnover and level of black ownership in case of all EMEs and QSEs with 51% black ownership or more must be submitted with the tender;
 3. Proof of registration with **cidb** in the correct designated grading;
 4. Proof of registration on the Central Supplier Database;
 5. Other Returnable Documents listed in T2.2 (fully completed and signed)

C3.11 **Stage Two: Test for Administrative Responsiveness**

The test for administrative responsiveness will include the following:

Administrative responsiveness check	RFP Reference
<ul style="list-style-type: none"> • Whether the Bid has been lodged on time 	<i>All sections</i>
<ul style="list-style-type: none"> • Whether all Returnable Documents and/or schedules were completed and returned by the closing date and time 	<i>All sections</i>
<ul style="list-style-type: none"> • Verify the validity of all returnable documents 	<i>All sections</i>
<ul style="list-style-type: none"> • Verify if the Bid document has been duly signed by the authorised respondent 	<i>All sections</i>

Stage Three: Test for Substantive Responsiveness to RFP

The test for substantive responsiveness to this RFP will include the following:

Check for substantive responsiveness	RFP Reference
<ul style="list-style-type: none">Whether the tender contains completed and signed form of offer and acceptance and Bill of Quantities	<i>C.2.1 & C.2.2</i>

The test for substantive responsiveness [Step Three] must be passed for a Respondent's proposal to progress to Step Four for further evaluation

Stage Four: Functionality criteria

Tenderers should note that this tender forms part of a batch projects (framework contracts) in three separate regions and also in three classes of works going out during the same period. Therefore, any interested tenderer submitting its proposal or tender in all or some of the regions and in more than one class of work, **each tender submission should contain unique resources to address the functionality requirements of each tender** (region).

If a tenderer is found to have submitted the same resources in all classes of work (i.e. in current batch of projects) or in the same class but in other regions, no points will be allocated for that particular resource(s) or criteria in other two classes of works. A tenderer would have to indicate which class of work or region must be considered by Transnet.

The minimum number of evaluation points for functionality is: **60**.

Only those tenderers who attain the minimum number of evaluation points (60 points) for Functionality will be eligible to proceed for further evaluation. Failure to meet the minimum threshold (60 points) will result in the tender being disqualified and removed from any further consideration.

Functionality Criteria

The functionality criteria and maximum score in respect of each of the criteria are as follows:



Evaluation Schedules	Maximum number of points
T2.2-02: Previous Experience of the company.	30
T2.2-03: Experience and Qualifications of key personnel	40
T2.2-04: Plant and Machinery	10
T2.2-05: Access to credit or proof of financial resources	15
T2.2-06: Environmental management	5
Maximum score for functionality	100



The criteria and sub criterion are broken down as follows:

Functionality criteria	Sub-criteria and Sub-criteria points	Max. No. of points
<p>1. PREVIOUS EXPERIENCE*</p>	<p>EXPERIENCE OF TENDERER - 30 POINTS.</p> <p><u>1. Number of Projects completed:</u></p> <p>Experience in having successfully completed construction, maintenance, repairs, replacement and/or rehabilitation of surfaced roads related works: <u>15 points</u></p> <p>Points allocated as follows:</p> <ul style="list-style-type: none"> a) 0 or 1 project or no information or no information or information not as per requirements = 0 point b) 2 projects = 3 points c) 3 projects = 6 points d) 4 projects = 9 points e) 5 projects = 12 points f) 6 projects or more = 15 points <p><u>2. Completed Projects with the highest value,</u></p> <p>Projects with Highest value completed in the construction, maintenance, repairs, replacement and/or rehabilitation of surfaced roads and related works: <u>15 points</u></p> <p>Points allocated as follows:</p> <ul style="list-style-type: none"> a) No project, or No project value or insufficient information = 0 point b) < R3m = 3 points c) ≥ R 3m but < R4m = 6 points d) ≥ R 4m but < R6m = 9 Points e) ≥ R 6m but <R 10m = 12 Points f) ≥ R 10m and above = 15 points 	<p>30</p>

<p>2. EXPERIENCE AND QUALIFICATIONS OF KEY PERSONNEL:</p>	<p>EXPERIENCE AND QUALIFICATIONS OF KEY PERSONNEL - 40 POINTS.</p> <p>Construction Manager x 1 – 10 points</p> <p>1.1 Professional Registration and Qualifications <u>To score the points illustrated below, the Construction Manager must have academic qualifications and professional registration:</u></p> <ul style="list-style-type: none"> a) Diploma, Degree or B Tech at minimum NQF Level 7 in Construction/ Project Management or Civil Engineering b) Professional Registered (Pr. CM or Pr. CPM or Pr. Eng or Pr. Tech Eng) c) The registration must be with SACPCMP and/or ECSA and the bidder must attach proof of registration or a professional registration number. <p>Registrations in a “Candidate” category will not be considered.</p> <p>1.2 Years of service – Construction Manager Number of years of experience in construction, maintenance, repair and operation of surfaced roads and related works with the responsibility of overseeing roads related works. The scores will be averaged. 10 points Points allocated as follows:</p> <ul style="list-style-type: none"> a) < 5 years = 0 point b) ≥ 5 years but < 7 years = 2 points c) ≥ 7 years but < 10 years = 4 points d) ≥ 10 years but < 15 years = 6 points e) ≥ 15 years but < 20 years = 8 points f) ≥ 20 years = 10 points <p>1.3 Site management – 10 Points (combined) a) Site Agent X 1 – 6 points Site Agent should have more than 15 years of experience in relevant large / complex surfaced roads and related works. The Site Agent must possess at least a National Diploma (NQF Level 6) qualification or Trade Test certificate and necessary</p>	<p>40</p>
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	<p>experience.</p> <p>Points allocated as follows:</p> <ul style="list-style-type: none">a) No qualifications in built environment = 0 pointb) At least Trade Test certificate in built environment = 1.2 pointsc) At least NQF Level 6 qualification in built environment = 2.4 pointsd) At least NQF Level 7 qualification in built environment = 3.6 pointse) At least two NQF Level 7 Qualifications in built environment = 4.8 pointsf) NQF Level 8 qualification or higher in built environment = 6 points <p>b) <u>Site Foremen x 2 – 4 points (2 each)</u></p> <p>Site Foremen should have more than 10 years of experience in relevant large / complex surfaced roads and related works. Qualification preferred but not compulsory if the incumbent can demonstrate that she/he has developed the necessary competence through experience.</p> <p>Points allocated as follows:</p> <ul style="list-style-type: none">a) No experience = 0 pointb) Provided at least one Site foreman = 0,8 pointsc) Provided two Site foremen = 1.6 pointsd) Provided two Site foremen, one with an NQF Level 6 qualifications in built environment or Trade Test certificate = 2.4 pointse) Provided two Site foremen, both with at least Trade Test certificates = 3.2 pointsf) Provided two Site foremen, both in possession of at least NQF Level 6 qualifications in built environment = 4 points <p>c) Quality Officer – 5 Points</p> <p>A detailed CV of a Quality Officer supplemented by a Diploma in Quality Management or Advanced Diploma in Quality or Degree in Quality Management or a minimum of an NQF Level 6 qualification in the Built Environment and ISO 9001:2015 Quality Management System training</p>	
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	<p>certificates (Implementation of QMS and Internal Auditing). The Quality Officer MUST have a minimum of 3 years' responsible for quality management in civil engineering works.</p> <p>i) Qualifications (3 Points)-</p> <p>Points / scoring broken down as follows:</p> <ul style="list-style-type: none"> a) No submission or Submitted information not as per requirements – 0 point b) Resource has submitted Quality related certificate not ISO 9001 or informal training in Quality Management related – 0.6 points c) Resource has ISO 9001:2015 QMS Implementation Certificate - 1.2 points. d) Resource has a Diploma in Quality Management or Advanced Diploma in Quality or Degree in Quality Management or a minimum of an NQF Level 6 qualification in the Built Environment - 1.8 points. e) Resource has a Diploma in Quality Management or Advanced Diploma in Quality or Degree in Quality Management or a minimum of an NQF Level 6 qualification in the Built Environment with ISO 9001:2015 QMS Implementation Certificate. - 2.4 points f) Resource has a Diploma in Quality Management or Advanced Diploma in Quality or Degree in Quality Management or a minimum of an NQF Level 6 qualification in the Built Environment with ISO 9001:2015 QMS Auditing Certificate - 3 points. <p>ii) Experience (2 Points) –</p> <p>Points / scoring broken down as follows:</p> <ul style="list-style-type: none"> a) No submission or information submitted not as per requirements - 0 point b) Experience provided is on the built environment, but not in the scope related to this tender – 0.4 points. c) Less than 3 years of working experience responsible for quality management in the civil engineering works. – 0.8. points d) From 3 years but less than 5 of working experience responsible for quality management in the civil engineering works. - 1.2 points 	
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	<p>e) from 5 years but less than 10 years' of working experience responsible for quality management in the civil engineering works. - 1.6 points</p> <p>f) from 10 years and above of working experience responsible for quality management in the civil engineering works. - 2 points</p> <p>d) Health and Safety officer (5)-</p> <p>A detailed CV of a Health and Safety Officer with valid proof of registration with SACPCMP as a Construction Health and Safety Officer. A minimum of an NQF Level 6 (National Diploma) in Safety Management or Environmental Health or equivalent is required together with formal training certificates relating to incident investigation, hazard identification and risk assessment (HIRA), Legal Liability (but not limited). The Health and Safety Officer MUST have a construction health and safety experience relevant to the scope of works in this tender.</p> <p>Registrations in a "Candidate" category will not be considered.</p> <p>i) Qualifications (3 Points)-</p> <p>Points / scoring broken down as follows:</p> <p>a) No submission, No proof of valid SACPCMP registration. – 0 point</p> <p>b) Valid proof of registration with SACPCMP and qualification not relevant to health and safety. – 0.6 points</p> <p>c) Valid proof of registration with SACPCMP. SAMTRAC/NEBOSH certificate with relevant health and safety training certificates (incident investigation, HIRA, Legal Liability)- 1.2 points</p> <p>d) Valid proof of registration with SACPCMP and National Diploma (NQF Level 6 qualification) in Safety Management/Environmental Health or equivalent. - 1.8 points</p> <p>e) Valid proof of registration with SACPCMP and B-Tech (or NQF Level 7 qualification) in Safety Management/Environmental Health or equivalent – 2.4 points</p> <p>f) Valid proof of registration with SACPCMP. B-Tech (or NQF Level 7 Qualification) in Safety Management /Environmental Health or equivalent qualification. In addition, SAMTRAC/NEBOSH certificate with relevant health and safety training certificates (incident</p>	
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	<p>investigation, HIRA, Legal Liability, Fall protection plan developer) – 3 points</p> <p>ii) Experience (2 Points)-</p> <p>Points / scoring broken down as follows:</p> <ul style="list-style-type: none">a) No submission, information not available to determine experience. – 0 pointb) Three (3) years or less health and safety working experience in the construction environment - 0.4 pointsc) More than three (3) years but less than 5 years health and safety working experience in the construction environment. - 0.8 pointsd) Five (5) years health and safety working experience in the construction environment. - 1.2 pointse) More than five (5) years but less than seven (7) years' health and safety working experience in the construction environment. – 1.6 pointsf) Seven (7) years' or more health and safety working experience in the construction environment - 2 points	
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<p>3. PLANT, MACHINERY AND EQUIPMENT*</p>	<p>PLANT AND EQUIPMENT – 10 POINTS</p> <p>The tenderer should indicate the presence of necessary plant and machinery to execute any work allocated to it, by submitting the described resources below. Points / scoring broken down as follows:</p> <ul style="list-style-type: none"> a) No information, machinery or plant submitted is not as per the list below - 0 Point b) TLB. 1 required – 2 Points c) Excavator 20 tons. 1 required= 2 points d) Compactor or similar type pedestrian roller – 2 required (1 point: 0.5 points for each) e) Bulldozer - 20 Tons or more. 1 required – 1 point f) Tipper truck (10m3) – 1 required – 2 points g) Dumper Trucks. 1 required – 1 point h) Watercart – 1 required – 1 point <p>Points for plant and equipment will only be allocated if;</p> <ol style="list-style-type: none"> 1. In case where plant is owned by the Tenderer, Proof of ownership must be in the form of a license disc or certificate of ownership as per e-Natis requirements in the name of the company or directors must be attached. 2. In case where the plant is to be hired by the Tenderer, a letter from a Plant Hire Company addressed to the tenderer with reference to this project clearly indicating the list of plant to be hired and made available must be attached. 	<p>10</p>
<p>4. PROOF OF FINANCIAL RESOURCES OR ACCESS TO CREDIT*</p>	<p>ACCESS TO CREDIT OR PROOF OF FINANCIAL RESOURCES – 15 POINTS</p> <p>Breakdown of Points:</p> <p>Resources available to the bidder showing that there is proof of available credit to source all necessary material and equipment to start and conclude the project (it must be specific to this tender. Points / scoring broken down as follows:</p> <ul style="list-style-type: none"> • No information, financial resources or credit less than R100 000, or information is not as per the tender requirements = 0 Point • Available credit or proof of financial resources with an amount above R100 000 but less than R200 000 = 3 Points 	<p>15</p>



	<ul style="list-style-type: none"> • Available credit or proof of financial resources with an amount from R200 000 but less than R600 000 = 6 Points • Available credit or proof of financial resources with an amount from R600 000 but less than R800 000= 9 Points • Available credit or proof of financial resources with an amount from R800 000 but less than R1000 000 = 12 Points • Available credit or proof of financial resources with an amount R1000 000 and above = 15 Points 	
5. ENVIRONMENTAL MANAGEMENT	<p>Points / scoring broken down as follows:</p> <ul style="list-style-type: none"> • Environmental Management Plan (EMP) – 1 point • Organogram -CV and Qualifications (Masters Degree in Natural Science or Environment Management) -1 point • Organogram - CV and Previous Experience (Years of Experience = above 8 years -2 points • List of projects where environmental duties relating to projects of same or similar scope to be undertaken -1 point 	5
Maximum possible score for Functionality		100

** **Note:** In the event the tenderer augments or supplements his or her experience and resources by another company's experience and/or resources (to meet one or more set criteria), a signed Partnership/Joint Venture/ Consortium agreement must be attached. The tenderer **MUST** package that proof of experience and/or resources accordingly for purpose of evaluation. Tenderers must take note of and comply with clause 4.5.3 of cidb's Standard for Uniformity for Engineering and Construction Procurement August 2019.*

Schedules to be used to access the adequacy of information provided are attached and form part of this RFP. These are:

- **T2.2.-02** Previous Experience
- **T2.2.-03** Experience and Qualifications of Key Personnel
- **T2.2.-04** Plant, Machinery and Equipment
- **T2.2.-05** Proof of financial Resources or Access to credit
- **T2.2.-06** Environmental Management

Each evaluation criteria (Schedule(s) T2.2-02, T2.2-03, T2.2-04, T2.2.-05 and T2.2-06) will be assessed in terms of scores of 0, 20, 40, 60, 80 or 100

The scores of each of the evaluators will be averaged, weighted and then totaled to obtain the final score for functionality, unless scored collectively. (See **cidb** Inform Practice Note #9).

Note: Any tender not complying with the above-mentioned requirements, will be regarded as non-responsive and will therefore not be considered for further evaluation. This note must be read in conjunction with Clause C.2.1.

C.3.11. Stage Five: Price and Preference

Only tenders that achieve the minimum qualifying score of 60 points for functionality will be evaluated further in accordance with the 80/20 preference points systems as described in Preferential Procurement Regulations.

Evaluation Criteria	Final Weighted Scores
Price	80
Specific goals - Scorecard	20
TOTAL SCORE:	100

Up to 20 tender evaluation preference points will be awarded to tenderers who complete the preferencing schedule and who are found to be eligible for the preference claimed. Tender will be evaluated on the 80/20 preference point system, as the value of the tender is below R50 000 000.

Should the evidence required for any of the Specific Goals applicable in this tender not be provided, a tenderer will score zero preference points for that particular “Specific Goal”.

In terms of Transnet Preferential Procurement Policy (TPPP) and Procurement Manuals, the following preference points must be awarded to a bidder who provides the relevant required evidence for claiming points.

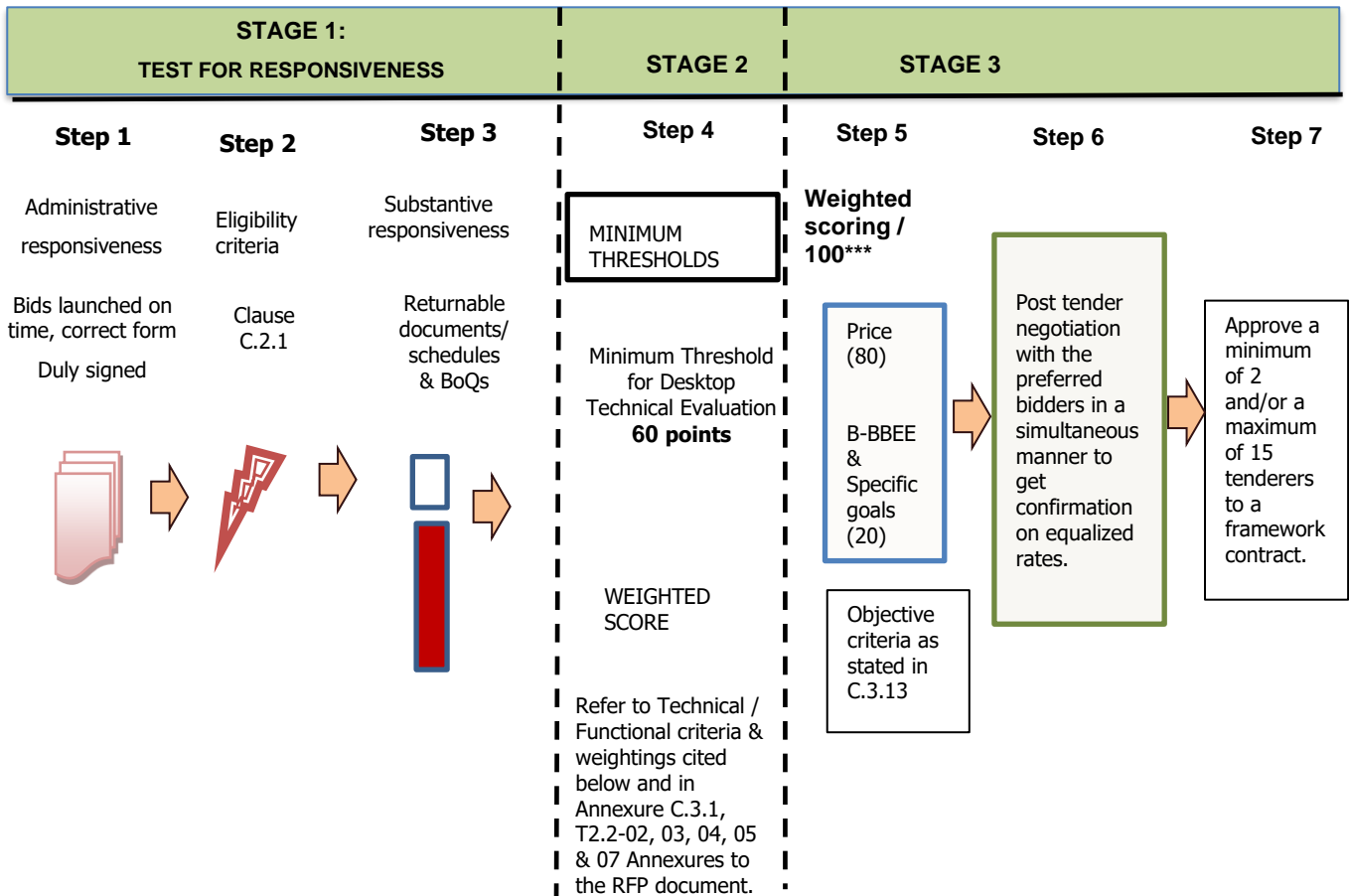
B-BBEE Status Level of Contributor 1 or 2	04.00
The promotion of enterprises located in the KwaZulu Natal province for work to be done or services to be rendered within this province	16.00
Non-Compliant and/or B-BBEE Level 3-8 contributors	0
Total for Specific Goals	20

Note: Transnet reserves the right to carry out an independent audit of the tenderers scorecard components at any stage from the date of close of the tenders until completion of the contract. **The following Table represents the evidence to be submitted for claiming preference points for applicable specific goals in a particular tender:**



Specific Goals	Acceptable Evidence
B-BBEE Status Level of Contributor 1 or 2	<p>A valid B-BBEE Certificate issued in terms of the Construction Sector Codes (CSC000) from a Verification Agency accredited by the South African Accreditation System [SANAS] / Sworn-Affidavit B-BBEE Certificate as per DTIC guidelines;</p> <p>In case of JV, a consolidated scorecard will be accepted as per DTIC guidelines.</p> <p>In case of EMEs and QSEs with 51% black ownership or more, a sworn affidavit confirming annual turnover and level of black ownership must be submitted with the tender. Complete Annexure C or Annexure D affidavit form / template attached in this RFP.</p>
The promotion of enterprises located in the KwaZulu Natal province for work to be done or services to be rendered within this province	<ul style="list-style-type: none"> • CIPC Registration Documents, or • Proof of registered address of the entity (e.g., Municipality or Eskom Letter, Business accounts, Levy Statement, etc.)

C.3.11 The evaluation process illustrated in a diagrammatic form:



C.3.11. The minimum number of contractors in the framework contract will be **two (2)** and the maximum number **will not exceed fifteen (15) contractors**.

TNPA will only consider the Top fifteen (15) most responsive tenderers (with highest points scored) in the points allocation for consideration / admission to the Framework Contract list in each region. Should the minimum number not be met, the tender process will be cancelled.

In the event of a tie (i.e. two tenders scoring an equal number of total points), the tenderer who scored the highest points for specific goals will be considered for inclusion in the framework contract.

Where two or more tenderers score equal total points in all respects the award will be decided by drawing of lots.

In respect of admission to the Framework Contracts, the above deadlock breaking mechanism will be implemented in respect of the 15th ranked bidder(s).

Transnet will publish the outcome of this RFP in the National Treasury e-tender portal and Transnet website within 10 days after the list has been approved. Respondents are required to check the National Treasury e-tender Portal and Transnet website for the results of the tender process. All unsuccessful bidders have a right to request Transnet to furnish individual reasons for their bid not being successful. This requested must be directed to the contact person stated in the SBD 1 form and tender data clause C.1.4.

Other divisions of Transnet and other Organs of state may make use of this framework contract, upon request and acceptance by each TNPA and the tenderer(s) concerned.

C.3.13 Tender offers will only be accepted if:

- a) The tenderer or any of its directors/shareholders is not listed on the Register of Tender Defaulters in terms of the Prevention and Combating of Corrupt Activities Act of 2004 as a person prohibited from doing business with the public sector;
- b) the tenderer does not appear on Transnet's list for restricted tenderers and National Treasury's list of Tender Defaulters;
- c) is not under restrictions, or has principals who are under restrictions, preventing participating in the employer's procurement,
- d) the tenderer has fully and properly completed the Compulsory Enterprise Questionnaire and there are no conflicts of interest which may impact on the tenderer's ability to perform the contract in the best interests of the Employer or potentially compromise the tender process and persons in the employ of the state.
- e) The tenderer submits a fully and properly completed Form of Offer and Acceptance and the Bill of Quantities or Pricing Schedule.
- f) Transnet reserves the right to award the tender to the tenderer who scores the highest number of points overall, unless there are objective criteria which will justify the award of the tender to another tenderer. Objective criteria include but are not limited to the outcome of a due diligence exercise to be conducted. The due diligence exercise may take the following factors into account inter alia;

the tenderer:

-
- i. is not undergoing a process of being restricted by Transnet or other state institution that Transnet may be aware of,
 - ii. has no legal capacity to enter into the contract,
 - iii. is not insolvent, in receivership, under Business Rescue as provided for in chapter 6 of the Companies Act, 2008, bankrupt or being wound up, has his affairs administered by a court or a judicial officer, has suspended his business activities, or is subject to legal proceedings in respect of any of the foregoing,
 - iv. does not comply with the legal requirements, if any, stated in the tender data and
 - v. is not able, in the option of the employer to perform the contract free of conflicts of interest.
 - vi. is not in good standing with Transnet National Ports Authority due to a poor track record of past performance with Transnet SOC Ltd and or Transnet National Ports Authority;
 - vii. in relation to the proposed contract, a due diligence exercise to validate the bidder's proposal that demonstrate that it possesses the professional and technical qualifications, professional and technical competence, financial resources, equipment and other physical facilities, managerial capability, reliability, experience and reputation, expertise and the personnel, to perform the contract;
 - viii. has clear, uncontrived and/or overwhelming evidence and/or facts that the it has or continues to be in breach of any of the provisions contained in the Integrity Pact (Form T 2.2-20),
 - ix. has had the Probity check undertaken by Transnet National Ports Authority which established the existence of any unmitigated risks which would have a negative impact on the project;
 - x. would have the appointment which would result in a negative impact on Transnet's Return on Investment;
 - xi. has been awarded business previously and the award of this tender will result in inequitable allocation of business, therefore it necessary to rotate Suppliers to promote opportunities for other suppliers;
 - xii. has its members, directors, partners:
 - under restrictions as contemplated in the Integrity Pact (Form T 2.2-20),
 - subject of a process of restriction by Transnet or other state institution that Transnet may be aware of and there is a clear, uncontrived and/or overwhelming evidence and/or facts in relation to the alleged wrongdoing on the basis of which the restriction process has been initiated;

C.3.17 The number of paper copies of the signed contract to be provided by the Employer is 1 (one).

Annex C

Standard Conditions of Tender

C.1 General

C.1.1 Actions

C.1.1.1 The employer and each tenderer submitting a tender offer shall comply with these conditions of tender. In their dealings with each other, they shall discharge their duties and obligations as set out in C.2 and C.3, timeously and with integrity, and behave equitably, honestly and transparently, comply with all legal obligations and not engage in anticompetitive practices.

C.1.1.2 The employer and the tenderer and all their agents and employees involved in the tender process shall avoid conflicts of interest and where a conflict of interest is perceived or known, declare any such conflict of interest, indicating the nature of such conflict. Tenderers shall declare any potential conflict of interest in their tender submissions. Employees, agents and advisors of the employer shall declare any conflict of interest to whoever is responsible for overseeing the procurement process at the start of any deliberations relating to the procurement process or as soon as they become aware of such conflict and abstain from any decisions where such conflict exists or recuse themselves from the procurement process, as appropriate.

Note: 1) A conflict of interest may arise due to a conflict of roles which might provide an incentive for improper acts in some circumstances. A conflict of interest can create an appearance of impropriety that can undermine confidence in the ability of that person to act properly in his or her position even if no improper acts result.

2) Conflicts of interest in respect of those engaged in the procurement process include direct, indirect or family interests in the tender or outcome of the procurement process and any personal bias, inclination, obligation, allegiance or loyalty which would in any way affect any decisions taken.

C.1.1.3 The employer shall not seek and a tenderer shall not submit a tender without having a firm intention and the capacity to proceed with the contract.

C.1.2 Tender Documents

The documents issued by the employer for the purpose of a tender offer are listed in the tender data.

C.1.3 Interpretation

C.1.3.1 The tender data and additional requirements contained in the tender schedules that are included in the returnable documents are deemed to be part of these conditions of tender.

C.1.3.2 These conditions of tender, the tender data and tender schedules which are required for tender evaluation purposes, shall form part of any contract arising from the invitation to tender.

C.1.3.3 For the purposes of these conditions of tender, the following definitions apply:

- a) **conflict of interest** means any situation in which:
 - i) someone in a position of trust has competing professional or personal interests which make it difficult to fulfill his or her duties impartially;
 - ii) an individual or tenderer is in a position to exploit a professional or official capacity in some way for their personal or corporate benefit; or
 - iii) incompatibility or contradictory interests exist between an employee and the tenderer who employs that employee.
- b) **comparative offer** means the price after the factors of a non-firm price and all unconditional discounts it can be utilised to have been taken into consideration;

- c) **corrupt practice** means the offering, giving, receiving or soliciting of anything of value to influence the action of the employer or his staff or agents in the tender process;
- d) **fraudulent practice** means the misrepresentation of the facts in order to influence the tender process or the award of a contract arising from a tender offer to the detriment of the employer, including collusive practices intended to establish prices at artificial levels;

C.1.4 Communication and employer's agent

Each communication between the employer and a tenderer shall be to or from the employer's agent only, and in a form that can be readily read, copied and recorded. Communications shall be in the English language. The employer shall not take any responsibility for non-receipt of communications from or by a tenderer. The name and contact details of the employer's agent are stated in the tender data.

C.1.5 Cancellation and Re-Invitation of Tenders

C.1.5.1 An employer may, prior to the award of the tender, cancel a tender if-

- a) due to changed circumstances, there is no longer a need for the engineering and construction works specified in the invitation;
- b) funds are no longer available to cover the total envisaged expenditure; or
- c) no acceptable tenders are received.
- d) there is a material irregularity in the tender process.

C.1.5.2 The decision to cancel a tender invitation must be published in the same manner in which the original tender invitation was advertised

C.1.5.3 An employer may only with the prior approval of the relevant treasury cancel a tender invitation for the second time.

C.1.6 Procurement procedures

C.1.6.1 General

Unless otherwise stated in the tender data, a contract will, subject to C.3.13, be concluded with the tenderer who in terms of C.3.11 is the highest ranked or the tenderer scoring the highest number of tender evaluation points, as relevant, based on the tender submissions that are received at the closing time for tenders.

C.1.6.2 Competitive negotiation procedure

C.1.6.2.1 Where the tender data require that the competitive negotiation procedure is to be followed, tenderers shall submit tender offers in response to the proposed contract in the first round of submissions. Notwithstanding the requirements of C.3.4, the employer shall announce only the names of the tenderers who make a submission. The requirements of C.8 relating to the material deviations or qualifications which affect the competitive position of tenderers shall not apply.

C.1.6.2.2 All responsive tenderers or at least a minimum of not less than three responsive tenderers that are highest ranked in terms of the evaluation criteria stated in the tender data shall be invited to enter into competitive negotiations based on the principle of equal treatment, keeping confidential the proposed solutions and associated information.

Notwithstanding the provisions of C.2.17, the employer may request that tenders be clarified, specified and fine-tuned in order to improve a tenderer's competitive position provided that such clarification, specification, fine-tuning or additional information does not alter any fundamental aspects of the offers or impose substantial new requirements which restrict or distort competition or have a discriminatory effect.

C.1.6.2.3 At the conclusion of each round of negotiations, tenderers shall be invited by the employer to revise their tender offer based on the same evaluation criteria, with or without adjusted weightings. Tenderers shall be advised when they are to submit their best and final offer.

C.1.6.2.4 The contract shall be awarded in accordance with the provisions of C.3.11 and C.3.13 after tenderers have been requested to submit their best and final offer.

C.1.6.3 Proposal procedure using the two stage-system

C.1.6.3.1 Option 1

Tenderers shall in the first stage submit technical proposals and, if required, cost parameters around which a contract may be negotiated. The employer shall evaluate each responsive submission in terms of the method of evaluation stated in the tender data, and in the second stage negotiate a contract with the tenderer scoring the highest number of evaluation points and award the contract in terms of these conditions of tender.

C.1.6.3.2 Option 2

C.1.6.3.2.1 Tenderers shall submit in the first stage only technical proposals. The employer shall invite all responsive tenderers to submit tender offers in the second stage, following the issuing of procurement documents.

C.1.6.3.2.2 The employer shall evaluate tenders received during the second stage in terms of the method of evaluation stated in the tender data, and award the contract in terms of these conditions of tender.

C.2 Tenderer's obligations

C.2.1 Eligibility

C.2.1.1 Submit a tender offer only if the tenderer satisfies the criteria stated in the tender data and the tenderer, or any of his principals, is not under any restriction to do business with employer.

C.2.1.2 Notify the employer of any proposed material change in the capabilities or formation of the tendering entity (or both) or any other criteria which formed part of the qualifying requirements used by the employer as the basis in a prior process to invite the tenderer to submit a tender offer and obtain the employer's written approval to do so prior to the closing time for tenders.

C.2.2 Cost of tendering

C.2.2.1 Accept that, unless otherwise stated in the tender data, the employer will not compensate the tenderer for any costs incurred in the preparation and submission of a tender offer, including the costs of any testing necessary to demonstrate that aspects of the offer complies with requirements.

C.2.2.2 The cost of the tender documents charged by the employer shall be limited to the actual cost incurred by the employer for printing the documents. Employers must attempt to make available the tender documents on its website so as not to incur any costs pertaining to the printing of the tender documents.

C.2.3 Check documents

Check the tender documents on receipt for completeness and notify the employer of any discrepancy or omission.

C.2.4 Confidentiality and copyright of documents

Treat as confidential all matters arising in connection with the tender. Use and copy the documents issued by the employer only for the purpose of preparing and submitting a tender offer in response to the invitation.

C.2.5 Reference documents

Obtain, as necessary for submitting a tender offer, copies of the latest versions of standards, specifications, conditions of contract and other publications, which are not attached but which are incorporated into the tender documents by reference.

C.2.6 Acknowledge addenda

Acknowledge receipt of addenda to the tender documents, which the employer may issue, and if necessary apply for an extension to the closing time stated in the tender data, in order to take the addenda into account.

C.2.7 Clarification meeting

Attend, where required, a clarification meeting at which tenderers may familiarize themselves with aspects of the proposed work, services or supply and raise questions. Details of the meeting(s) are stated in the tender data.

C.2.8 Seek clarification

Request clarification of the tender documents, if necessary, by notifying the employer at least five (5) working days before the closing time stated in the tender data.

C.2.9 Insurance

Be aware that the extent of insurance to be provided by the employer (if any) might not be for the full cover required in terms of the conditions of contract identified in the contract data. The tenderer is advised to seek qualified advice regarding insurance.

C.2.10 Pricing the tender offer

C.2.10.1 Include in the rates, prices, and the tendered total of the prices (if any) all duties, taxes except Value Added Tax (VAT), and other levies payable by the successful tenderer, such duties, taxes and levies being those applicable fourteen (14) days before the closing time stated in the tender data.

C.2.10.2 Show VAT payable by the employer separately as an addition to the tendered total of the prices.

C.2.10.3 Provide rates and prices that are fixed for the duration of the contract and not subject to adjustment except as provided for in the conditions of contract identified in the contract data.

C.2.10.4 State the rates and prices in Rand unless instructed otherwise in the tender data. The conditions of contract identified in the contract data may provide for part payment in other currencies.

C.2.11 Alterations to documents

Do not make any alterations or additions to the tender documents, except to comply with instructions issued by the employer, or necessary to correct errors made by the tenderer. All signatories to the tender offer shall initial all such alterations.

C.2.12 Alternative tender offers

C.2.12.1 Unless otherwise stated in the tender data, submit alternative tender offers only if a main tender offer, strictly in accordance with all the requirements of the tender documents, is also submitted as well as a schedule that compares the requirements of the tender documents with the alternative requirements that are proposed.

C.2.12.2 Accept that an alternative tender offer must be based only on the criteria stated in the tender data or criteria otherwise acceptable to the employer.

C.2.12.3 An alternative tender offer must only be considered if the main tender offer is the winning tender.

C.2.13 Submitting a tender offer

C.2.13.1 Submit one tender offer only, either as a single tendering entity or as a member in a joint venture to provide the whole of the works identified in the contract data and described in the scope of works, unless stated otherwise in the tender data.

C.2.13.2 Return all returnable documents to the employer after completing them in their entirety, either electronically (if they were issued in electronic format) or by writing legibly in non-erasable ink.

C.2.13.3 Submit the parts of the tender offer communicated on paper as an original plus the number of copies stated in the tender data, with an English translation of any documentation in a language other than English, and the parts communicated electronically in the same format as they were issued by the employer.

C.2.13.4 Sign the original and all copies of the tender offer where required in terms of the tender data. The employer will hold all authorized signatories liable on behalf of the tenderer. Signatories for tenderers proposing to contract as joint ventures shall state which of the signatories is the lead partner whom the employer shall hold liable for the purpose of the tender offer.

C.2.13.5 Seal the original and each copy of the tender offer as separate packages marking the packages as "ORIGINAL" and "COPY". Each package shall state on the outside the employer's address and identification details stated in the tender data, as well as the tenderer's name and contact address.

C.2.13.6 Where a two-envelope system is required in terms of the tender data, place and seal the returnable documents listed in the tender data in an envelope marked "financial proposal" and place the remaining returnable documents in an envelope marked "technical proposal". Each envelope shall state on the outside the employer's address and identification details stated in the tender data, as well as the tenderer's name and contact address.

C.2.13.7 Seal the original tender offer and copy packages together in an outer package that states on the outside only the employer's address and identification details as stated in the tender data.

C.2.13.8 Accept that the employer will not assume any responsibility for the misplacement or premature opening of the tender offer if the outer package is not sealed and marked as stated.

C.2.13.9 Accept that tender offers submitted by facsimile or e-mail will be rejected by the employer, unless stated otherwise in the tender data.

C.2.14 Information and data to be completed in all respects

Accept that tender offers, which do not provide all the data or information requested completely and in the form required, may be regarded by the employer as non-responsive.

C.2.15 Closing time

C.2.15.1 Ensure that the employer receives the tender offer at the address specified in the tender data not later than the closing time stated in the tender data. Accept that proof of posting shall not be accepted as proof of delivery.

C.2.15.2 Accept that, if the employer extends the closing time stated in the tender data for any reason, the requirements of these conditions of tender apply equally to the extended deadline.

C.2.16 Tender offer validity

C.2.16.1 Hold the tender offer(s) valid for acceptance by the employer at any time during the validity period stated in the tender data after the closing time stated in the tender data.

C.2.16.2 If requested by the employer, consider extending the validity period stated in the tender data for an agreed additional period with or without any conditions attached to such extension.

C.2.16.3 Accept that a tender submission that has been submitted to the employer may only be withdrawn or substituted by giving the employer's agent written notice before the closing time for tenders that a tender is to be withdrawn or substituted. If the validity period stated in C.2.16 lapses before the employer evaluating tender, the contractor reserves the right to review the price based on Consumer Price Index (CPI).

C.2.16.4 Where a tender submission is to be substituted, a tenderer must submit a substitute tender in accordance with the requirements of C.2.13 with the packages clearly marked as "SUBSTITUTE".

C.2.17 Clarification of tender offer after submission

Provide clarification of a tender offer in response to a request to do so from the employer during the evaluation of tender offers. This may include providing a breakdown of rates or prices and correction of arithmetical errors by the adjustment of certain rates or item prices (or both). No change in the competitive position of tenderers or substance of the tender offer is sought, offered, or permitted.

Note: *Sub-clause C.2.17 does not preclude the negotiation of the final terms of the contract with a preferred tenderer following a competitive selection process, should the Employer elect to do so.*

C.2.18 Provide other material

C.2.18.1 Provide, on request by the employer, any other material that has a bearing on the tender offer, the tenderer's commercial position (including notarized joint venture agreements), preferencing arrangements, or samples of materials, considered necessary by the employer for the purpose of a full and fair risk assessment.

Should the tenderer not provide the material, or a satisfactory reason as to why it cannot be provided, by the time for submission stated in the employer's request, the employer may regard the tender offer as non-responsive.

C.2.18.2 Dispose of samples of materials provided for evaluation by the employer, where required.

C.2.19 Inspections, tests and analysis

Provide access during working hours to premises for inspections, tests and analysis as provided for in the tender data.

C.2.20 Submit securities, bonds and policies

If requested, submit for the employer's acceptance before formation of the contract, all securities, bonds, guarantees, policies and certificates of insurance required in terms of the conditions of contract identified in the contract data.

C.2.21 Check final draft

Check the final draft of the contract provided by the employer within the time available for the employer to issue the contract.

C.2.22 Return of other tender documents

If so instructed by the employer, return all retained tender documents within twenty-eight (28) days after the expiry of the validity period stated in the tender data.

C.2.23 Certificates

Include in the tender submission or provide the employer with any certificates as stated in the tender data.

C.3 The employer's undertakings

C.3.1 Respond to requests from the tenderer

C.3.1.1 Unless otherwise stated in the tender Data, respond to a request for clarification received up to five (5) working days before the tender closing time stated in the Tender Data and notify all tenderers who collected tender documents.

C.3.1.2 Consider any request to make a material change in the capabilities or formation of the tendering entity (or both) or any other criteria which formed part of the qualifying requirements used to prequalify a tenderer to submit a tender offer in terms of a previous procurement process and deny any such request if as a consequence:

- a) an individual firm, or a joint venture as a whole, or any individual member of the joint venture fails to meet any of the collective or individual qualifying requirements;
- b) the new partners to a joint venture were not prequalified in the first instance, either as individual firms or as another joint venture; or
- c) in the opinion of the Employer, acceptance of the material change would compromise the outcome of the prequalification process.

C.3.2 Issue Addenda

If necessary, issue addenda that may amend or amplify the tender documents to each tenderer during the period from the date that tender documents are available until three (3) working days before the tender closing time stated in the Tender Data. If, as a result a tenderer applies for an extension to the closing time stated in the Tender Data, the Employer may grant such extension and, shall then notify all tenderers who collected tender documents.

C.3.3 Return late tender offers

Return tender offers received after the closing time stated in the Tender Data, unopened, (unless it is necessary to open a tender submission to obtain a forwarding address), to the tenderer concerned.

C.3.4 Opening of tender submissions

C.3.4.1 Unless the two-envelope system is to be followed, open valid tender submissions in the presence of tenderers' agents who choose to attend at the time and place stated in the tender data. Tender submissions for which acceptable reasons for withdrawal have been submitted will not be opened.

C.3.4.2 Announce at the meeting held immediately after the opening of tender submissions, at a venue indicated in the tender data, the name of each tenderer whose tender offer is opened and, where

applicable, the total of his prices, number of points claimed for its BBBEE status level and time for completion for the main tender offer only.

C.3.4.3 Make available the record outlined in C.3.4.2 to all interested persons upon request.

C.3.5 Two-envelope system

C.3.5.1 Where stated in the tender data that a two-envelope system is to be followed, open only the technical proposal of valid tenders in the presence of tenderers' agents who choose to attend at the time and place stated in the tender data and announce the name of each tenderer whose technical proposal is opened.

C.3.5.2 Evaluate functionality of the technical proposals offered by tenderers, then advise tenderers who remain in contention for the award of the contract of the time and place when the financial proposals will be opened. Open only the financial proposals of tenderers, who score in the functionality evaluation more than the minimum number of points for functionality stated in the tender data, and announce the score obtained for the technical proposals and the total price and any points claimed on BBBEE status level. Return unopened financial proposals to tenderers whose technical proposals failed to achieve the minimum number of points for functionality.

C.3.6 Non-disclosure

Not disclose to tenderers, or to any other person not officially concerned with such processes, information relating to the evaluation and comparison of tender offers, the final evaluation price and recommendations for the award of a contract, until after the award of the contract to the successful tenderer.

C.3.7 Grounds for rejection and disqualification

Determine whether there has been any effort by a tenderer to influence the processing of tender offers and instantly disqualify a tenderer (and his tender offer) if it is established that he engaged in corrupt or fraudulent practices.

C.3.8 Test for responsiveness

C.3.8.1 Determine, after opening and before detailed evaluation, whether each tender offer properly received:

- a) complies with the requirements of these Conditions of Tender,
- b) has been properly and fully completed and signed, and
- c) is responsive to the other requirements of the tender documents.

C.3.8.2 A responsive tender is one that conforms to all the terms, conditions, and specifications of the tender documents without material deviation or qualification. A material deviation or qualification is one which, in the Employer's opinion, would:

- a) detrimentally affect the scope, quality, or performance of the works, services or supply identified in the Scope of Work,
- b) significantly change the Employer's or the tenderer's risks and responsibilities under the contract, or
- c) affect the competitive position of other tenderers presenting responsive tenders, if it were to be rectified.

Reject a non-responsive tender offer, and not allow it to be subsequently made responsive by correction or withdrawal of the non-conforming deviation or reservation.

C.3.9 Arithmetical errors, omissions and discrepancies

C.3.9.1 Check responsive tenders for discrepancies between amounts in words and amounts in figures. Where there is a discrepancy between the amounts in figures and the amount in words, the amount in words shall govern.

C.3.9.2 Check the highest ranked tender or tenderer with the highest number of tender evaluation points after the evaluation of tender offers in accordance with C.3.11 for:

- a) the gross misplacement of the decimal point in any unit rate;
- b) omissions made in completing the pricing schedule or bills of quantities; or
- c) arithmetic errors in:
 - (i) line item totals resulting from the product of a unit rate and a quantity in bills of quantities or schedules of prices; or
 - (ii) the summation of the prices.

C.3.9.3 Notify the tenderer of all errors or omissions that are identified in the tender offer and either confirm the tender offer as tendered or accept the corrected total of prices.

C.3.9.4 Where the tenderer elects to confirm the tender offer as tendered, correct the errors as follows:

- a) If bills of quantities or pricing schedules apply and there is an error in the line item total resulting from the product of the unit rate and the quantity, the line item total shall govern and the rate shall be corrected. Where there is an obviously gross misplacement of the decimal point in the unit rate, the line item total as quoted shall govern, and the unit rate shall be corrected.
- b) Where there is an error in the total of the prices either as a result of other corrections required by this checking process or in the tenderer's addition of prices, the total of the prices shall govern and the tenderer will be asked to revise selected item prices (and their rates if bills of quantities apply) to achieve the tendered total of the prices.

C.3.10 Clarification of a tender offer

Obtain clarification from a tenderer on any matter that could give rise to ambiguity in a contract arising from the tender offer.

C.3.11 Evaluation of tender offers

The Standard Conditions of Tender standardize the procurement processes, methods and procedures from the time that tenders are invited to the time that a contract is awarded. They are generic in nature and are made project specific through choices that are made in developing the Tender Data associated with a specific project.

Conditions of tender are by definition the document that establishes a tenderer's obligations in submitting a tender and the employer's undertakings in soliciting and evaluating tender offers. Such conditions establish the rules from the time a tender is advertised to the time that a contract is awarded and require employers to conduct the process of offer and acceptance in terms of a set of standard procedures.

The CIDB Standard Conditions of Tender are based on a procurement system that satisfies the following system requirements:	
Requirement	Qualitative interpretation of goal
Fair	The process of offer and acceptance is conducted impartially without bias, providing simultaneous and timely access to participating parties to the same information.
Equitable	Terms and conditions for performing the work do not unfairly prejudice the interests of the parties.
Transparent	The only grounds for not awarding a contract to a tenderer who satisfies all requirements are restrictions from doing business with the employer, lack of capability or capacity, legal impediments and conflicts of interest.
Competitive	The system provides for appropriate levels of competition to ensure cost effective and best value outcomes.

Cost effective	The processes, procedures and methods are standardized with sufficient flexibility to attain best value outcomes in respect of quality, timing and price, and least resources to effectively manage and control procurement processes.
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The activities associated with evaluating tender offers are as follows:

- a) Open and record tender offers received
- b) Determine whether or not tender offers are complete
- c) Determine whether or not tender offers are responsive
- d) Evaluate tender offers
- e) Determine if there are any grounds for disqualification
- f) Determine acceptability of preferred tenderer
- g) Prepare a tender evaluation report
- h) Confirm the recommendation contained in the tender evaluation report

C.3.11.1 General

The employer must appoint an evaluation panel of not less than three persons conversant with the proposed scope of works to evaluate each responsive tender offer using the tender evaluation methods and associated evaluation criteria and weightings that are specified in the tender data.

C.3.12 Insurance provided by the employer

If requested by the proposed successful tenderer, submit for the tenderer's information the policies and / or certificates of insurance which the conditions of contract identified in the contract data, require the employer to provide.

C.3.13 Acceptance of tender offer

Accept the tender offer; if in the opinion of the employer, it does not present any risk and only if the tenderer:

- a) is not under restrictions, or has principals who are under restrictions, preventing participating in the employer's procurement;
- b) can, as necessary and in relation to the proposed contract, demonstrate that he or she possesses the professional and technical qualifications, professional and technical competence, financial resources, equipment and other physical facilities, managerial capability, reliability, experience and reputation, expertise and the personnel, to perform the contract;
- c) has the legal capacity to enter into the contract;
- d) is not; insolvent, in receivership, under Business Rescue as provided for in chapter 6 of the Companies Act No. 2008, bankrupt or being wound up, has his/her affairs administered by a court or a judicial officer, has suspended his/her business activities or is subject to legal proceedings in respect of any of the foregoing;
- e) complies with the legal requirements, if any, stated in the tender data; and
- f) is able, in the opinion of the employer, to perform the contract free of conflicts of interest.

C.3.14 Prepare contract documents

C.3.14.1 If necessary, revise documents that shall form part of the contract and that were issued by the employer as part of the tender documents to take account of:

- a) addenda issued during the tender period,
- b) inclusion of some of the returnable documents and
- c) other revisions agreed between the employer and the successful tenderer.

C.3.14.2 Complete the schedule of deviations attached to the form of offer and acceptance, if any.

C.3.15 Complete adjudicator's contract

Unless alternative arrangements have been agreed or otherwise provided for in the contract, arrange for both parties to complete formalities for appointing the selected adjudicator at the same time as the main contract is signed.

C.3.16 Registration of the award

An employer must, within twenty-one (21) working days from the date on which a contractor's offer to perform a construction works contract is accepted in writing by the employer, register and publish the award on the cidb Register of Projects.

C.3.17 Provide copies of the contracts

Provide to the successful tenderer the number of copies stated in the Tender Data of the signed copy of the contract as soon as possible after completion and signing of the form of offer and acceptance.

C.3.18 Provide written reasons for actions taken

Provide upon request written reasons to tenderers for any action that is taken in applying these conditions of tender but withhold information which is not in the public interest to be divulged, which is considered to prejudice the legitimate commercial interests of tenderers or might prejudice fair competition between tenderers.

“HOW TO” GUIDE FOR BIDDERS

REGISTER ON ETENDER PORTAL

ACCESS TENDERS

NB: Do not wait for the last minute to register or to upload a tender. Ensure you complete your process at least 1 day (24 hours) before the closing date

TENDERERS TO NOTE WHEN UPLOADING DOCUMENTS TO ONLY USE ALPHA NUMERIC AND NO SPECIAL CHARACTERS TO BE USED

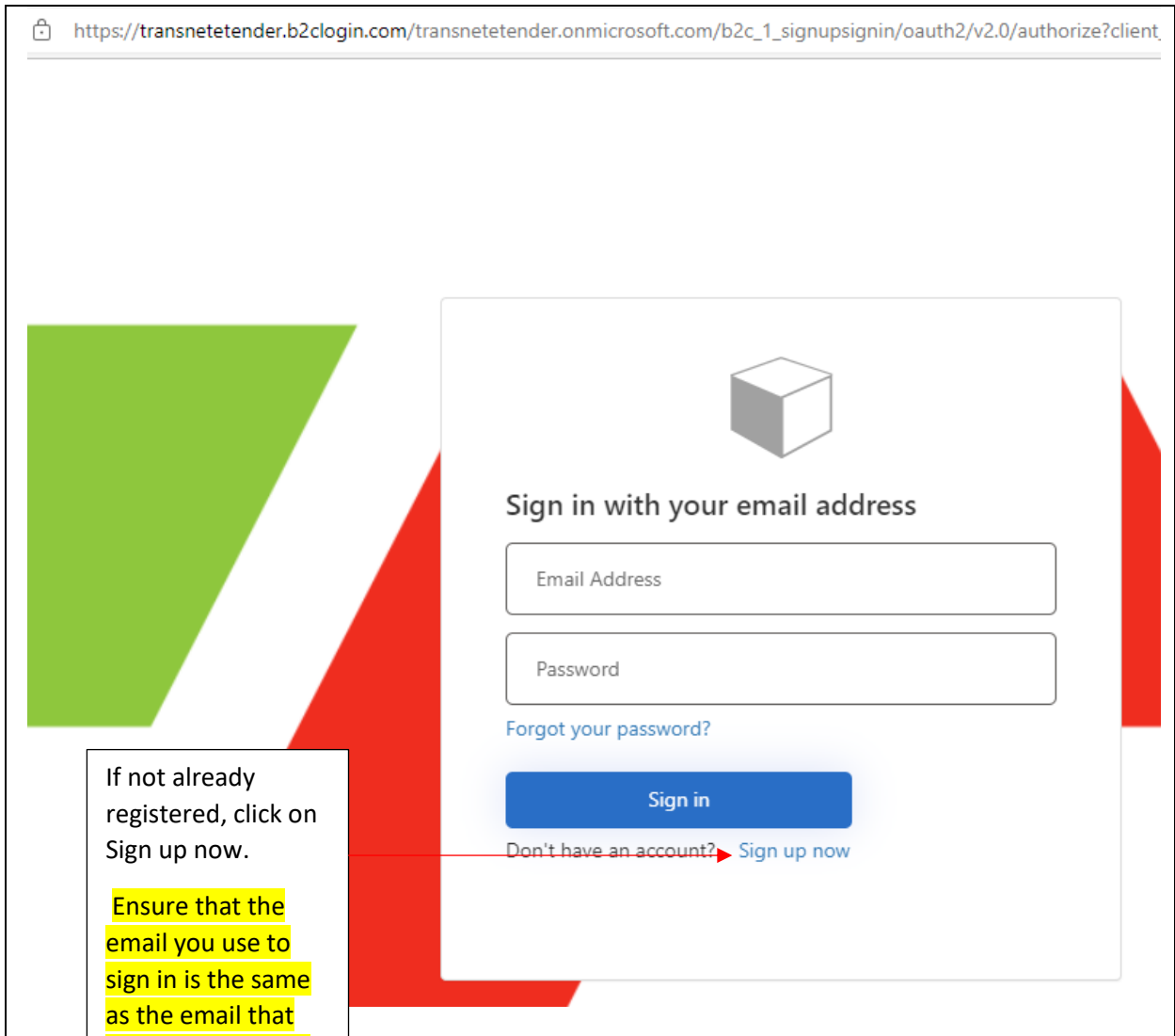
Go to Google Chrome



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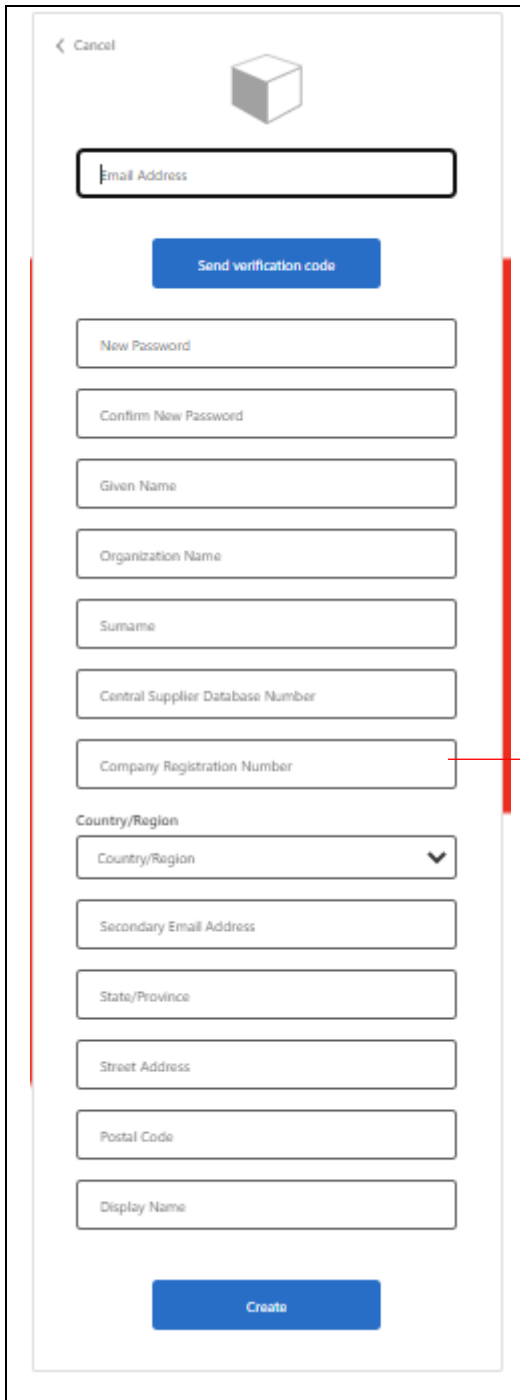


https://transnetetender.b2clogin.com/transnetetender.onmicrosoft.com/b2c_1_signupsignin/oauth2/v2.0/authorize?client



If not already registered, click on Sign up now.

Ensure that the email you use to sign in is the same as the email that you received from the tender invite on the email, otherwise you will not see the tender




The screenshot shows a mobile registration form with the following fields and buttons:

- Cancel (top left)
- 3D cube icon (top center)
- Email Address (text input)
- Send verification code (blue button)
- New Password (text input)
- Confirm New Password (text input)
- Given Name (text input)
- Organization Name (text input)
- Surname (text input)
- Central Supplier Database Number (text input)
- Company Registration Number (text input)
- Country/Region (dropdown menu)
- Secondary Email Address (text input)
- State/Province (text input)
- Street Address (text input)
- Postal Code (text input)
- Display Name (text input)
- Create (blue button)

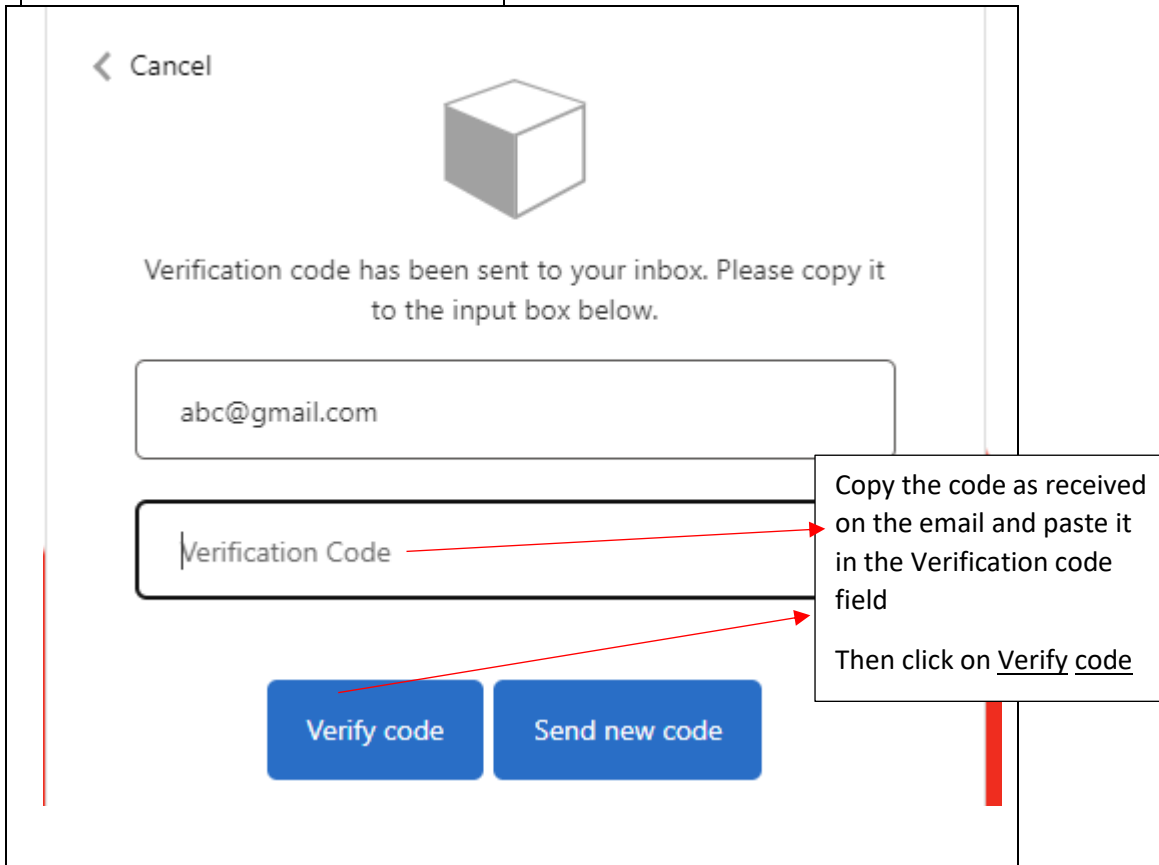
Complete all fields, before selecting “Send verification code” and confirm that all information is correct.

VERY IMPORTANT: Each field needs to be completed and not to be left blank

If you do not have a central Supplier Database number, enter the same company registration number in that field.



After completing all fields, select "Send verification code". The code will be sent to your email.



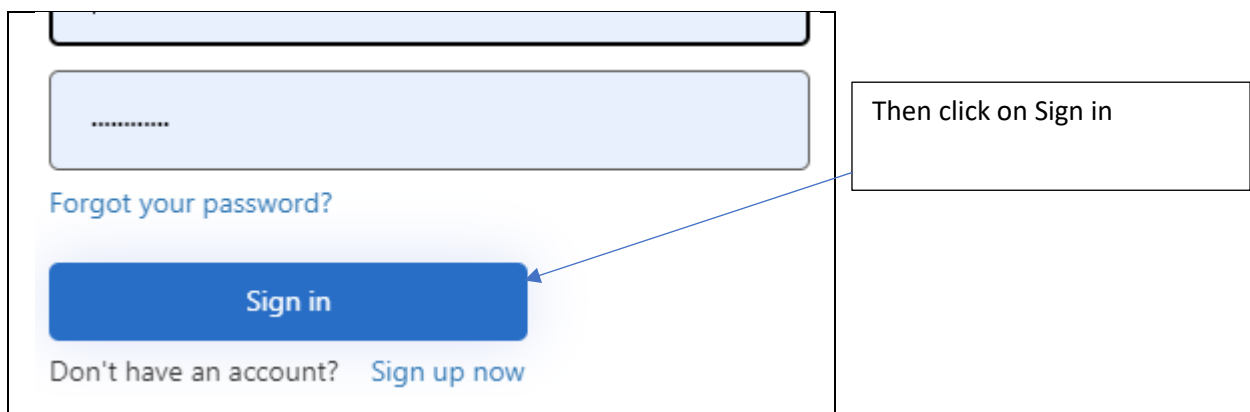
Verification code has been sent to your inbox. Please copy it to the input box below.

abc@gmail.com

Verification Code

Verify code Send new code

Copy the code as received on the email and paste it in the Verification code field
Then click on Verify code



.....

Forgot your password?

Sign in

Don't have an account? Sign up now

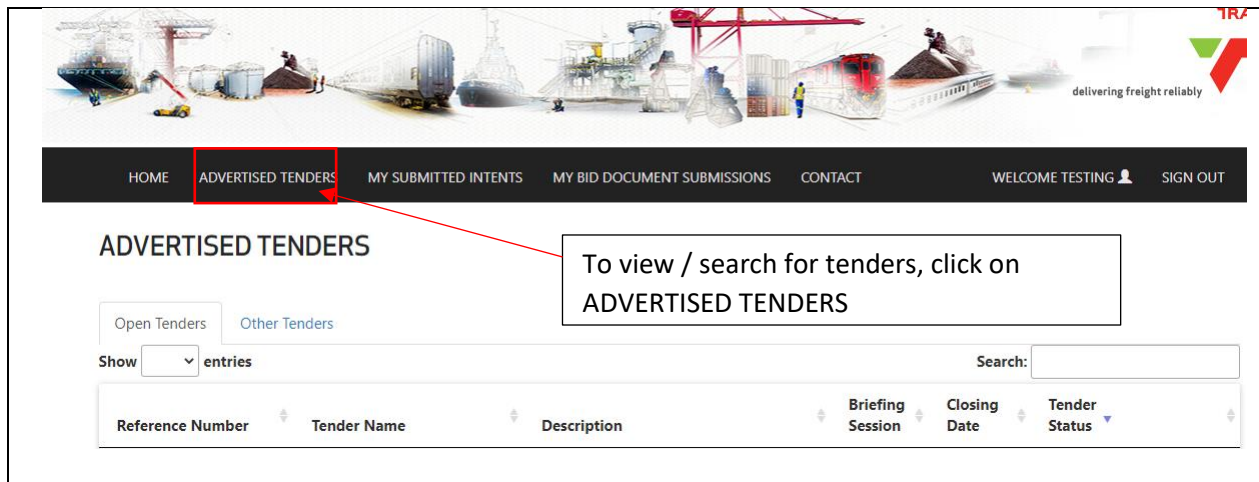
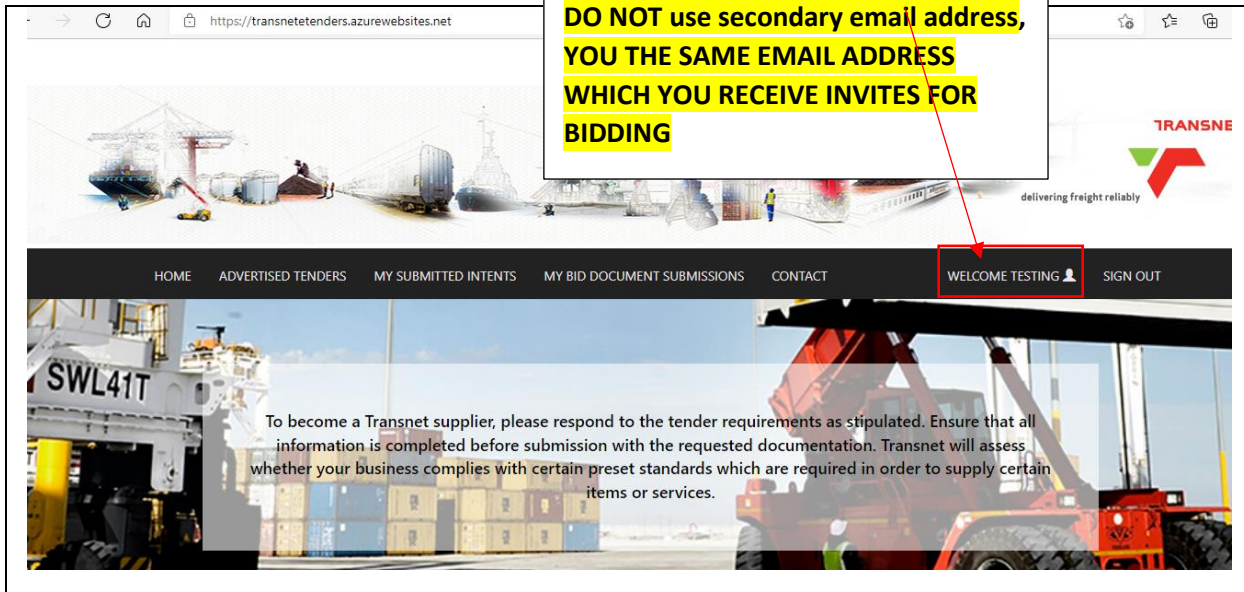
Then click on Sign in

Once registered and signed in, the home screen will have "WELCOME (Registered user)"

TRANSNET



DO NOT use secondary email address, YOU THE SAME EMAIL ADDRESS WHICH YOU RECEIVE INVITES FOR BIDDING



Tender Invitation For Tender Ref # TE/2022/04/0697/RFQ - Message (HTML)

File Message Help Tell me what you want to do

Delete Archive Reply Reply All Forward Share to Teams ATM signed To Manager Team Email Move Tags Editing Read Aloud Translate Zoom Send to OneNote Viva Insights

Tender Invitation For Tender Ref # TE/2022/04/0697/RFQ

SRV-TCC-Etender
To noreply@transnet.net

This message was sent with Low importance.

Dear Suppliers,
You have been invited to bid and respond to the following tender:

Name Of Tender : TE22-SRX-1FG-02068
Description : STOP; TOP BUNK, OD 19.5 X HT 6.5 MM
Tender Number : TE/2022/04/0697/RFQ

Access to this tender will be granted by using this email when you sign up/sign in. To access the tender information

Kind Regards,
Transnet eTenders

When a bidder receives an email to quote, the bidder needs to register with the email address of the recipient that received the email. If already registered, sign in.

NOTE: The details on this email is intended for guidance only and not to be used on the live system

HOME ADVERTISED TENDERS MY SUBMITTED INTENTS MY BID DOCUMENT SUBMISSIONS CONTACT WELCOME TESTING SIGN OUT

ADVERTISED TENDERS

Open Tenders Other Tenders

Show entries Search:

Reference Number	Tender Name	Description	Briefing Session	Closing Date	Tender Status	
TCC/2021/11/0031/RFQ	For the supply and installation of an air compressor	For the supply and installation of an air compressor for indoor shooting range that operates the laser system and supply air to air guns utilised during training and conduct maintenance on air supply system and hoses.		12/10/2021 12:00:00 PM	Closed	View Details
TFR/2021/12/0014/RFQ	ELECTRICAL MATERIAL (CABLES)	SUPPLY AND DELIVERY OF ELECTRICAL MATERIAL (CABLES) FOR A ONCE OFF PERIOD		12/13/2021 4:00:00 PM	Closed	View Details
TFR/2021/12/0017/RFQ	CRAC_JHB_36509.	FOR THE SUPPLY AND DELIVERY OF HIGH BACK CHAIRS FOR CTC OFFICES IN CENTRAL, EASTERN AND WESTERN REGIONS, FOR A ONCE OFF PERIOD.		12/14/2021 10:00:00 AM	Closed	View Details
TFR/2021/12/0015/RFQ	CRAC-JHB-36313	FOR THE SUPPLY AND DELIVERY OF VARIOUS CLAMPS, TERMINAL LUGS, DROPPER CLIPS AND		1/13/2022 12:00:00	Closed	View Details

When signed in, select "ADVERTISED TENDERS".

To manually search and change the view from Closed to Open, click twice on arrow next to "Tender Status". The arrow pointing down will change to blue and open tenders will be displayed.

HOME ADVERTISED TENDERS MY SUBMITTED INTENTS MY BID DOCUMENT SUBMISSIONS CONTACT WELCOME TESTING SIGN OUT

ADVERTISED TENDERS

Open Tenders Other Tenders

Show entries Search:

Reference Number	Tender Name	Description	Briefing Session	Closing Date	Tender Status	
TE/2022/04/0450/RFQ	VALVE:L-1 LOAD DET,WAGONS AIRBRAKE	VALVE:L-1 LOAD DET,WAGONS AIRBRAKE-062101802 VALVE; TYPE: L-1 LOAD DETECTOR, MEDIA FOR WHICH DESIGNED: WAGONS AIRBRAKE, CONNECTION TYPE: FLANGE, SPECIAL FEATURES: BLUE, WITHOUT PIPE BRACKET; SIMILAR ITEM: 062004338		4/8/2022 10:00:00 AM	Open	View Details
TE/2022/04/0494/RFQ	GEAR OIL	OIL GEAR TYPE SYNTHETIC BRAND NAME MOBILGEAR SHC SERIES GRADE SCH 6800 VISCOSITY RATING 220 TO 320 FLASH POINT 234 DEG C COLOR ORANGE CONTAINER TYPE SACHET 250 G CONTAINER CAPACITY 14 KG FOR USE ON: 39-200 GM, 15E AND 19E LOCOMOTIVES		4/8/2022 10:00:00 AM	Open	View Details
TE/2022/04/0495/RFQ	SUPPLY OF CORROSION (NALCOOL) - APPROVED	ITEM NUMBER - 077807563 INHIBITOR, CORROSION; TYPE: COOL-C18, COLOR: RED,		4/8/2022 10:00:00	Open	View Details

HOME ADVERTISED TENDERS MY SUBMITTED INTENTS MY BID DOCUMENT SUBMISSIONS CONTACT WELCOME TESTING SIGN OUT

ADVERTISED TENDERS

Open Tenders Other Tenders

Show entries Search:

Reference Number	Tender Name	Description	Briefing Session	Closing Date	Tender Status	
TE/2022/04/0697/RFQ	TE22-SRX-1FG-02068	STOP; TOP BUNK, OD 19.5 X HT 6.5 MM		4/13/2022 10:00:00 AM	Open	View Details

To search for a specific tender, the tender number, tender name or description can be used for searching.

ADVERTISED TENDERS

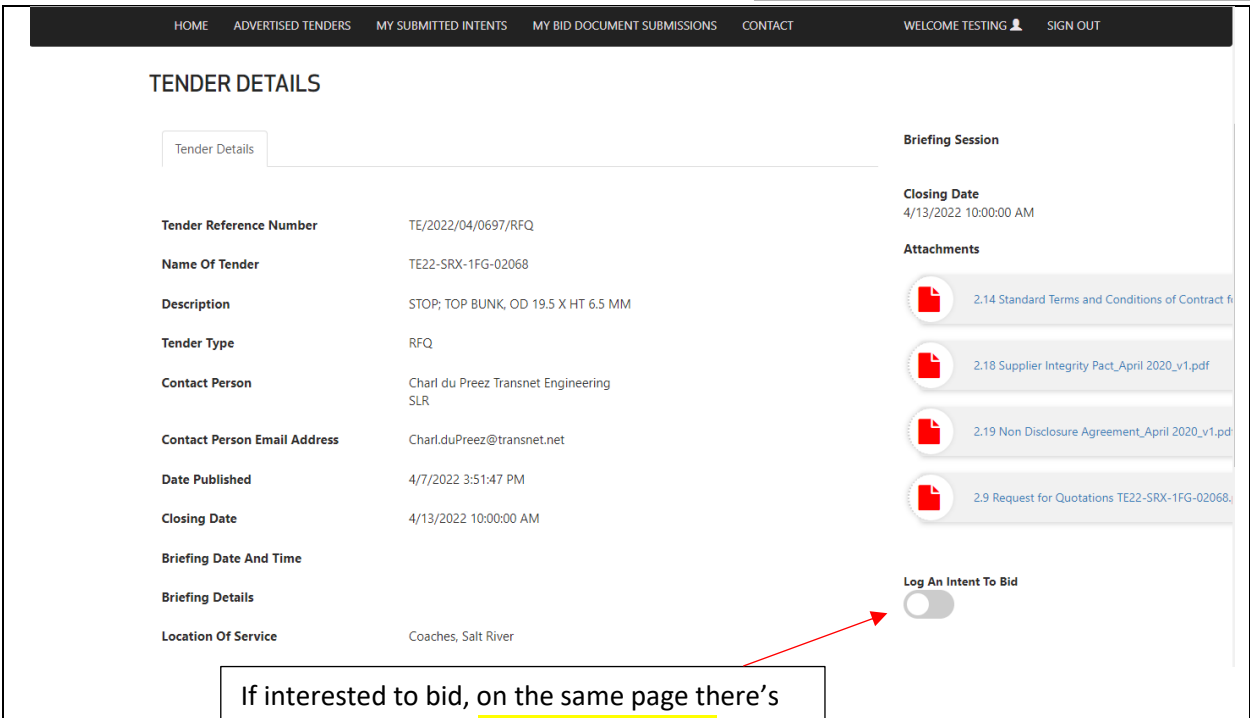
Open Tenders Other Tenders

Show entries Search:

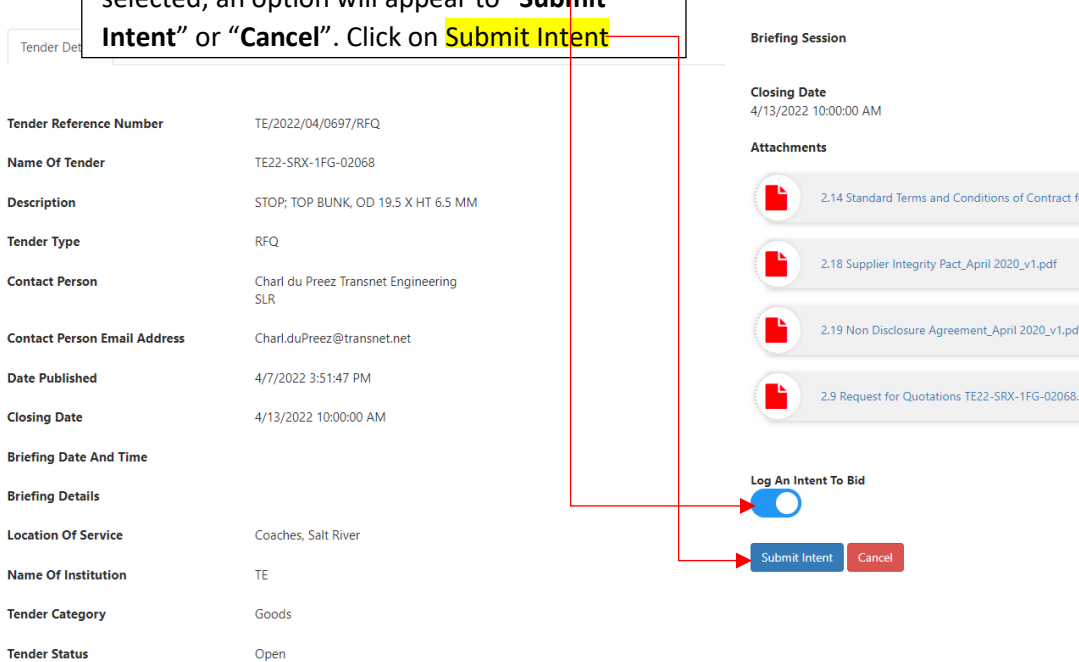
Reference Number	Tender Name	Description	Briefing Session	Closing Date	Tender Status	
TE/2022/04/0697/RFQ	TE22-SRX-1FG-02068	STOP; TOP BUNK, OD 19.5 X HT 6.5 MM		4/13/2022 10:00:00	Open	View Details

When the tender has been identified, click on "View Details"

When the "View Details" has been selected, the following screen will be displayed where the attachments can be viewed or downloaded.



If interested to bid, on the same page there's an option to select: **Log an Intent to Bid**. Once selected, an option will appear to "Submit Intent" or "Cancel". Click on **Submit Intent**



Tender Details

Tender Reference Number

Name Of Tender

Description

Tender Type RFQ

Contact Person Charl du Preez Transnet Engineering
SLR

Contact Person Email Address Charl.duPreez@transnet.net

Date Published 4/7/2022 3:51:47 PM

Closing Date 4/13/2022 10:00:00 AM

Briefing Date And Time

Briefing Details

Location Of Service

Name Of Institution

Tender Category

Tender Status

Intent to Bid

Your request to log an intent to bid has been successfully submitted.

[Close](#)

Briefing Session

Closing Date 4/13/2022 10:00:00 AM

Attachments

- 2.14 Standard Terms and Conditions of Contract for
- 2.18 Supplier Integrity Pact_April 2020_v1.pdf
- 2.19 Non Disclosure Agreement_April 2020_v1.pdf
- 2.9 Request for Quotations TE22-SRX-1FG-02068.pd

Log An Intent To Bid

[Submit Intent](#) [Cancel](#)

When the "Submit Intent" is selected, a message will appear to indicate that the request was successfully submitted. Click on close and wait for the next screen.

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HOME
ADVERTISED TENDERS
MY SUBMITTED INTENTS
MY BID DOCUMENT SUBMISSIONS
CONTACT
WELCOME TESTING
SIGN OUT

MY SUBMISSION INTENTS

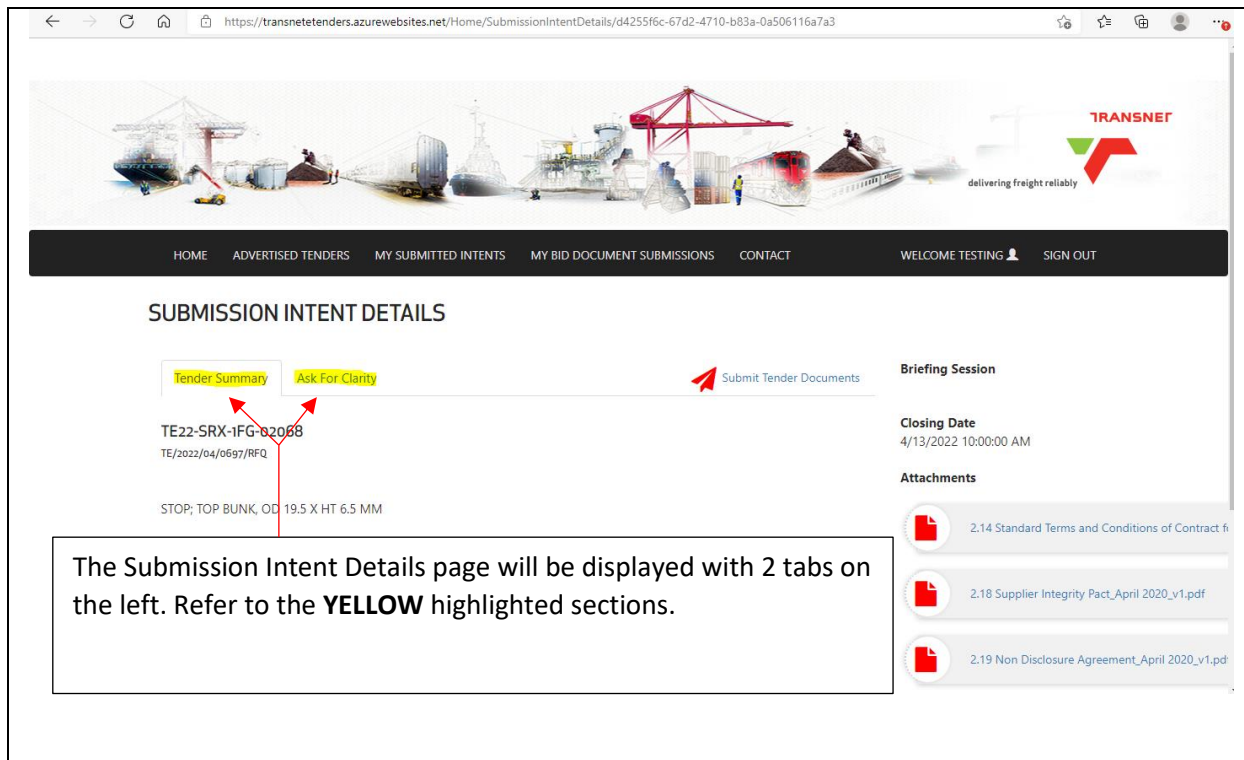
Show entries

Tender Reference Number	Name	Description Of Tender	Briefing Session Date	Closing Date	View Details
TE/2022/04/0697/RFQ	TE22-SRX-1FG-02068	STOP; TOP BUNK, OD 19.5 X HT 6.5 MM		4/13/2022 10:00:00 AM	View Details

Showing 1 to 1 of 1 entries

Previous 1 Next

The screen should be updated and load the "MY SUBMITTED INTENTS". To proceed to capturing your bid documents, click on "View Details"



https://transnettenders.azurewebsites.net/Home/SubmissionIntentDetails/d4255f6c-67d2-4710-b83a-0a506116a7a3

HOME ADVERTISED TENDERS MY SUBMITTED INTENTS MY BID DOCUMENT SUBMISSIONS CONTACT WELCOME TESTING SIGN OUT

SUBMISSION INTENT DETAILS

Tender Summary Ask For Clarity Submit Tender Documents

TE22-SRX-1FG-02068
TE/2022/04/0697/RFQ

STOP, TOP BUNK, OD 19.5 X HT 6.5 MM

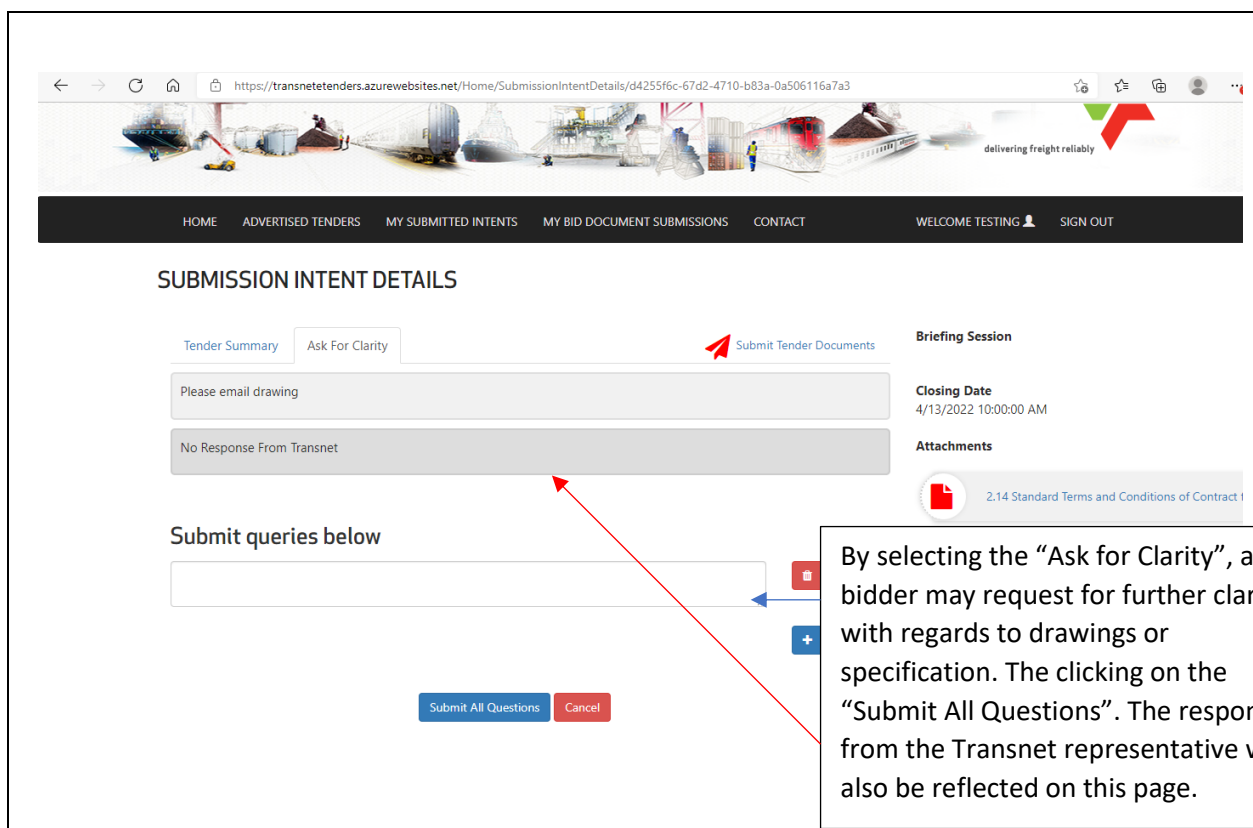
Briefing Session

Closing Date
4/13/2022 10:00:00 AM

Attachments

- 2.14 Standard Terms and Conditions of Contract f
- 2.18 Supplier Integrity Pact_April 2020_v1.pdf
- 2.19 Non Disclosure Agreement_April 2020_v1.pdf

The Submission Intent Details page will be displayed with 2 tabs on the left. Refer to the **YELLOW** highlighted sections.



https://transnettenders.azurewebsites.net/Home/SubmissionIntentDetails/d4255f6c-67d2-4710-b83a-0a506116a7a3

HOME ADVERTISED TENDERS MY SUBMITTED INTENTS MY BID DOCUMENT SUBMISSIONS CONTACT WELCOME TESTING SIGN OUT

SUBMISSION INTENT DETAILS

Tender Summary Ask For Clarity Submit Tender Documents

Please email drawing

No Response From Transnet

Submit queries below

Submit All Questions Cancel

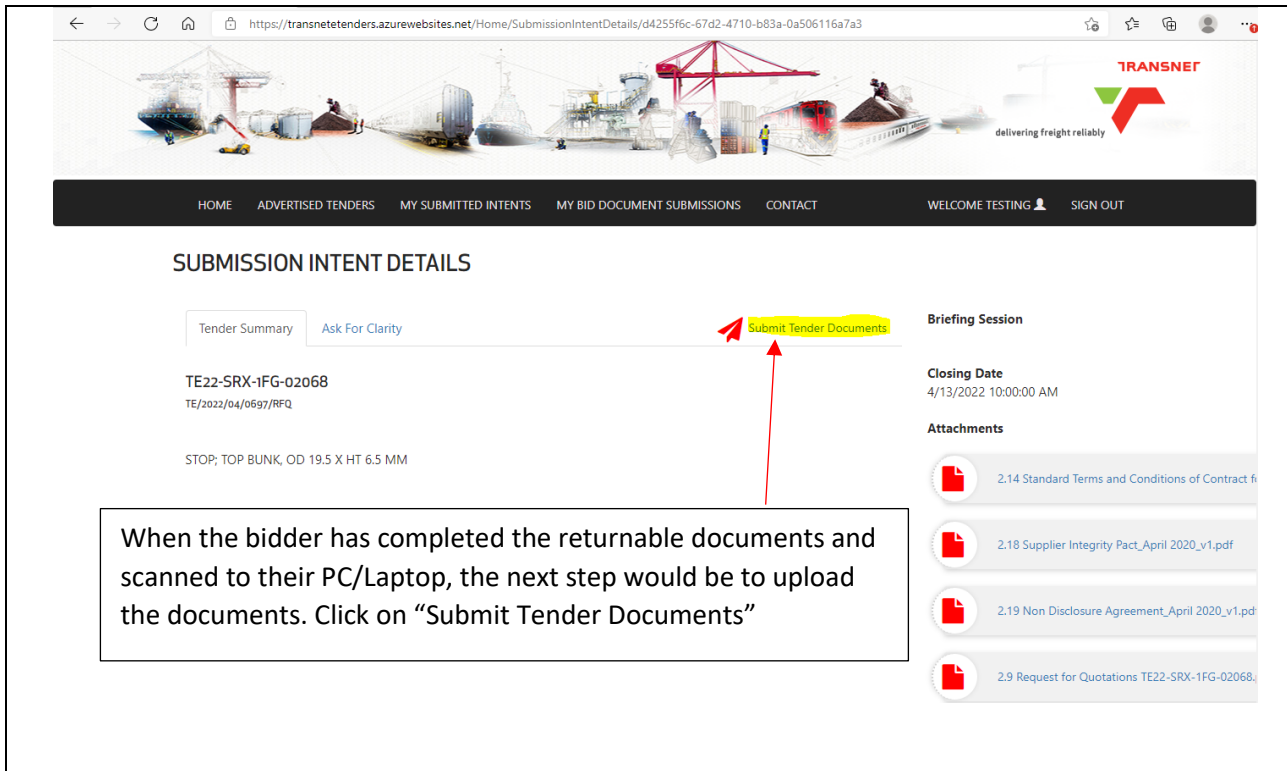
Briefing Session

Closing Date
4/13/2022 10:00:00 AM

Attachments

- 2.14 Standard Terms and Conditions of Contract 1

By selecting the "Ask for Clarity", a bidder may request for further clarity with regards to drawings or specification. The clicking on the "Submit All Questions". The response from the Transnet representative will also be reflected on this page.



https://transnettenders.azurewebsites.net/Home/SubmissionIntentDetails/d4255f6c-67d2-4710-b83a-0a506116a7a3

HOME ADVERTISED TENDERS MY SUBMITTED INTENTS MY BID DOCUMENT SUBMISSIONS CONTACT WELCOME TESTING SIGN OUT

SUBMISSION INTENT DETAILS

Tender Summary Ask For Clarity **Submit Tender Documents**

TE22-SRX-1FG-02068
TE/2022/04/0697/RFQ

STOP; TOP BUNK, OD 19.5 X HT 6.5 MM

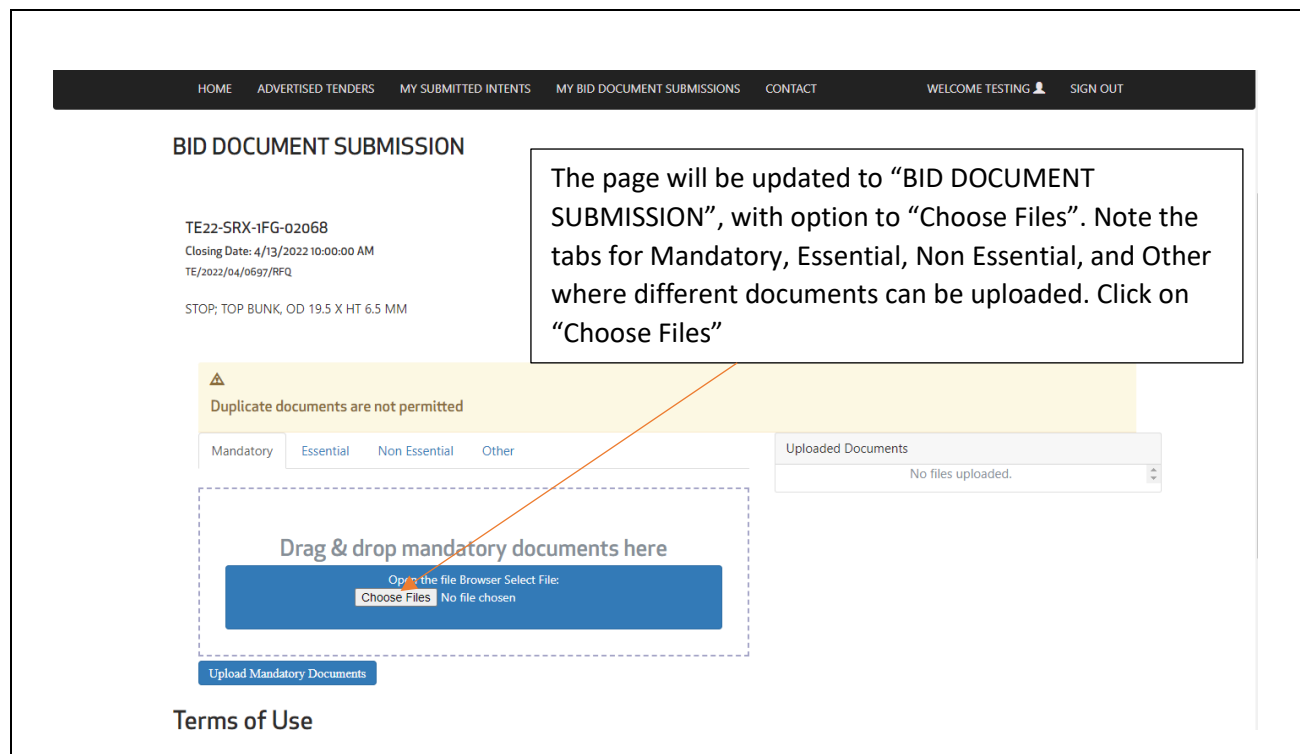
Briefing Session

Closing Date
4/13/2022 10:00:00 AM

Attachments

- 2.14 Standard Terms and Conditions of Contract f
- 2.18 Supplier Integrity Pact_April 2020_v1.pdf
- 2.19 Non Disclosure Agreement_April 2020_v1.pdf
- 2.9 Request for Quotations TE22-SRX-1FG-02068.

When the bidder has completed the returnable documents and scanned to their PC/Laptop, the next step would be to upload the documents. Click on "Submit Tender Documents"



HOME ADVERTISED TENDERS MY SUBMITTED INTENTS MY BID DOCUMENT SUBMISSIONS CONTACT WELCOME TESTING SIGN OUT

BID DOCUMENT SUBMISSION

TE22-SRX-1FG-02068
Closing Date: 4/13/2022 10:00:00 AM
TE/2022/04/0697/RFQ

STOP; TOP BUNK, OD 19.5 X HT 6.5 MM

Terms of Use

Duplicate documents are not permitted

Mandatory Essential Non Essential Other

Uploaded Documents
No files uploaded.

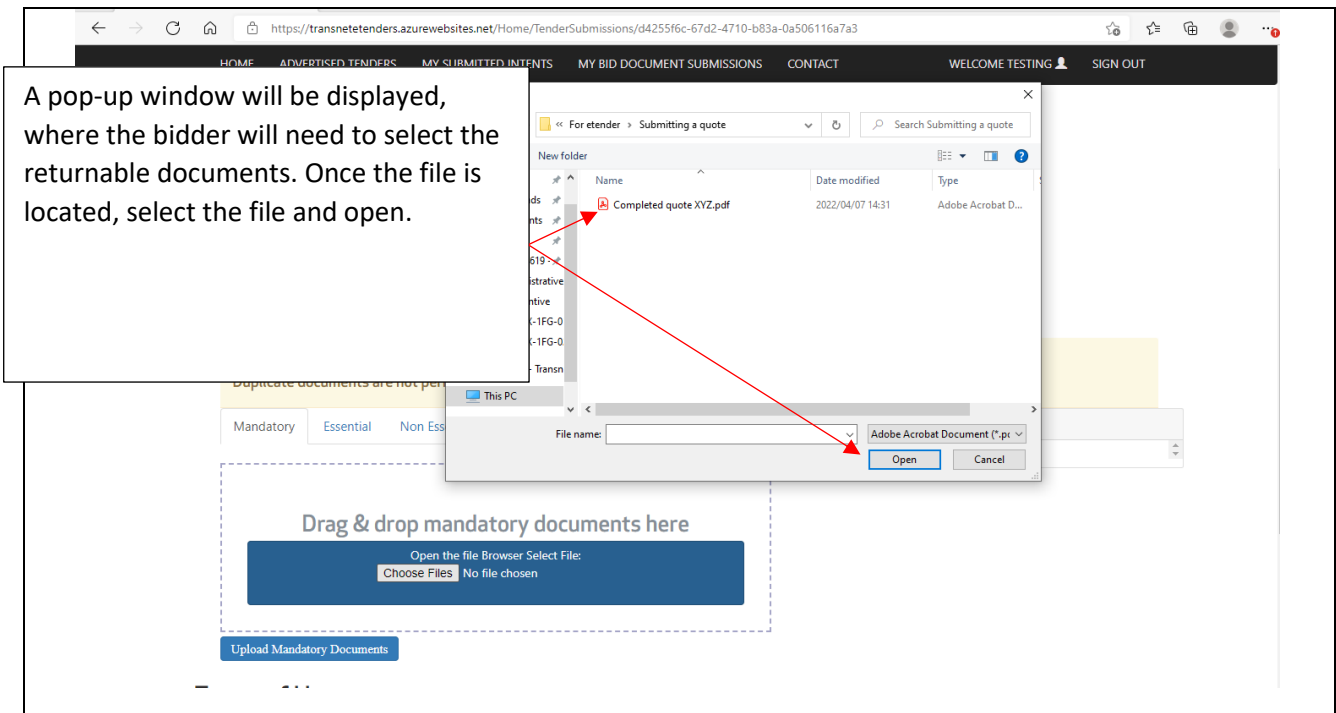
Drag & drop mandatory documents here

Open the file Browser Select File:
Choose Files No file chosen

Upload Mandatory Documents

The page will be updated to "BID DOCUMENT SUBMISSION", with option to "Choose Files". Note the tabs for Mandatory, Essential, Non Essential, and Other where different documents can be uploaded. Click on "Choose Files"

A pop-up window will be displayed, where the bidder will need to select the returnable documents. Once the file is located, select the file and open.



BID DOCUMENT SUBMISSION

TE22-SRX-1FG-02068
 Closing Date: 4/13/2022 10:00:00 AM
 TE/2022/04/0697/RFQ
 STOP; TOP BUNK, OD 19.5 X HT 6.5 MM

Duplicate documents are not permitted

Mandatory Essential Non Essential Other

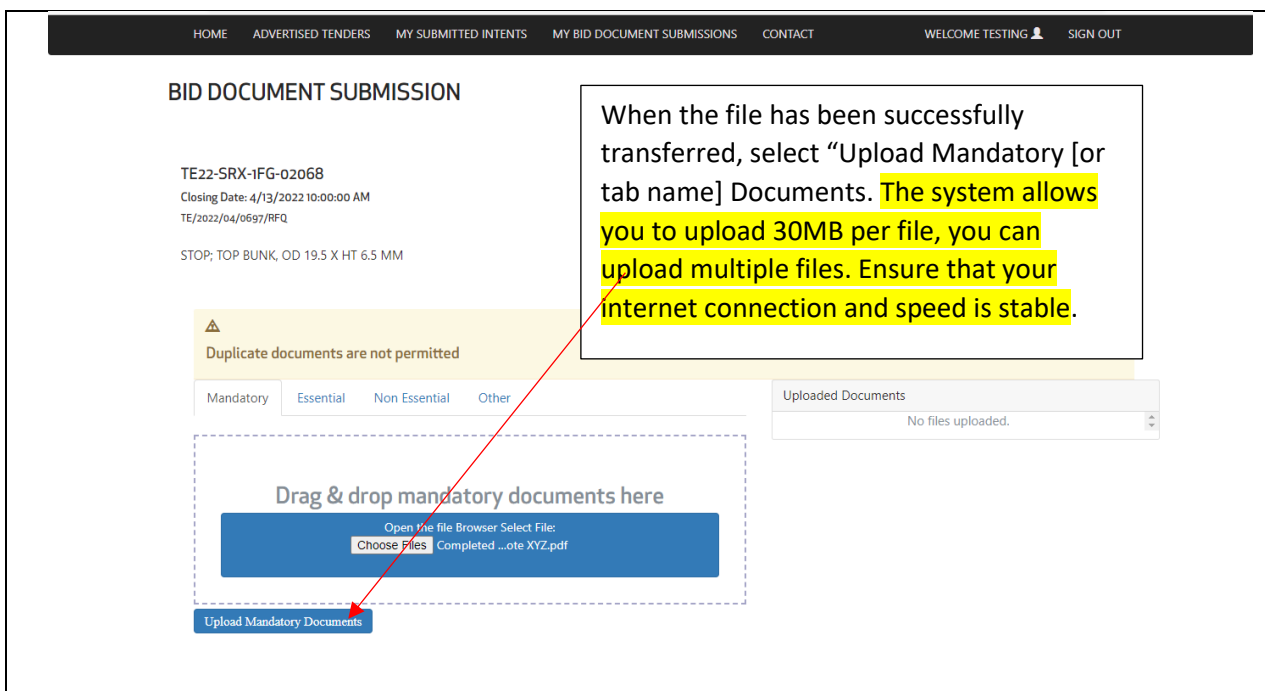
Drag & drop mandatory documents here

Open the file Browser Select File:
 Choose Files Completed ...ote XYZ.pdf

Upload Mandatory Documents

Uploaded Documents
 No files uploaded.

When the file has been successfully transferred, select "Upload Mandatory [or tab name] Documents. The system allows you to upload 30MB per file, you can upload multiple files. Ensure that your internet connection and speed is stable.



The "Uploaded Documents" section will be updated to confirm that the document was uploaded, then click on "Submit Bid"

TE/2022/04/0697/RFQ
STOP; TOP BUNK, OD 19.5 X HT 6.5 MM

⚠ Duplicate documents are not permitted

Mandatory Essential Non Essential Other

Drag & drop mandatory documents here

Open the file Browser Select File:
Choose Files No file chosen

Upload Mandatory Documents

Terms of Use

Information provided by the bidder through this portal constitute a binding bid submission/response and a commitment to deliver Transnet requirements. Kindly note that the system automatically ranks the outcome of the evaluation of price and BBBEE scoring based on the information provided. Pricing and BBBEE information provided is the responsibility of the bidder to ensure correctness and Transnet will only consider your latest submission made before the closing date.


← Back

Uploaded Documents

Completed quote XYZ.pdf - Document Type: Mandatory Documents

Delete

→ Submit Bid



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HOME ADVERTISED TENDERS MY SUBMITTED INTENTS MY BID DOCUMENT SUBMISSIONS CONTACT WELCOME TESTING SIGN OUT

MY BID DOCUMENT SUBMISSIONS

Show 10 entries Search:

Tender Reference Number	Name	Date Submitted	Company Name	View Details
TE/2022/04/0697/RFQ	TE22-SRX-1FG-02068	4/8/2022 8:59:06 AM	Transnet Engineering	View Details

Showing 1 to 1 of 1 entries

Previous 1 Next

The screen will progress to "MY BID DOCUMENT SUBMISSION", where the "View Details" can be selected to confirm that all required information is submitted correctly.



T2.2

LIST OF RETURNABLE SCHEDULES

T2.1 List of Returnable Documents:

2.1.1 These schedules are required for pre-qualification, eligibility and evaluation purposes:

Section 1 SBD 1 - **Invitation to Bid.**

- T2.2-01 CIDB Registration Certificate or CRS number
- T2.2-02 **Evaluation Schedule:** Previous experience
- T2.2-03 **Evaluation Schedule:** Experience and Qualifications of Key Personnel
- T2.2-04 **Evaluation Schedule:** Plant and Equipment
- T2.2-05 **Evaluation Schedule:** Access to credit / financial resources
- T2.2-06 **Evaluation Schedule:** Environmental management

2.1.2 Returnable Schedules - General:

- T2.2-07 **Authority to submit a Tender**
- T2.2-08 **Record of Addenda to Tender Documents**
- T2.2-09 **Letter/s of Good Standing with the Workmen's Compensation Fund**
- T2.2-10 **Risk Elements**
- T2.2-11 **Availability of Equipment and Other Resources**
- T2.2-12 **Proposed subcontractors /suppliers**
- T2.2-13 **Site Establishment requirements**

Declaration, Agreement and Commitment by Tenderer:

- T2.2-14 **CIDB SFU ANNEX G Compulsory Enterprise Questionnaire**
- SBD 6.1 **Preference Points schedule**
- SBD 4 **Bidder's Disclosure form**
- T2.2-15 **Capacity and Ability to meet Delivery Schedule**
- T2.2-16 **Non-Disclosure Agreement**
- T2.2-17 **RFP Declaration Form**
- T2.2-18 **RFP – Breach of Law**
- T2.2-19 **Certificate of Acquaintance with Tender Document**
- T2.2-20 **Service Provider Integrity Pact**
- T2.2-21 **Supplier Code of Conduct**
- T2.2-22 **Agreement in terms of Protection of Personal Information Act**
- T2.2-23 **Supplier Declaration Form**
 - Annexure C Affidavit Form for QSEs to claim preferential points**
 - Annexure. D Affidavit Form for EMEs to claim preferential points**
- T2.2-24 **Domestic Prominent Influential Persons (DPIP) Or Foreign Prominent Public**

Officials (FPPO)

2.1.3 Bonds/Guarantees/Financial/Insurance:

- T2.2-25 ~~Insurance provided by the Contractor~~
- T2.2-26 ~~Form of Intent to provide a Performance Guarantee~~
- T2.2-27 **Foreign Exchange requirements**
- T2.2-28 ~~Forecast Rate of Invoicing~~
- T2.2-29 ~~Three (3) years audited financial statements~~

2.2 C1.1 Offer portion of Form of Offer & Acceptance

2.3 C1.2 Contract Data (Conditions of Framework Contract)

2.4 C2.1 Pricing Instructions (Bill of Quantities)

2.5 C2.2 Bill of Quantities

2.6 Part C3: Scope of Work

2.7 C3.1 Works Information

2.8 C4 - Site Information

****TAKE NOTE: Where the schedule above has been crossed or written "Not applicable at this Stage" in the body of a returnable schedule, the tenderer must not complete at this stage or may even not return the schedule if it opts to do so. The schedules will not be used to evaluate this tender.**



Part T2:
Returnable
Documents



T2.2-01: Eligibility Criteria Schedule - cidb Grading Designation

Note to tenderers:

Tenderers are to indicate their cidb Grading by filling in the table below. **Attach a copy of the CIDB Grading Designation or evidence of being capable of being so registered.**

CRS Number	Status	Grading	Expiry Date

1. Only those tenderers who are registered with the **cidb**, or are capable of being so prior to the evaluation of submissions, in a contractor grading designation equal to or higher than a contractor grading designation determined in accordance with the sum tendered or a value determined in accordance with Regulation(s) 25(1A), 25 (1B) or 25(7A) of the Construction Industry Development Regulations, for a **4CE or higher**) class of construction work, are eligible to have their tenders evaluated.
2. **Joint Venture (JV)**
Joint ventures are eligible to submit tenders subject to the following:
 - a) every member of the joint venture is registered with the **cidb**;
 - b) the lead partner has a contractor grading designation of not lower than one level one level below the required grading designation in the class of construction works under consideration and possesses the required recognition status; and
 - c) the combined Contractor grading designation calculated in accordance with the Construction Industry Development Regulations is equal to or higher than a Contractor grading designation determined in accordance with the sum tendered for a **4CE or higher** class of construction work or a value determined in accordance with Regulation(s) 25(1A), 25(1B) or 25(7A) of the Construction Industry Development Regulations.
 - d) the Contractor shall provide the employer with a copy of its signed joint venture agreement;
 - e) and in the event that the joint venture is an 'Incorporated Joint Venture' the Memorandum of Incorporation to be provided within 4 (four) weeks of the Contract Date.
3. Tenderers which possess the cidb Grade level 7 or higher are only allowed to submit tender offers in one framework contract per class of work in a region. That is, a cidb Grade level 7, 8 or 9 contractor may elect to participate only in the cidb level 4-6 framework contract or cidb level 7-9 framework contract, not both.

T2.2-02: Evaluation Schedule – Previous Experience (30 points)

Note to Tenderers:

Tenderers are required to demonstrate their past experience in the delivery of surfaced roads related works, conditions and circumstances in relation to the scope of work. Tenderers are required to supply a sufficiently detailed reference list for each mentioned project as well the contact details for those clients / employers.

1. Please provide your previous experience showing but not limited to the following:
 - The experience of the tenderer as a company (as opposed to key staff members) in the construction, maintenance, repair, rehabilitation, or replacement of surfaced roads related works.
 - In respect of item (1) below, **“Number of Projects completed”**, the following information is needed:
 - Tenderers should very briefly describe his or her experience in this regard, emphasizing the nature of the works and complexity and attach this to this schedule.
 - Proof of completion in the form of a completion certificate or the reference letter from the previous employer in the letterhead of that employer (dated and stamped) and signed by the Project Manager/ Client confirming that the Works has been completed shall be provided in order for a project to be scored.
 - In respect of item (2) below, **“Completed Projects with highest value”**, the following information is needed:
 - An award letter (employer letterhead, signed and dated) or any official documentation from previous employer indicating the project value or signed final account amount depicting the project value, and
 - A completion certificate or proof of project completion from previous clients / employers

Breakdown of Points:

1. Number of Projects completed:

- Experience in having successfully completed construction, maintenance, repairs, replacement and/or rehabilitation of surfaced roads related works: **15 points**
 - a) 1 project, no project or no information = 0 point
 - b) 2 projects = 3 points
 - c) 3 projects = 6 points
 - d) 4 projects = 9 points
 - e) 5 projects = 12 points
 - f) 6 projects or more = 15 points

2. Completed Projects with the highest value:

Scores and Weightings are illustrated in **TABLE A** below

- Projects with Highest value completed in the construction, maintenance, repairs, replacement and/or rehabilitation of surfaced roads related works: **15 points**

Points broken down as follows:

- a) No project, or No project value or insufficient information = 0 point
- b) < R3m = 3 points
- c) ≥ R 3m but < R4m = 6 points
- d) ≥ R 4m but < R6m = 9 Points
- e) ≥ R 6m but <R 10m = 12 Points
- f) ≥ R 10m and above = 15 points

Scores and points are illustrated in **TABLE B** below.

The information about projects completed should be put in tabular form with the following headings:

Employer, contact person and telephone number, where available	Description of contracts relating to the construction, maintenance, repair, replacement and/or rehabilitation of surfaced roads related works and location of project	Contract value of the project inclusive of VAT (Rand)	Date	
			Start (Month & Year)	Completion (Actual or expected) (Month & Year)

Index of documentation attached to this schedule:

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TABLE A – NUMBER OF PROJECTS COMPLETED

Score & Indicator	Points (15)	Number of completed projects*
<p>0 Failed to address issues</p>	<p>0</p>	<p>No information, one (1) project, no project completion certificate, no list of projects, or experience submitted is not as per the scope stated above</p>
<p>20 Failed to address issues</p>	<p>3</p>	<p>The tenderer has successfully completed two (2) projects with scope relating to construction, maintenance, repairs, replacement and/or rehabilitation of surfaced roads related works</p>
<p>40 Less than acceptable response</p>	<p>6</p>	<p>The tenderer has successfully completed three (3) projects with scope relating to construction, maintenance, repairs, replacement and/or rehabilitation of surfaced roads related works</p>
<p>60 Acceptable response</p>	<p>9</p>	<p>The tenderer has successfully completed four (4) projects with scope relating to construction, maintenance, repairs, replacement and/or rehabilitation of surfaced roads related works</p>
<p>80 Above acceptable response</p>	<p>12</p>	<p>The tenderer has successfully completed five (5) projects with scope relating to construction, maintenance, repairs, replacement and/or rehabilitation of surfaced roads related works</p>

100 Excellent response	15	The tenderer has successfully completed six (6) projects with scope relating to construction, maintenance, repairs, replacement and/or rehabilitation of surfaced roads related works
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***Note:** In the event the tenderer augments or supplements his or her experience and resources by another company's experience and/or resources (to meet one or more set criteria), a signed Partnership/Joint Venture/ Consortium agreement must be attached. The tenderer MUST package that proof of experience and/or resources accordingly for purpose of evaluation. Tenderers must take note of and comply with clause 4.5.3 of cidb's Standard for Uniformity for Engineering and Construction Procurement August 2019.

TABLE B – COMPLETED PROJECTS WITH HIGHEST VALUES

Score & Indicator	Points (15)	Project(s) with the Highest or largest Value of completed* (Rands)
0 Failed to address issues	0	No information, project value or experience submitted is not as per the scope stated above
20 Failed to address issues	3	The tenderer has successfully completed at least one (1) project with scope relating to construction, maintenance, repairs, replacement and/or rehabilitation of surfaced roads related works with the highest value less than R3 000 000
40 Less than acceptable response	6	The tenderer has successfully completed at least one (1) project with scope relating to construction, maintenance, repairs, replacement and/or rehabilitation of surfaced roads related works with the highest value from R3 000 000 but less than R4 000 000
60	9	The tenderer has successfully completed at least one (1) project with scope relating to

Acceptable response		construction, maintenance, repairs, replacement and/or rehabilitation of surfaced roads related works with the highest value from R 4 000 000 but less than R6 000 000
80 Above acceptable response	12	The tenderer has successfully completed at least one (1) project with scope relating to construction, maintenance, repairs, replacement and/or rehabilitation of surfaced roads related works with the highest value from R6 000 000 but less than R10 000 000
100 Excellent response	15	The tenderer has successfully completed at least one (1) project with scope relating to construction, maintenance, repairs, replacement and/or rehabilitation of surfaced roads related works with the highest value from R 10 000 000 and above

***Note:** In the event the tenderer augments or supplements his or her experience and resources by another company's experience and/or resources (to meet one or more set criteria), a signed Partnership/Joint Venture/ Consortium agreement must be attached. The tenderer MUST package that proof of experience and/or resources accordingly for purpose of evaluation. Tenderers must take note of and comply with clause 4.5.3 of cidb's Standard for Uniformity for Engineering and Construction Procurement August 2019.

T2.2-03: Schedule: Experience and Qualifications of key personnel

The experience and qualifications of the key personnel who will be responsible for the management of the physical construction, maintenance, repairs, replacement and/or rehabilitation of surfaced roads related works in this project will be evaluated in relation to the scope of work from two different points of view:

- 1) General experience (total duration of work activity). The experience must be set out in the C.V., stipulating/ stating name of the project, key responsibility, commencement and end date.
- 2) The education, training and skills which are pertinent to the scope of work. Proof of education and training (certificates) must be attached to the C.V.

CVs of all key personnel, preferably, in no more than 4 pages using font Arial regular 10 points having margins at each side no less than 2,54 cm and line spacing 1,50 for each of the proposed key personnel should be submitted along with the submission referring to this schedule. The CVs should be structured as detailed below:

Name and Surname:	
Proposed Position:	Phone:
Years with the Firm:	Cell:
Mailing Address:	Email:
	ID No.:

Nationality: _____
 Education: _____
 Professional Awards _____
 Computer Skill: _____
 Professional Membership: _____

Membership number #:

Experience: IN SOUTH AFRICA
 Duration: _____ Organization (belongs to): _____
 Project Name: _____
 Client: _____
 Position: _____
 Responsibilities/ Work Done: _____

IN OTHER COUNTRIES
 Duration: _____ Organization (belongs to): _____
 Project: _____
 Client: _____
 Position: _____
 Responsibilities/ Work Done: _____

Consent: I hereby offer my full consent to work in the project titled as 'Framework Contracts for Civil Works in various TNPA infrastructure structures – Eastern region' within the TNPA regions in South Africa' with the Tenderer named as _____

I also confirm that I have not offered and will not offer my consent to any other Tenderer responding to this tender / proposal to work for any other project until the expiry of the validity of the proposal or the award of the contract whichever is later. However, if the above-mentioned Tenderer is successful in winning this contract, I shall be available for the full duration of the contract or for the full period of my input to the project whichever will be applicable for me.

Signature: _____

Date: _____

Enclosure:

1. Certificates of academic qualifications
2. Certificate of Professional registration

The CV of individuals will be used for evaluation of the each of the personnel for this section.

The scoring of the experience of key person (service management) will be as follows:

Breakdown of Points:**1. Construction Manager x 1 – 10 points**

The scoring of the experience of key person (service management) will be as follows:

a) Professional Registration and Qualifications

To score the points illustrated below, the Construction Manager must have academic qualifications and professional registration:

- Diploma, Degree or B Tech at minimum NQF Level 6 in Civil Engineering.
- Professional Registered (Pr. CM or Pr. CPM or Pr Eng or Pr Tech Eng)
- The registration must be with SACPCMP and/or ECSA and the bidder must attach proof of registration or a professional registration number.

Where registration with the applicable built environment council is stated, registration in a "candidate" category is not acceptable.

b) Years of service – Construction Manager

Number of years of experience in the construction, maintenance, repairs, replacement and/or rehabilitation of surfaced roads related works with the responsibility of overseeing roads related works. The scores will be averaged. **10 points**

Points allocated as follows:

- a) < 5 years = 0 point
- b) ≥ 5 years but < 7 years = 2 points
- c) ≥ 7 years but < 10 years = 4 points
- d) ≥ 10 years but < 15 years = 6 points
- e) ≥ 15 years but < 20 years = 8 points
- f) ≥ 20 years = 10 points

2. Site management – 10 Points (combined)

a) Site Agent X 1 – 6 points

Site Agent should have more than 15 years of experience in relevant large / complex surfaced roads and related works. The Site Agent must possess at least a National Diploma (NQF Level 6 qualification) or Trade Test certificate and necessary experience.

Points allocated as follows:

- a) No qualifications in built environment = **0 point**
- b) At least a Trade Test certificate in built environment = **1.2 points**
- c) At least NQF Level 6 qualification in built environment = **2.4 points**
- d) At least NQF Level 7 qualification in built environment = **3.6 points**
- e) At least two NQF Level 7 Qualifications in built environment = **4.8 points**
- f) NQF Level 8 qualification or higher in built environment = **6 points**

b) Site Foremen x 2 – 4 points (2 each)

Site Foremen should have more than 10 years of experience in relevant large / complex surfaced roads and related works. Qualification preferred but not compulsory if the incumbent can demonstrate that she/he has developed the necessary competence through experience.

Points allocated as follows:

- a) No experience information not as per requirements = **0 point**
- b) Provided at least one Site foreman = **0,8 points**
- c) Provided two Site foremen = **1.6 points**
- d) Provided two Site foremen, one with an NQF Level 6 qualifications in built environment or Trade Test certificate = **2.4 points**
- e) Provided two Site foremen, both with at least Trade Test certificates = **3.2 points**
- f) Provided two Site foremen, both in possession of at least NQF Level 6 qualifications in built environment = **4 points**

3. Quality Officer – 5 Points

A detailed CV of a Quality Officer supplemented by a Diploma in Quality Management or Advanced Diploma in Quality or Degree in Quality Management or a minimum of an NQF Level 6 qualification in the Built Environment and ISO 9001:2015 Quality Management System training certificates (Implementation of QMS and Internal Auditing). The Quality Officer MUST have a minimum of 3 years' responsible for quality management in civil works.

Qualifications (3 Points)-

Points allocated as follows:

- a) No submission / information not as per requirements – **0 point**
- b) Resource has submitted Quality related certificate not ISO 9001 or informal training in Quality Management related- **0.6 points**
- c) Resource has ISO 9001:2015 QMS Implementation Certificate - **1.2 points**
- d) Resource has a Diploma in Quality Management or Advanced Diploma in Quality or Degree in Quality Management or a minimum of an NQF Level 6 qualification in the Built Environment - **1.8 points**
- e) Resource has a Diploma in Quality Management or Advanced Diploma in Quality or Degree in Quality Management or a minimum of an NQF Level 6 qualification in the Built Environment with ISO 9001:2015 QMS Implementation Certificate. - **2.4 points**
- f) Resource has a Diploma in Quality Management or Advanced Diploma in Quality or Degree in Quality Management or a minimum of an NQF Level 6 qualification in the Built Environment with ISO 9001:2015 QMS Auditing Certificate - **3 points**

a) Experience (2 Points) –

Points allocated as follows:

- g) No submission or information submitted not as per requirements - **0 point**
- h) Experience provided is on the built environment, but not in the scope related to this tender – **0.4 points.**
- i) Less than 3 years of working experience responsible for quality management in the civil engineering works. – **0.8. points**
- j) From 3 years but less than 5 of working experience responsible for quality management in the civil engineering works. - **1.2 points**
- k) From 5 years but less than 10 years' of working experience responsible for quality management in the civil engineering works- **1.6 points**
- l) From 10 years and above of working experience responsible for quality management in the civil engineering works. - **2 points**

4. Health and Safety officer (5) -

A detailed CV of a Health and Safety Officer with valid proof of registration with SACPCMP as a Construction Health and Safety Officer. A minimum of an NQF Level 6 (National Diploma or equivalent level) in Safety Management or Environmental Health or equivalent is required together with formal training certificates relating to incident investigation, hazard identification and risk assessment (HIRA), Legal Liability (but not limited). The Health and Safety Officer MUST have a construction health and safety experience relevant to the scope of works. "Candidate" professionals not accepted.

Points broken down as follows:

i) Qualifications (3 Points)

- a) No submission, No proof of valid SACPCMP registration or submission not as per requirements. – **0 point**
- b) Valid proof of registration with SACPCMP and qualification not relevant to health and safety. – **0.6 points**
- c) Valid proof of registration with SACPCMP. SAMTRAC/NEBOSH certificate with relevant health and safety training certificates (incident investigation, HIRA, Legal Liability) - **1.2 points**
- d) Valid proof of registration with SACPCMP and National Diploma (NQF Level 6 qualification) in Safety Management/Environmental Health or equivalent. - **1.8 points**
- e) Valid proof of registration with SACPCMP and B-Tech (or NQF Level 7 qualification) in Safety Management/Environmental Health or equivalent – **2.4 points**
- f) Valid proof of registration with SACPCMP. B-Tech (or NQF Level 7 Qualification) in Safety Management /Environmental Health or equivalent qualification. In addition, SAMTRAC/NEBOSH certificate with relevant health and safety training certificates (incident investigation, HIRA, Legal Liability, Fall protection plan developer) – **3 points**

ii) Experience (2 Points)

- a) No submission or information not available to determine experience. – **0 point**
- b) Three (3) years or less health and safety working experience in the construction environment - **0.8 points**
- c) More than three (3) years but less than 5 years health and safety working experience in the construction environment. - **1.4 points**
- d) Five (5) years health and safety working experience in the construction environment. - **1.8 points**
- e) More than five (5) years but less than seven (7) years' health and safety working experience in the construction environment. - **2 points**
- f) Seven (7) years' or more health and safety working experience in the construction environment. - **3 points**

***The employer discourages the sharing of professionals (i.e professional engineers, specialist artisans, and artisans) among bidders. In cases where there is evidence of sharing of professionals; the recommended contractors will have to discuss risks involved with the employer.**

*** the employer reserves the right to verify all information presented by the tenderer**

Provide details of each of the key resources provided and attach an Organogram indicating where each Key Resource is located:

No.	Key Persons	Name and Surname	CV attached (Yes/No)
1	Construction Manager		
2	Site Agent		
3	Site Foreman 1		
4	Site Foreman 2		
5	Quality Officer		
6	Safety Officer		

The scoring of the Experience and Qualifications of key Personnel will be as follows:

Resource	Points (40)	Criteria	0	20	40	60	80	100
			The tenderer has submitted no information or inadequate information to determine a score.	Project structure shows incomplete list of Key staff and management structure.	Project structure shows some Key staff and management structure with experience, but not adequate for the project.	Project structure is complete with all Key resources specific to the project indicated with reasonable experience to the project as indicated in the CV's.	Project structure is complete with all Key resources specific to the project indicated with reasonable experience to the project as indicated in the CV's. It further shows onsite and off-site management.	Project structure is complete with all Key resources specific to the project indicated with reasonable experience to the project as indicated in the CV's. It further shows onsite and off-site management. Details of the location and functions of offices from which the works will be managed are clearly defined.
Construction Manager	20	Qualification (minimum requirements) (10)	Submission not as specified	Construction Manager has relevant qualification, professional registration	Construction Manager has relevant qualification, professional registration	Construction Manager has relevant qualification, professional registration	Construction Manager has relevant qualification, professional registration	Construction Manager has relevant qualification, professional registration
		Experience (10)	Has less than 5 years' working experience	has at least 5 years' working experience but less than 7 years	has at least 7 years' working experience but less than 10 years	has at least 10 years' working experience but less than 15 years	has at least 15 years' working experience but less than 20 years	has at least 20 years' working experience and above
Site Agent	6	Qualification	Submission not as specified	Site Agent has at least 15 years of working experience, and a Trade	Site Agent has at least 15 years of working experience, and a maximum NQF Level 6	Site Agent has at least 15 years of working experience, and a maximum NQF Level 7 qualification in built environment	Site Agent has at least 15 years of working experience, and a minimum of two NQF Level 7 qualifications in built	Site Agent has at least 15 years of working experience, and above NQF Level 8 qualification in built environment

Resource	Points (40)	Criteria	0	20	40	60	80	100
				Test certificate in built environment	qualification in built environment		environment	
Site Foremen	4	Qualification	No submission / information not as per requirements	One Site foreman, no formal tertiary education qualifications	Two Site foremen with more than 10 years of experience in large / complex surfaced roads and related works, no formal tertiary education qualifications	Two Site foremen with more than 10 years of experience in large / complex surfaced roads and related works, one with Trade Test certificate or NQF Level 6 tertiary education qualifications	Two Site foremen with more than 10 years of experience in large / complex surfaced roads and related works, both with trade test certificates	Two Site foremen with more than 10 years of experience in large / complex surfaced roads and related works, both in possession of at least NQF Level 6 qualifications in built environment
Quality Officer	5	Qualification (3)	No submission / information not as per requirements	Resource has submitted Quality related certificate not ISO 9001 or informal training in Quality Management related	Resource has ISO 9001:2015 QMS Implementation Certificate	Resource has a Quality Diploma or a Technical qualification	Resource has a Quality Diploma or a Technical qualification with ISO 9001:2015 QMS Implementation Certificate	Resource has a Quality Diploma or a Technical qualification with ISO 9001:2015 QMS Auditing Certification
		Experience (2)	No submission / information not available to determine experience or not as per requirements	Experience provided is on the built environment, but not in the scope related to this tender	Less than 3 years of working experience responsible for quality management in the civil engineering works	From 3 years but less than 5 of working experience responsible for quality management in the civil engineering works	From 5 years but less than 10 years' of working experience responsible for quality management in the civil engineering works	From 10 years and above of working experience responsible for quality management in the civil engineering works

Resource	Points (40)	Criteria	0	20	40	60	80	100
Safety Officer	5	Qualification (3)	No submission, No proof of valid SACPCMP registration or submission not as per requirements	Valid proof of registration with SACPCMP and qualification not relevant to health and safety.	Valid proof of registration with SACPCMP. SAMTRAC/NEBOSH certificate with relevant health and safety training certificates (incident investigation, HIRA, Legal Liability)	Valid proof of registration with SACPCMP and National Diploma (NQF Level 6 qualification) in Safety Management/Environmental Health or equivalent	Valid proof of registration with SACPCMP and B-Tech (or NQF Level 7 qualification) in Safety Management/Environmental Health or equivalent	Valid proof of registration with SACPCMP. B-Tech (or NQF Level 7 Qualification) in Safety Management /Environmental Health or equivalent qualification. In addition, SAMTRAC/NEBOSH certificate with relevant health and safety training certificates (incident investigation, HIRA, Legal Liability, Fall protection plan developer)
		Experience (2)	No submission / information not available to determine experience or not as per requirements	Three (3) years or less health and safety working experience in the construction environment	More than three (3) years but less than 5 years health and safety working experience in the construction environment	Five (5) years health and safety working experience in the construction environment.	Five (5) years but less than seven (7) years' experience health and safety working experience in the construction environment	More than seven (7) years' health and safety working experience in the construction environment

T2.2-04: Schedule 3 – Plant and Equipment (10 Points)

Points will be allocated as indicated below for plant and equipment **owned and / or hired** by the Tenderer, and which will be available for the project, should the Tenderer be successful. Tenderers must complete the table below for availability of plant and equipment.

Number and Type of available plant and machinery equipment	Own / hired (full points)	Total Points
TLB –1 required = 2 points		
Excavator 20 tons minimum. 1 required = 2 points		
Compactor or similar type pedestrian roller – 2 required =1 point (i.e 0.5 points for each)		
Bulldozer -20 Tons or more. 1 required – 1 point		
Tipper truck (10m3)– 1 required = 2 points		
Dumper Trucks –1 required = 1 point		
Watercart – 1 required = 1 point		
Total scored		

** **Note:** In the event the tenderer augments or supplements his or her resources by another company’s resources (to meet one or more set criteria), a signed Partnership/Joint Venture/ Consortium agreement must be attached. The bidder **MUST** package that proof of plant ownership or hired plant accordingly for purpose of evaluation. Tenderers must take note of and comply with clause 4.5.3 of cidb’s Standard for Uniformity for Engineering and Construction Procurement August 2019.*

Points for plant and equipment will only be allocated if;

1. In case where plant is owned by the tenderer, Proof of ownership must be in the form of a license disc or certificate of ownership as per e-Natis requirements in the name of the company or directors must be attached.
2. In case where the plant is to be hired by the tenderer, a letter from a Plant Hire Company addressed to the tenderer with reference to this project clearly indicating the list of plant to be hired and made available must be attached.

Note: No other proof of ownership will be considered

<p>Index of documentation attached to this schedule:</p> <p>.....</p> <p>.....</p> <p>.....</p>
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Plant and Equipment (10 Points)

Score & Indicator	Points (10)	Number and type of available plant and machinery equipment*
0 Failed to address issues	0	No information, machinery or plant submitted is not as per the scope stated above
20 Failed to address issues	2	The tenderer has submitted a list of available plant or machinery which will score a tenderer a minimum of 2 points
40 Less than acceptable response	4	The tenderer has submitted a list of available plant or machinery which will score a tenderer a minimum of 4 points
60 Acceptable response	6	The tenderer has submitted a list of available plant or machinery which will score a tenderer a minimum of 6 points
80 Above acceptable response	8	The tenderer has submitted a list of available plant or machinery which will score a tenderer a minimum of 8 points
100 Excellent response	10	The tenderer has submitted a list of available plant or machinery which has all seven (7) plant / machinery listed in the criteria above

*** NOTE:** In the event the tenderer augments or supplements his or her resources by another company's resources (to meet one or more set criteria), a signed Partnership/Joint Venture/ Consortium agreement must be attached. The tenderer MUST package that proof of plant ownership or hired plant accordingly for purpose of evaluation. Tenderers must take note of and comply with clause 4.5.3 of cidb's Standard for Uniformity for Engineering and Construction Procurement August 2019.

T2.2-05: Schedule 4 – Available credit /Proof of financial resources (15 Points)

Resources available to the tenderer showing that there is proof of available credit to source all necessary material and equipment to start and conclude the project (it must be specific to this tender/project):

Source of funding /available credit*	Points per criteria	Total Points
No information, financial resources or credit less than R100 000, or information is not as per the tender requirements	0 point	
Available credit or proof of financial resources with an amount from R100 000 but less than R200 000	3 Points,	
Available credit or proof of financial resources with an amount from R200 000 but less than R600 000	6 Points,	
Available credit or proof of financial resources with an amount from R600 000 but less than R800 000	9 Points,	
Available credit or proof of financial resources with an amount from R800 000 but less than R1000 000	12 Points	
Available credit or proof of financial resources with an amount from R1000 000 and above.	15 Points	
Total scored		

** **NOTE:** In the event the tenderer augments or supplements his or her financial resources by another company’s financial resources (to meet one or more set criteria), a signed Partnership/Joint Venture/ Consortium agreement must be attached. The tenderer **MUST** package that proof of available credit or financial resources accordingly for purpose of evaluation. Tenderers must take note of and comply with clause 4.5.3 of cidb’s Standard for Uniformity for Engineering and Construction Procurement August 2019.*

Notes:

<p>Index of documentation attached to this schedule:</p> <p>.....</p> <p>.....</p> <p>.....</p>
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TENDERER'S REGISTERED FINANCIAL SERVICE PROVIDER LETTER and BANK DETAILS

Notes to tenderer:

1. Attach proof of available credit or letter from a registered, credible financial service provider(s), financiers or supplier (the confirmation should bear this Project name, Project number, bidder's name, the type of credit available and amount of credit available). It must be signed, stamped and dated. Multiple letters from different institutions are acceptable and will be added up for purposes of points allocation.
2. A tenderer which does not need credit from financial institutions or material suppliers must submit a proof of own capital or own available funding. The proof must be under tender's name and have no conditions for access.
3. Letters with no amount or not project specific or not from registered financial institutions will not be accepted.
4. In the event that the tenderer is a joint venture enterprise, details of all the members of the joint venture shall be similarly provided and attached to this form.
5. The successful tenderer may be requested to demonstrate its financial capability to execute the contract prior to award at Transnet's discretion in terms of clause C.3.13.
6. In the event that the Employer at its sole discretion is not satisfied with the financial capability of the tenderer as a result of whatsoever nature and reason, the Employer reserves the right to invoke the provisions under tender data C.3.13. In addition, the Employer reserves the right to perform a full risk assessment as per tender data C.3.13. Furthermore, if the aforementioned occur, any and all report/s will be used to evaluate the Tenderer's ability to perform the contract as stated in sub-clause C.3.13.(b) of the cidb Standard Conditions of Tender.
7. The letter (as stated in item 1 above) shall contain the information as indicated below:
 - 7.5 Financial service provider's or bank name
 - 7.6 Financial service provider's or bank logo (FSP) number
 - 7.7 Financial service provider or bank registration number
 - 7.8 Contactable person from FSP: names, contact numbers (preferable a land line) and official email address
 - 7.9 Description of this contract and tender number and location of project
 - 7.10 Tenderer's name
 - 7.11 Contract value of the project inclusive of VAT (Rand)
 - 7.12 Amount of available credit
 - 7.13 Type of credit available
 - 7.14 Duration of credit availability
 - 7.15 Conditions of credit
 - 7.16 Signature of Financial service provider or bank
 - 7.17 Date and Stamp of the Financial service provider or bank

Bank Name
FSB Number
Bank Address

(Letter to be on the Financial Service Provider’s letter head)

RE: ACCOUNT CONDUCT AND CASHFLOW CONFIRMATION

To Whom It May Concern:

We hereby confirm that.....[Tenderer Name] has been banking with xxxx bank for a period of xxx years and the account has been conducted in a satisfactory manner. Tenderer Name has the financial means, net of current commitments available to meet the construction cash flow requirements to the value of R xxxxx for contract (TNPA/2024/04/0009/61844/RFP).

- i) Name of Account Holder:
- ii) Account Number:
- iii) Bank name:.....
- iv) Branch Number (If applicable)::.....
- v) Bank and branch contact details

OR

We hereby confirm that.....[Tenderer Name] will get financial or funding assistance from xxxxxx [bank or financial / credit service provider]] to the value of R xxxx xxxxx for the contract ((TNPA/2024/04/0009/61844/RFP)). Access to this funding will be made easily available whenever..... ...[tenderer] needs it for purposes of funding a project awarded to them by TNPA in relation to the current framework contracts.

- i) Name of Account Holder:
- ii) Account Number:
- iii) Bank name (FSP):
- iv) Branch Number (If applicable):.....
- v) Bank and branch contact details (If applicable):

Yours Sincerely,

Name _____

Signature _____

BANK STAMP

AVAILABLE CREDIT /PROOF OF FINANCIAL RESOURCES (15 POINTS)

Score & Indicator	Points (15)	Proof of available credit or financial resources*
<p>0 Failed to address issues</p>	<p>0</p>	<p>No information, financial resources or credit less R100 000, or information is not as per the tender requirements</p>
<p>20 Failed to address issues</p>	<p>3</p>	<p>Available credit or proof of financial resources with an amount from R100 000 but less than R200 000</p>
<p>40 Less than acceptable response</p>	<p>6</p>	<p>Available credit or proof of financial resources with an amount from R200 000 but less than R600 000</p>
<p>60 Acceptable response</p>	<p>9</p>	<p>Available credit or proof of financial resources with an amount from R600 000 but less than R800 000</p>
<p>80 Above acceptable response</p>	<p>12</p>	<p>Available credit or proof of financial resources with an amount from R800 000 but less than R1 000 000</p>
<p>100 Excellent response</p>	<p>15</p>	<p>Available credit or proof of financial resources with an amount from R1 000 000 and above</p>

** **Note:** In the event the bidder augments or supplements his or her financial resources by another company's financial resources (to meet one or more set criteria), a signed Partnership/Joint Venture/ Consortium agreement must be attached. The bidder MUST package that proof of available credit or financial resources accordingly for purpose of evaluation. Tenderers must take note of and comply with clause 4.5.3 of cidb's Standard for Uniformity for Engineering and Construction Procurement August 2019.*



T2.2 -06 Evaluation Schedule: Environmental Management

The Tenderer must review the following documents for context to meet the environmental requirements, namely:

- a) Transnet Governance Framework which comprises of the following:
 - Transnet Integrated Management System (TIMS) Policy Commitment Statement.
 - Transnet Construction Environmental and Sustainability Specification (CESS): TRN-IMS-GRP-GDL-014.4 Rev 3.0
 - Transnet Construction Environmental Management Standard Operating Procedure (CEM SOP). 009-TCC-CLO-SUS-11386 Rev 1.0

Evaluation Criteria

1. The tenderer must provide evidence of how their Environmental Management Plan and signed policy will ensure conformance to the abovementioned requirements.
 1. Policy
 2. Roles and Responsibilities;
 3. Legislative Requirements;
 4. Impacts and Mitigation; and
 5. Incident and Non-conformance Reports.
 6. Monitoring and Continuous Improvement
2. The tenderer must provide an environmental policy signed by Top Management which, as a minimum:
 1. Is appropriate given the purpose and context of the tenderer’s business;
 2. Includes a commitment to fulfil the tenderer’s environmental compliance (legal) obligations;
 3. Includes a commitment to the protection of the environment, including prevention of pollution;
 4. Provides framework for setting environmental objectives; and
 5. Includes a commitment to continual improvement of their EMS.
3. Provide an organogram depicting the roles, responsibilities within the Environmental Management discipline illustrating the environmental reporting structure. CVs for the full time on site Environmental Officer (Key Person) that includes qualifications and years of experience.
4. The tenderer must provide a list of projects **where detailed environmental duties** of a similar nature have been executed.

By signing this Tender Schedule, the tenderer confirms that they will comply with the above requirements and in particular Transnet policy statements and environmental specifications.

<p>Attached submissions to this schedule:</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p>



The scoring of the Tenderer’s Environmental requirements will be as follows:

	Environmental Management Plan (EMP)	Organogram - CV and Qualifications	Organogram - CV and Previous Experience (Years of Experience)	List of projects where environmental relating to projects of same or similar scope to be undertaken
Points (5)	1	1	2	1
	<p>Environmental Management Plan with Environmental Policy</p> <p>The tenderer must provide narrative evidence of how their Environmental Management Plan & Policy will ensure conformance for the minimum six elements:</p> <ol style="list-style-type: none"> 1. Signed policy 2. Roles and Responsibilities 3. Legislative Requirements 4. Impacts and Mitigation 5. Incident and Non-conformance Reports 6. Monitoring and Continuous Improvement 	<p>Organogram - CV and Qualifications</p> <p>Provide an organogram depicting the roles, responsibilities within the Environmental Management discipline, illustrating the environmental reporting structure. CV for Environmental Officer includes qualifications.</p>	<p>Organogram – CV and years of experience</p> <p>Provide an organogram depicting the roles, responsibilities within the Environmental Management discipline, illustrating the environmental reporting structure. CV for the Environmental Officer that includes years of experience.</p>	<p>List of projects where environmental relating to projects of same or similar scope to be undertaken</p>



Score 0	No information submitted by the tenderer or information not as per tender and scope requirements			
Score 20	The tenderer responded to 1 of the items above.	Key Person in possession of a relevant Certificate in Natural Science or Environmental management	Key Person has less than 12 months on-the-job experience	Tenderer has only completed 1 project of similar nature
Score 40	The tenderer responded to 2 or 3 of the items above.	Key Person in possession of a Diploma in Natural Science or Environmental Management	Key Person has greater or equal to 1 year but ≤ 3 years of relevant on the job experience	Tenderer has only completed 2 projects of similar nature
Score 60	The tenderer responded to 4 or 5 of the items above.	Key Person in possession of a Bachelors Degree in Natural Science or Environmental Management	Key Person has >3 yrs but ≤ 4 years of relevant on-the-job experience.	Tenderer has only completed 3 projects of similar nature
Score 80	The tenderer responded to 6 of the items above.	Key Person in possession of a Bachelors Degree with Honours Natural Science or Environmental Management	Key Person has >4 yrs but ≤ 8 years of relevant on-the-job experience	Tenderer has completed 4 projects of similar nature
Score 100	The tenderer responded to all items above and provided additional elements in the environment management field (other than the listed minimum) to environmental management plan regarding performance.	Key Person in possession of a Masters Degree in Natural Science or Environmental Management	Key Person has >8 years relevant on-the-job experience	Tenderer has completed more than 4 projects of similar nature.



T2.2-07: Authority to submit a Tender

Indicate the status of the tenderer by ticking the appropriate box hereunder. The tenderer must complete the certificate set out below for his category of organization or alternatively attach a copy of a company / organization document which provides the same information for the relevant category as requested here.

A - COMPANY	B - PARTNERSHIP	C - JOINT VENTURE	D - SOLE PROPRIETOR

A. Certificate for Company

I, _____ chairperson of the board of directors _____
 _____, hereby confirm that by
 resolution of the board taken on _____ (date), Mr/Ms _____,
 acting in the capacity of _____, was
 authorized to sign all documents in connection with this tender offer and any
 contract resulting from it on behalf of the company.

Signed

Date

Name

Position

Chairman of the Board of Directors



B. Certificate for Partnership

We, the undersigned, being the **key partners** in the business trading as _____

_____ hereby authorise Mr/Ms _____

acting in the capacity of _____, to sign all

documents inconnection with the tender offer for

Contract _____ and

anycontract resulting from it on our behalf.

Name	Address	Signature	Date

NOTE: This certificate is to be completed and signed by the full number of Partners necessaryto commit the Partnership. Attach additional pages if more space is required.



C. Certificate for Joint Venture

We, the undersigned, are submitting this tender offer in Joint Venture and hereby authorise Mr/Ms _____, an authorised signatory of the company

_____, acting in the capacity of lead partner, to sign all documents in connection with the tender offer for Contract _____

_____ and any contract resulting from it on our behalf.

This authorisation is evidenced by the attached power of attorney signed by legally authorised signatories of all the partners to the Joint Venture.

Furthermore we attach to this Schedule a copy of the joint venture agreement which incorporates a statement that all partners are liable jointly and severally for the execution of the contract and that the lead partner is authorised to incur liabilities, receive instructions and payments and be responsible for the entire execution of the contract for and on behalf of any and all the partners.

Name of firm	Address	Authorising signature, name (in caps) and capacity



Certificate for Sole Proprietor

I, _____, hereby confirm that I am the sole
owner of the business trading as _____.

Signed

Date

Name

Position

Sole Proprietor

T2.2-08: Record of Addenda to Tender Documents

This schedule as submitted confirms that the following communications received from the Employer before the submission of this tender offer, amending the tender documents, have been taken into account in this specific tender offer:

	Date	Title or Details
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		

Attach additional pages if more space is required.



T2.2-09 Letter/s of Good Standing with the Workmen’s Compensation Fund

Attached to this schedule is the Letter/s of Good Standing.1.

- 2.
- 3.
- 4.

Name of Company/Members of Joint Venture:

NOT APPLICABLE AT THIS STAGE

T2.2-10: Risk Elements

Tenderers to identify and evaluate the potential risk elements associated with the Works and possible mitigation thereof. The risk elements and the mitigation as identified thereof by the Tenderer are to be submitted.

If No Risks are identified "No Risks" must be stated on this schedule.

.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....

Tenders to note: Notwithstanding this information, all costs related to risk elements which are at the Contractor's risk are deemed to be included in the tenderer's offered total of the Prices.



T2.2-11: Availability of Equipment and Other Resources

The Tenderer to submit a list of all Equipment and other resources that will be used to execute the works as described in the Works Information. This could be the same information submitted for purposes of functionality scoring and more.

Equipment Type and Availability – Description	Hourly Rate	Number of Equipment	Details of Ownership

T2.2-12: Schedule of Proposed Subcontractors / Suppliers

The tenderer is required to provide details of all the sub-contractors that will be utilised in the execution of the *works*.

Tenderer to note that after award, any deviations from this list of proposed sub- contractors will be subject to acceptance by the Project Manager in terms of the Conditions of Contract.

Provide information of the Sub-contractors below:

Name of Proposed Subcontractor / Supplier			Address		Nature of work		Amount of Worked (R/c)	Percentage of work
% Black Owned	EME	QSE	Youth	Women	Disabilities	Rural/ Underdeveloped areas/ Townships	Military Veterans	
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Name of Proposed Subcontractor / Supplier			Address		Nature of work		Amount of Worked (R/c)	Percentage of work
% Black Owned	EME	QSE	Youth	Women	Disabilities	Rural/ Underdeveloped areas/ Townships	Military Veterans	
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Name of Proposed Subcontractor / Supplier			Address		Nature of work		Amount of Worked (R/c)	Percentage of work
% Black Owned	EME	QSE	Youth	Women	Disabilities	Rural/ Underdeveloped areas/ Townships	Military Veterans	
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Name of Proposed Subcontractor / Supplier			Address		Nature of work		Amount of Worked (R/c)	Percentage of work



% Black Owned	EME	QSE	Youth	Women	Disabilities	Rural/ Underdeveloped areas/ Townships	Military Veterans
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Name of Proposed Subcontractor / Supplier			Address		Nature of work	Amount of Worked (R/c)	Percentage of work
% Black Owned	EME	QSE	Youth	Women	Disabilities	Rural/ Underdeveloped areas/ Townships	Military Veterans
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Name of Proposed Subcontractor / Supplier			Address		Nature of work	Amount of Worked (R/c)	Percentage of work
% Black Owned	EME	QSE	Youth	Women	Disabilities	Rural/ Underdeveloped areas/ Townships	Military Veterans
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



T2.2-13: Site Establishment Requirements

Tenderers to indicate their Site establishment area requirements (in broad terms):

Series of horizontal dashed lines for input.

T2.2-14: ANNEX G Compulsory Enterprise Questionnaire

The following particulars hereunder must be furnished.

In the case of a **Joint Venture, separate enterprise questionnaires** in respect of each partner/member must be completed and submitted.

Section 1: Name of enterprise: _____

Section 2: VAT registration number, if any: _____

Section 3: CIDB registration number, if any: _____

Section 4: CSD number: _____

Section 5: Particulars of sole proprietors and partners in partnerships

Name	Identity number	Personal income tax number

* Complete only if sole proprietor or partnership and attach separate page if more than 3 partners

Section 6: Particulars of companies and close corporations

Company registration number _____

Close corporation number _____

Tax reference number: _____

Section 7: The attached SBD4 must be completed for each tender and be attached as a tender requirement.

Section 8: The attached SBD 6 must be completed for each tender and be attached as a requirement.

The undersigned, who warrants that he / she is duly authorised to do so on behalf of the enterprise:

- i) authorizes the Employer to obtain a tax clearance certificate from the South African Revenue Services that my / our tax matters are in order;
- ii) confirms that the neither the name of the enterprise or the name of any partner, manager, director or other person, who wholly or partly exercises, or may exercise, control over the enterprise appears on the Register of Tender Defaulters established in terms of the Prevention and Combating of Corrupt Activities Act of 2004;
- iii) confirms that no partner, member, director or other person, who wholly or partly exercises, or may exercise, control over the enterprise appears, has within the last five years been convicted of fraud or corruption;
- iv) confirms that I / we are not associated, linked or involved with any other tendering entities submitting tender offers and have no other relationship with any of the tenderers or those responsible for compiling the scope of work that could cause or be interpreted as a conflict of interest; and
- v) confirms that the contents of this questionnaire are within my personal knowledge and are to the best of my belief both true and correct.

Signed	Date
.....	
Name:	Position:
.....	
Enterprise name	
.....	

SBD 6.1

**PREFERENCE POINTS
 CLAIM FORM**

This preference form must form part of all bids invited. It contains general information and serves as a claim for preference points for Specific Goals contribution. Transnet will award preference points to companies who provide valid proof of evidence as per the table of evidence in paragraph 4.1 below.

1. GENERAL CONDITIONS

- 1.1 The following preference point systems are applicable to all bids:
 - the 80/20 system for requirements with a Rand value of up to R50 000 000 (all applicable taxes included); and
 - the 90/10 system for requirements with a Rand value above R50 000 000 (all applicable taxes included).
- 1.2 The value of this bid is estimated to be below R50 000 000 (all applicable taxes included) and therefore the 80/20 preference point system shall be applicable. Despite the stipulated preference point system, Transnet shall use the lowest acceptable bid to determine the applicable preference point system in a situation where all received acceptable bids are received outside the stated preference point system.
- 1.3 Preference points for this bid shall be awarded for:
 - (a) Price;
 - (b) B-BBEE Status Level of Contribution; and
 - (c) Any other specific goal determined in the Transnet preferential procurement policy
- 1.4 The maximum points for this bid are allocated as follows:

Description	Number of points (80/20 system)
Price	80
Specific Goals	Points
B-BBEE Status Level of Contributor 1 or 2	6.00
The promotion of enterprises located in the KwaZulu Natal province for work to be done or services to be rendered within this province	14.00
Non-Compliant and/or B-BBEE Level 3-8 contributors	0
TOTAL POINTS (Price + Specific Goals)	100

- 1.5 Failure on the part of a bidder to submit proof of evidence required for any of the specific goals together with the bid will be interpreted to mean that preference points for that specific goal are not claimed.
- 1.6 The purchaser reserves the right to require of a bidder, either before a bid is adjudicated or at any time subsequently, to substantiate any claim in regard to preferences, in any manner required by the purchaser.

2. DEFINITIONS

- (a) **"all applicable taxes"** includes value-added tax, pay as you earn, income tax, unemployment insurance fund contributions and skills development levies;
- (b) **"B-BBEE"** means broad-based black economic empowerment as defined in section 1 of the Broad-Based Black Economic Empowerment Act;
- (c) **"B-BBEE status level of contributor"** means the B-BBEE status received by a measured entity based on its overall performance using the relevant scorecard contained in the Codes of Good Practice on Black Economic Empowerment, issued in terms of section 9(1) of the Broad-Based Black Economic Empowerment Act;
- (d) **"bid"** means a written offer in a prescribed or stipulated form in response to an invitation by an organ of state for the supply/provision of services, works or goods, through price quotations, advertised competitive bidding processes or proposals;
- (e) **"Broad-Based Black Economic Empowerment Act"** means the Broad-Based Black Economic Empowerment Act, 2003 (Act No. 53 of 2003);
- (f) **"EME"** means an Exempted Micro Enterprise as defined by Codes of Good Practice under section 9 (1) of the Broad-Based Black Economic Empowerment Act, 2003 (Act No. 53 of 2003);
- (g) **"functionality"** means the ability of a bidder to provide goods or services in accordance with specification as set out in the bid documents
- (h) **"Price"** includes all applicable taxes less all unconditional discounts.
- (i) "Proof of B-BBEE Status Level of Contributor"**
- i) the B-BBEE status level certificate issued by an authorised body or person;
 - ii) a sworn affidavit as prescribed by the B-BBEE Codes of Good Practice; or
 - iii) any other requirement prescribed in terms of the B-BBEE Act.
- (j) **"QSE"** means a Qualifying Small Enterprise as defined by Codes of Good Practice under section 9 (1) of the Broad-Based Black Economic Empowerment Act, 2003 (Act No. 53 of 2003);
- (k) **"rand value"** means the total estimated value of a contract in South African currency, calculated at the time of bid invitations, and includes all applicable taxes and excise duties.
- (l) **"Specific goals"** means targeted advancement areas or categories of persons or groups either previously disadvantaged or falling within the scope of the Reconstruction and Development Programme identified by Transnet to be given preference in allocation of procurement contracts in line with section 2(1) of the PPPFA.

3. POINTS AWARDED FOR PRICE

3.1 T80/20 PREFERENCE POINT SYSTEMS

A maximum of 90 / 80 points is allocated for price on the following basis:80/20

$$80 \left(1 - \frac{Pt - Pmin}{Pmin} \right)$$

Where

- Ps = Points scored for comparative price of bid under consideration
- Pt = Comparative price of bid under consideration
- Pmin = Comparative price of lowest acceptable bid

4. EVIDENCE REQUIRED FOR CLAIMING SPECIFIC GOALS

4.1 In terms of Transnet Preferential Procurement Policy (TPPP) and Procurement Manuals, preference points must be awarded to a bidder for providing evidence in accordance with the table below:

Specific Goals	Acceptable Evidence
B-BBEE Status Level of Contributor 1 or 2	<p>A valid B-BBEE Certificate issued in terms of the Construction Sector Codes (CSC000) from a Verification Agency accredited by the South African Accreditation System [SANAS] / Sworn-Affidavit B-BBEE Certificate as per DTIC guidelines;</p> <p>In case of JV, a consolidated scorecard will be accepted as per DTIC guidelines.</p> <p>In case of EMEs and QSEs with 51% black ownership or more, a sworn affidavit confirming annual turnover and level of black ownership must be submitted with the tender. Complete Annexure C or Annexure D affidavit form / template attached in this RFP.</p>
The promotion of enterprises located in the KwaZulu province for work to be done or services to be rendered within this province	<ul style="list-style-type: none"> • CIPC Registration Documents, or • Proof of registered address of the entity (e.g., Municipality or Eskom Letter, Business accounts, Levy Statement, etc.)

4.2 The table below indicates the required proof of B-BBEE status depending on the category of enterprises:

Enterprise	B-BBEE Certificate & Sworn Affidavit
Large	Certificate issued by SANAS accredited verification agency
QSE	Certificate issued by SANAS accredited verification agency Sworn Affidavit signed by the authorised QSE representative and attested by a Commissioner of Oaths confirming annual turnover and black ownership (only black-owned QSEs - 51% to 100% Black owned) [Sworn affidavits must substantially comply with the format that can be obtained on the DTI’s website at www.dti.gov.za/economic_empowerment/bee_codes.jsp .]
EME	Sworn Affidavit signed by the authorised EME representative and attested by a Commissioner of Oaths confirming annual turnover and black ownership Certificate issued by CIPC (formerly CIPRO) confirming annual turnover and black ownership. Certificate issued by SANAS accredited verification agency only if the EME is being measured on the QSE scorecard

- 4.3 A trust, consortium or joint venture (including unincorporated consortia and joint ventures) must submit a consolidated B-BBEE Status Level verification certificate for every separate bid.
- 4.4 Tertiary Institutions and Public Entities will be required to submit their B-BBEE status level certificates in terms of the specialized scorecard contained in the B-BBEE Codes of Good Practice.
- 4.5 Bidders are to note that the rules pertaining to B-BBEE verification and other B-BBEE requirements may be changed from time to time by regulatory bodies such as National Treasury or the DTI. It is the Bidder’s responsibility to ensure that his/her bid complies fully with all B-BBEE requirements at the time of the submission of the bid.

5. BID DECLARATION

- 5.1 Bidders who claim points in respect of B-BBEE Status Level of Contribution must complete the following:

6. B-BBEE STATUS LEVEL OF CONTRIBUTION CLAIMED IN TERMS OF PARAGRAPHS 1.4 AND 6.1

- 6.1 B-BBEE Status Level of Contribution and Specific Goals: =(maximum of 20 points)
- 6.2 (Points claimed in respect of paragraph 6.1 must be in accordance with the table reflected in paragraph 4.1 and must be substantiated by relevant proof of B-BBEE status level of contributor.



7. SUB-CONTRACTING

7.1 Will any portion of the contract be sub-contracted?(**Tick applicable box**)

YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
-----	--------------------------	----	--------------------------

7.1.1 If yes, indicate:

- i) What percentage of the contract will be subcontracted.
%
- ii) The name of the sub-contractor.....
- iii) The B-BBEE status level of the sub-contractor.....
- iv) Whether the sub-contractor is an EME or QSE.

(Tick applicable box)

YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
-----	--------------------------	----	--------------------------

8. DECLARATION WITH REGARD TO COMPANY/FIRM

8.1 Name of company/firm:.....

8.2 VAT registration number:.....

8.3 Company registration number:.....

8.4 TYPE OF COMPANY/ FIRM

- Partnership/Joint Venture / Consortium
- One person business/sole propriety
- Close corporation
- Company
- (Pty) Limited

[TICK APPLICABLE BOX]



8.5 DESCRIBE PRINCIPAL BUSINESS ACTIVITIES (IN BRIEF):

.....
.....
.....
.....

8.6 COMPANY CLASSIFICATION

- Manufacturer
- Supplier
- Professional Service provider
- Other Service providers, e.g. transporter, etc. [TICK APPLICABLE BOX]

8.1 Total number of years the company/firm has been in business:.....

8.2 I/we, the undersigned, who is / are duly authorised to do so on behalf of the company/firm, certify that the points claimed, based on the B-BBE status level of contribution indicated in paragraphs 1.4 and 6.1 of the foregoing certificate, qualifies the company/ firm for the preference(s) shown and I / we acknowledge that:

- i) The information furnished is true and correct;
- ii) The preference points claimed are in accordance with the General Conditions as indicated in paragraph 1 of this form;
- iii) In the event of a contract being awarded as a result of points claimed as shown in paragraph 1.4 and 6.1, the contractor may be required to furnish documentary proof to the satisfaction of the purchaser that the claims are correct;
- iv) If a bidder submitted false information regarding its B-BBEE status level of contributor,, which will affect or has affected the evaluation of a bid, or where a bidder has failed to declare any subcontracting arrangements or any of the conditions of contract have not been fulfilled, the purchaser may, in addition to any other remedy it may have
 - (a) disqualify the person from the bidding process;
 - (b) recover costs, losses or damages it has incurred or suffered as a
 - (c) result of that person’s conduct;
 - (d) cancel the contract and claim any damages which it has suffered as a result of having to make less favourable arrangements due to such cancellation;
 - (e) if the successful bidder subcontracted a portion of the bid to another person without disclosing it, Transnet reserves the right to penalise the bidder up to 10 percent of the value of the contract;
 - (f) recommend that the bidder or contractor, its shareholders and directors, or only the shareholders and directors who acted on a fraudulent basis, be restricted by the National Treasury from obtaining business from any organ of state for a period not exceeding 10 years, after the audi alteram partem (hear the other side) rule has been applied; and
 - (g) forward the matter for criminal prosecution.



WITNESSES

1.

2.

.....

SIGNATURE(S) OF BIDDERS(S)

DATE:



BIDDER’S DISCLOSURE

SBD4

1. PURPOSE OF THE FORM

Any person (natural or juristic) may make an offer or offers in terms of this invitation to bid. In line with the principles of transparency, accountability, impartiality, and ethics as enshrined in the Constitution of the Republic of South Africa and further expressed in various pieces of legislation, it is required for the bidder to make this declaration in respect of the details required hereunder.

Where a person/s are listed in the Register for Tender Defaulters and / or the List of Restricted Suppliers, that person will automatically be disqualified from the bid process.

2. Bidder’s declaration

2.1 Is the bidder, or any of its directors / trustees / shareholders / members / partners or any person having a controlling interest² in the enterprise, employed by the state? **YES/NO**

2.1.1 If so, furnish particulars of the names, individual identity numbers, and, if applicable, state employee numbers of sole proprietor/ directors / trustees / shareholders / members/ partners or any person having a controlling interest in the enterprise, in table below.

Full Name	Identity Number	Name of State institution

2.2 Do you, or any person connected with the bidder, have a relationship with any person who is employed by the procuring institution? **YES/NO**

2.2.1 If so, furnish particulars:

² the power, by one person or a group of persons holding the majority of the equity of an enterprise, alternatively, the person/s having the deciding vote or power to influence or to direct the course and decisions of the enterprise.

2.3 Does the bidder or any of its directors / trustees / shareholders / members / partners or any person having a controlling interest in the enterprise have any interest in any other related enterprise whether or not they are bidding for this contract? **YES/NO**

2.3.1 If so, furnish particulars:

.....
.....

3 DECLARATION

I, _____ the
undersigned,(name)... _____ i
n submitting
the accompanying bid, do hereby make the following statements that I
certify to be true and complete in every respect:

- 3.1 I have read and I understand the contents of this disclosure;
- 3.2 I understand that the accompanying bid will be disqualified if this disclosure is found not to be true and complete in every respect;
- 3.3 The bidder has arrived at the accompanying bid independently from, and without consultation, communication, agreement or arrangement with any competitor. However, communication between partners in a joint venture or consortium³ will not be construed as collusive bidding.
- 3.4 In addition, there have been no consultations, communications, agreements or arrangements with any competitor regarding the quality, quantity, specifications, prices, including methods, factors or formulas used to calculate prices, market allocation, the intention or decision to submit or not to submit the bid, bidding with the intention not to win the bid and conditions or delivery particulars of the products or services to which this bid invitation relates.
- 3.4 The terms of the accompanying bid have not been, and will not be, disclosed by the bidder, directly or indirectly, to any competitor, prior to the date and time of the official bid opening or of the awarding of the contract.
- 3.5 There have been no consultations, communications, agreements or arrangements made by the bidder with any official of the procuring institution in relation to this procurement process prior to and during the bidding process except to provide clarification on the bid submitted where so required by the institution; and the bidder was not involved in the drafting of the specifications or terms of reference for this bid.

³ Joint venture or Consortium means an association of persons for the purpose of combining their expertise, property, capital, efforts, skill and knowledge in an activity for the execution of a contract.

3.6 I am aware that, in addition and without prejudice to any other remedy provided to combat any restrictive practices related to bids and contracts, bids that are suspicious will be reported to the Competition Commission for investigation and possible imposition of administrative penalties in terms of section 59 of the Competition Act No 89 of 1998 and or may be reported to the National Prosecuting Authority (NPA) for criminal investigation and or may be restricted from conducting business with the public sector for a period not exceeding ten



(10) years in terms of the Prevention and Combating of Corrupt Activities Act No 12 of 2004 or any other applicable legislation.

I CERTIFY THAT THE INFORMATION FURNISHED IN PARAGRAPHS 1, 2 and 3 ABOVE IS CORRECT.

I ACCEPT THAT THE STATE MAY REJECT THE BID OR ACT AGAINST ME IN TERMS OF PARAGRAPH 6 OF PFMA SCM INSTRUCTION 03 OF 2021/22 ON PREVENTING AND COMBATING ABUSE IN THE SUPPLY CHAIN MANAGEMENT SYSTEM SHOULD THIS DECLARATION PROVE TO BE FALSE.

.....
Signature

.....
Date

.....
Position

.....
Name of bidder



T2.2-15: Capacity and Ability to meet Delivery Schedule

Note to tenderers:

The Tenderer is required to demonstrate to the Employer that the tenderer has sufficient current and future capacity to carry out the work as detailed in the Works Information and that the tenderer has the capacity and plans in place to meet the required delivery schedule as required. To this end, the following must be provided by the Tenderer:

A schedule detailing the following:

- Maximum quantity of work concurrently performed by the Tenderer in the recent past in order to illustrate his potential capacity to design, fabricate and/or construct work of a similar nature;
- Current and future work on his order book, showing quantity and type of equipment;
- Quantity of work for which the Tenderer has tenders in the market or is currently tendering on;
- The work as covered in this Works Information, planned and scheduled as per the Tenderer’s capacities and methods but meeting the required delivery schedule.

Index of documentation attached to this schedule:

.....
.....
.....
.....
.....
.....



T2.2-16 Non-Disclosure Agreement

[..... 2024]

Note to tenderers: This Non-Disclosure Agreement is to be completed and signed by an authorised signatory:

THIS AGREEMENT is made effective as of day of 2024.
.....

by and between:

TRANSNET SOC LTD

(Registration No. 1990/000900/30), a company incorporated and existing under the laws of South Africa, having its principal place of business at Transnet Corporate Centre 138 Eloff Street , Braamfontein , Johannesburg 2000

and

.....
.....(Registration No:), a private company incorporated and existing under the laws of South Africa having its principal place of business at.....
.....
.....

WHEREAS

Transnet and the Company wish to exchange Information [as defined below] and it is envisaged that each party may from time to time receive Information relating to the other in respect thereof. In consideration of each party making available to the other such Information, the parties jointly agree that any dealings between them shall be subject to the terms and conditions of this Agreement which themselves will be subject to the parameters of the Tender Document.

IT IS HEREBY AGREED

1. INTERPRETATION

In this Agreement:

1.1 **Agents** mean directors, officers, employees, agents, professional advisers, contractors or sub-contractors, or any Group member;

1.2 **Bid** or **Bid Document** (hereinafter Tender) means Transnet’s Request for Information

[**RFI**] Request for Proposal [**RFP**] or Request for Quotation [**RFQ**], as the case may be;

1.3 **Confidential Information** means any information or other data relating to one party [the **Disclosing Party**] and/or the business carried on or proposed or intended to be carried on by that party and which is made available for the purposes of the Bid to the other party [the **Receiving Party**] or its Agents by the Disclosing Party or its Agents or recorded in agreed minutes following oral disclosure and any other information otherwise made available by the Disclosing Party or its Agents to the Receiving Party or its Agents, whether before, on or after the date of this Agreement, and whether in writing or otherwise, including any information, analysis or specifications derived from, containing or reflecting such information but excluding information which:

1.3.1 is publicly available at the time of its disclosure or becomes publicly available [other than as a result of disclosure by the Receiving Party or any of its Agents contrary to the terms of this Agreement]; or

1.3.2 was lawfully in the possession of the Receiving Party or its Agents [as can be demonstrated by its written records or other reasonable evidence] free of any restriction as to its use or disclosure prior to its being so disclosed; or

1.3.3 following such disclosure, becomes available to the Receiving Party or its Agents [as can be demonstrated by its written records or other reasonable evidence] from a source other than the Disclosing Party or its Agents, which source is not bound by any duty of confidentiality owed, directly or indirectly, to the Disclosing Party in relation to such information;

1.4 **Group** means any subsidiary, any holding company and any subsidiary of any holding company of either party; and

1.5 **Information** means all information in whatever form including, without limitation, any information relating to systems, operations, plans, intentions, market opportunities, know-how, trade secrets and business affairs whether in writing, conveyed orally or by machine-readable medium.

2. **CONFIDENTIAL INFORMATION**

2.1 All Confidential Information given by one party to this Agreement [the **Disclosing Party**] to the other party [the **Receiving Party**] will be treated by the Receiving Party as secret and confidential and will not, without the Disclosing Party's written consent, directly or indirectly communicate or disclose [whether in writing or

orally or in any other manner] Confidential Information to any other person other than in accordance with the terms of this Agreement.

- 2.2 The Receiving Party will only use the Confidential Information for the sole purpose of technical and commercial discussions between the parties in relation to the Tender or for the subsequent performance of any contract between the parties in relation to the Tender.
- 2.3 Notwithstanding clause 2.1 above, the Receiving Party may disclose Confidential Information:
- 2.3.1 to those of its Agents who strictly need to know the Confidential Information for the sole purpose set out in clause 2.2 above, provided that the Receiving Party shall ensure that such Agents are made aware prior to the disclosure of any part of the Confidential Information that the same is confidential and that they owe a duty of confidence to the Disclosing Party. The Receiving Party shall at all times remain liable for any actions of such Agents that would constitute a breach of this Agreement; or
- 2.3.2 to the extent required by law or the rules of any applicable regulatory authority, subject to clause 2.4 below.
- 2.4 In the event that the Receiving Party is required to disclose any Confidential Information in accordance with clause 2.3.2 above, it shall promptly notify the Disclosing Party and cooperate with the Disclosing Party regarding the form, nature, content and purpose of such disclosure or any action which the Disclosing Party may reasonably take to challenge the validity of such requirement.
- 2.5 In the event that any Confidential Information shall be copied, disclosed or used otherwise than as permitted under this Agreement then, upon becoming aware of the same, without prejudice to any rights or remedies of the Disclosing Party, the Receiving Party shall as soon as practicable notify the Disclosing Party of such event and if requested take such steps [including the institution of legal proceedings] as shall be necessary to remedy [if capable of remedy] the default and/or to prevent further unauthorised copying, disclosure or use.
- 2.6 All Confidential Information shall remain the property of the Disclosing Party and its disclosure shall not confer on the Receiving Party any rights, including intellectual property rights over the Confidential Information whatsoever, beyond those contained in this Agreement.

3. RECORDS AND RETURN OF INFORMATION

- 3.1 The Receiving Party agrees to ensure proper and secure storage of all Information

and any copies thereof.

3.2 The Receiving Party shall keep a written record, to be supplied to the Disclosing Party upon request, of the Confidential Information provided and any copies made thereof and, so far as is reasonably practicable, of the location of such Confidential Information and any copies thereof.

3.3 The Company shall, within 7 [seven] days of receipt of a written demand from Transnet:

3.3.1 return all written Confidential Information [including all copies]; and

3.3.2 expunge or destroy any Confidential Information from any computer, word processor or other device whatsoever into which it was copied, read or programmed by the Company or on its behalf.

3.4 The Company shall on request supply a certificate signed by a director as to its full compliance with the requirements of clause 3.3.2 above.

4. ANNOUNCEMENTS

4.1 Neither party will make or permit to be made any announcement or disclosure of its prospective interest in the Tender without the prior written consent of the other party.

4.2 Neither party shall make use of the other party's name or any information acquired through its dealings with the other party for publicity or marketing purposes without the prior written consent of the other party.

5. DURATION

The obligations of each party and its Agents under this Agreement shall survive the termination of any discussions or negotiations between the parties regarding the Tender and continue thereafter for a period of 5 [five] years.

6. PRINCIPAL

Each party confirms that it is acting as principal and not as nominee, agent or broker for any other person and that it will be responsible for any costs incurred by it or its advisers in considering or pursuing the Tender and in complying with the terms of this Agreement

7. ADEQUACY OF DAMAGES

Nothing contained in this Agreement shall be construed as prohibiting the Disclosing Party from pursuing any other remedies available to it, either at law or in equity, for any such threatened or actual breach of this Agreement, including specific performance, recovery of damages or otherwise.



8. PRIVACY AND DATA PROTECTION

- 8.1 The Receiving Party undertakes to comply with South Africa’s general privacy protection in terms Section14 of the Bill of Rights in connection with this Tender and shall procure that its personnel shall observe the provisions of such Act [as applicable] or any amendments and re-enactments thereof and any regulations made pursuant thereto.
- 8.2 The Receiving Party warrants that it and its Agents have the appropriate technical and organisational measures in place against unauthorised or unlawful processing of data relating to the Tender and againstaccidental loss or destruction of, or damage to such data held or processed by them.

9. GENERAL

- 9.1 Neither party may assign the benefit of this Agreement, or any interest hereunder, except with the prior written consent of the other, save that Transnet may assign this Agreement at any time to any member of the Transnet Group.
- 9.2 No failure or delay in exercising any right, power or privilege under this Agreement will operate as a waiverof it, nor will any single or partial exercise of it preclude any further exercise or the exercise of any right,power or privilege under this Agreement or otherwise.
- 9.3 The provisions of this Agreement shall be severable in the event that any of its provisions are held by a court of competent jurisdiction or other applicable authority to be invalid, void or otherwise unenforceable, and the remaining provisions shall remain enforceable to the fullest extent permitted by law.
- 9.4 This Agreement may only be modified by a written agreement duly signed by persons authorised on behalfof each party.
- 9.5 Nothing in this Agreement shall constitute the creation of a partnership, joint venture or agency between the parties.
- 9.6 This Agreement will be governed by and construed in accordance with South African law and the parties irrevocably submit to the exclusive jurisdiction of the South African courts.

Signed: _____ Date: _____

Name: _____ Position: _____

Tenderer: _____



T2.2-17: RFP DECLARATION FORM

NAME OF COMPANY: _____

We _____ do hereby certify that:

1. Transnet has supplied and we have received appropriate tender offers to any/all questions(as applicable) which were submitted by ourselves for tender clarification purposes;
2. we have received all information we deemed necessary for the completion of this Tender;
3. at no stage have we received additional information relating to the subject matter of thistender from Transnet sources, other than information formally received from the designated Transnet contact(s) as nominated in the tender documents;
4. we are satisfied, insofar as our company is concerned, that the processes and proceduresadopted by Transnet in issuing this tender and the requirements requested from tenderersin responding to this tender have been conducted in a fair and transparent manner; and
5. furthermore, we acknowledge that a direct relationship exists between a family member and/or an owner / member / director / partner / shareholder (unlisted companies) of ourcompany and an employee or board member of the Transnet Group as indicated below:[Respondent to indicate if this section is not applicable]

FULL NAME OF OWNER/MEMBER/DIRECTOR/

PARTNER/SHAREHOLDER: _____

ADDRESS:

Indicate nature of relationship with Transnet:

[Failure to furnish complete and accurate information in this regard may lead to the



disqualification of your response and may preclude Respondent from doing future business with Transnet]

6. We declare, to the extent that we are aware or become aware of any relationship between ourselves and Transnet (other than any existing and appropriate business relationship with Transnet) which could unfairly advantage our company in the forthcoming adjudication process, we shall notify Transnet immediately in writing of such circumstances.
7. We accept that any dispute pertaining to this tender will be resolved through the Ombudsman process and will be subject to the Terms of Reference of the Ombudsman. The Ombudsman process must first be exhausted before judicial review of a decision is sought. (Refer "Important Notice to respondents" below).
8. We further accept that Transnet reserves the right to reverse a tender award or decision based on the recommendations of the Ombudsman without having to follow a formal court process to have such award or decision set aside.
9. We have acquainted ourselves and agree with the content of T2.2-22 "Service Provider Integrity Pact".

For and on behalf of
.....
duly authorised thereto
Name:
Signature:
Date:

IMPORTANT NOTICE TO TENDERERS

- Transnet has appointed a Procurement Ombudsman to investigate any material complaint in respect of tenders exceeding R5,000,000.00 (five million S.A. Rand) in value. Should a Tenderer have any material concern regarding a tender process which meets this value threshold, a complaint may be lodged with Transnet’s Procurement Ombudsman for further investigation.
- It is incumbent on the Tenderer to familiarise himself/herself with the Terms of Reference for the Transnet Procurement Ombudsman, details of which are available for review at Transnet’s website www.transnet.net.

- An official complaint form may be downloaded from this website and submitted, together with any supporting documentation, within the prescribed period, to procurement.ombud@transnet.net
- For transactions below the R5,000,000.00 (five million S.A. Rand) threshold, a complaint may be lodged with the Chief Procurement Officer of the relevant Transnet Operating Division.
- All Tenderers should note that a complaint must be made in good faith. If a complaint is made in bad faith, Transnet reserves the right to place such a tenderer on its List of Excluded Bidders.

T2.2-18: REQUEST FOR PROPOSAL – BREACH OF LAW

NAME OF COMPANY: _____

I / We

do hereby certify that **I/we have/have not been** found guilty during the preceding 5 (five) years of a serious breach of law, including but not limited to a breach of the Competition Act, 89 of 1998, by a court of law, tribunal or other administrative body. The type of breach that the Tenderer is required to disclose excludes relatively minor offences or misdemeanours, e.g. traffic offences.

Where found guilty of such a serious breach, please disclose:

NATURE OF BREACH:

DATE OF BREACH:

Furthermore, I/we acknowledge that Transnet SOC Ltd reserves the right to exclude any Tenderer from the tendering process, should that person or company have been found guilty of a serious breach of law, tribunal or regulatory obligation.

Signed on this _____ day of _____ 2024__

SIGNATURE OF TENDER

T2.2-19: Certificate of Acquaintance with Tender Documents

NAME OF TENDERING ENTITY:

1. By signing this certificate I/we acknowledge that I/we have made myself/ourselves thoroughly familiar with, and agree with all the conditions governing this RFP. This includes those terms and conditions of the Contract, the Supplier Integrity Pact, Non- Disclosure Agreement etc. contained in any printed form stated to form part of the documents thereof, but not limited to those listed in this clause.
2. I/we furthermore agree that Transnet SOC Ltd shall recognise no claim from me/us for relief based on an allegation that I/we overlooked any tender/contract condition or failed to take it into account for the purpose of calculating my/our offered prices or otherwise.
3. I/we understand that the accompanying Tender will be disqualified if this Certificate is found not to be true and complete in every respect.
4. For the purposes of this Certificate and the accompanying Tender, I/we understand that the word "competitor" shall include any individual or organisation, other than the Tenderer, whether or not affiliated with the Tenderer, who:
 - a) has been requested to submit a Tender in response to this Tender invitation;
 - b) could potentially submit a Tender in response to this Tender invitation, based on their qualifications, abilities or experience; and
 - c) provides the same Services as the Tenderer and/or is in the same line of business as the Tenderer
5. The Tenderer has arrived at the accompanying Tender independently from, and without consultation, communication, agreement or arrangement with any competitor. However communication between partners in a joint venture or consortium will not be construed as collusive Tendering.
6. In particular, without limiting the generality of paragraph 5 above, there has been no consultation, communication, agreement or arrangement with any competitor regarding:
 - a) prices;

- b) geographical area where Services will be rendered [market allocation]
 - c) methods, factors or formulas used to calculate prices;
 - d) the intention or decision to submit or not to submit, a Tender;
 - e) the submission of a tender which does not meet the specifications and conditions of the tender; or
 - f) Tendering with the intention not winning the tender.
7. In addition, there have been no consultations, communications, agreements or arrangements with any competitor regarding the quality, quantity, specifications and conditions or delivery particulars of the Services to which this tender relates.
8. The terms of the accompanying tender have not been, and will not be, disclosed by the Tenderer, directly or indirectly, to any competitor, prior to the date and time of the official tender opening or of the awarding of the contract.
9. I/We am/are aware that, in addition and without prejudice to any other remedy provided to combat any restrictive practices related to tenders and contracts, tenders that are suspicious will be reported to the Competition Commission for investigation and possible imposition of administrative penalties in terms of section 59 of the Competition Act No 89 of 1998 and/or may be reported to the National Prosecuting Authority [NPA] for criminal investigation. In addition, Tenderers that submit suspicious tenders may be restricted from conducting business with the public sector for a period not exceeding 10[ten] years in terms of the Prevention and Combating of Corrupt Activities Act No 12 of 2004 or any other applicable legislation.

Signed on this _____ day of _____ 2024__

SIGNATURE OF TENDERER

T2.2-20: Service Provider Integrity Pact

Important Note: All potential tenderers must read this document and certify in the RFP Declaration Form that they have acquainted themselves with, and agree with the content.

The contract with the successful tenderer will automatically incorporate this Integrity Pact and shall be deemed as part of the final concluded contract.

INTEGRITY PACT

Between

TRANSNET SOC LTD

Registration Number: 1990/000900/30

("Transnet")

and

The Contractor (hereinafter referred to as the "Tenderer/Service Providers/Contractor")

PREAMBLE

Transnet values full compliance with all relevant laws and regulations, ethical standards and the principles of economical use of resources, fairness and transparency in its relations with its Tenderers/Service Providers/Contractors.

In order to achieve these goals, Transnet and the Tenderer/Service Provider/Contractor hereby enter into this agreement hereinafter referred to as the "Integrity Pact" which will form part of the Tenderer's/Service Provider's/Contractor's application for registration with Transnet as a vendor.

The general purpose of this Integrity Pact is to agree on avoiding all forms of dishonesty, fraud and corruption by following a system that is fair, transparent and free from any undue influence prior to, during and subsequent to the currency of any procurement and/or reverse logistics event and any further contract to be entered into between the Parties, relating to such event.

All Tenderers/Service Providers/Contractors will be required to sign and comply with undertakings contained in this Integrity Pact, should they want to be registered as a Transnet vendor.

1 OBJECTIVES

- 1.1 Transnet and the Tenderer/Service Provider/Contractor agree to enter into this Integrity Pact, to avoid all forms of dishonesty, fraud and corruption including practices that are anti-competitive in nature, negotiations made in bad faith and under-pricing by following a system that is fair, transparent and free from any influence/unprejudiced dealings prior to, during and subsequent to the currency of the contract to be entered into with a view to:

- a) Enable Transnet to obtain the desired contract at a reasonable and competitive price in conformity to the defined specifications of the works, goods and services; and
- b) Enable Tenderers/Service Providers/Contractors to abstain from bribing or participating in any corrupt practice in order to secure the contract.

2 COMMITMENTS OF TRANSNET

Transnet commits to take all measures necessary to prevent dishonesty, fraud and corruption and to observe the following principles:

- 2.1 Transnet hereby undertakes that no employee of Transnet connected directly or indirectly with the sourcing event and ensuing contract, will demand, take a promise for or accept directly or through intermediaries any bribe, consideration, gift, reward, favour or any material or immaterial benefit or any other advantage from the Tenderer, either for themselves or for any person, organisation or thirdparty related to the contract in exchange for an advantage in the tendering process, Tender evaluation, contracting or implementation process related to any contract.
- 2.2 Transnet will, during the registration and tendering process treat all Tenderers/Service Providers/Contractor with equity, transparency and fairness. Transnet will in particular, before and during the registration process, provide to all Tenderers/ Service Providers/Contractors the same information and will not provide to any Tenderers/Service Providers/Contractors confidential/additional information through which the Tenderers/Service Providers/Contractors could obtain an advantage in relation to any tendering process.
- 2.3 Transnet further confirms that its employees will not favour any prospective Tenderers/Service Providers/Contractors in any form that could afford an undue advantage to a particular Tenderer during the tendering stage, and will further treat all Tenderers/Service Providers/Contractors participating in the tendering process in a fair manner.
- 2.4 Transnet will exclude from the tender process such employees who have any personal interest in the Tenderers/Service Providers/Contractors participating in the tendering process.

3 OBLIGATIONS OF THE TENDERER / SERVICE PROVIDER

- 3.1 Transnet has a '**Zero Gifts**' Policy. No employee is allowed to accept gifts, favours or benefits.
 - a) Transnet officials and employees **shall not** solicit, give or accept, or from agreeing to solicit, give, accept or receive directly or indirectly, any gift, gratuity, favour, entertainment, loan, or anything of monetary value, from any person or juridical entities in the course of official duties or in connection with any operation being managed by, or any transaction which may be affected by the functions of their office.
 - b) Transnet officials and employees **shall not** solicit or accept gifts of any kind, from

- vendors, suppliers, customers, potential employees, potential vendors, and suppliers, or any other individual or organisation irrespective of the value.
- c) Under **no circumstances** should gifts, business courtesies or hospitality packages be accepted from or given to prospective suppliers participating in a tender process at the respective employee's Operating Division, regardless of retail value.
 - d) Gratuities, bribes or kickbacks of any kind must never be solicited, accepted or offered, either directly or indirectly. This includes money, loans, equity, special privileges, personal favours, benefit or services. Such favours will be considered to constitute corruption.
 - e) The Tenderer/Service Provider/Contractor commits itself to take all measures necessary to prevent corrupt practices, unfair means and illegal activities during any stage of its Tender or during any ensuing contract stage in order to secure the contract or in furtherance to secure it and in particular the Tenderer/Service Provider/Contractor commits to the following:
 - f) The Tenderer/Service Provider/Contractor will not, directly or through any other person or firm, offer, promise or give to Transnet or to any of Transnet's employees involved in the tendering process or to any third person any material or other benefit or payment, in order to obtain in exchange an advantage during the tendering process; and
 - g) The Tenderer/Service Provider/Contractor will not offer, directly or through intermediaries, any bribe, gift, consideration, reward, favour, any material or immaterial benefit or other advantage, commission, fees, brokerage or inducement to any employee of Transnet, connected directly or indirectly with the tendering process, or to any person, organisation or third party related to the contract in exchange for any advantage in the tendering, evaluation, contracting and implementation of the contract.
 - h) The Tenderer/Service Provider/Contractor will not collude with other parties interested in the contract to preclude a competitive Tender price, impair the transparency, fairness and progress of the tendering process, Tender evaluation, contracting and implementation of the contract. The Tenderer / Service Provider further commits itself to delivering against all agreed upon conditions as stipulated within the contract.
 - i) The Tenderer/Service Provider/Contractor will not enter into any illegal or dishonest agreement or understanding, whether formal or informal with other Tenderers/Service Providers/Contractors. This applies in particular to certifications, submissions or non-submission of documents or actions that are restrictive or to introduce cartels into the tendering process.
 - j) The Tenderer/Service Provider/Contractor will not commit any criminal offence under the relevant anti-corruption laws of South Africa or any other country. Furthermore, the Tenderer/Service Provider/Contractor will not use for illegitimate purposes or for restrictive purposes or personal gain, or pass on to others, any information provided by Transnet as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically.

- k) A Tenderer/Service Provider/Contractor of foreign origin shall disclose the name and address of its agents or representatives in South Africa, if any, involved directly or indirectly in the registration or tendering process. Similarly, the Tenderer / Service Provider / Contractor of South African nationality shall furnish the name and address of the foreign principals, if any, involved directly or indirectly in the registration or tendering process.
- l) The Tenderer/Service Provider/Contractor will not misrepresent facts or furnish false or forged documents or information in order to influence the tendering process to the advantage of the Tenderer/Service Provider/Contractor or detriment of Transnet or other competitors.
- m) Transnet may require the Tenderer/Service Provider/Contractor to furnish Transnet with a copy of its code of conduct. Such code of conduct must address the compliance programme for the implementation of the code of conduct and reject the use of bribes and other dishonest and unethical conduct.
- n) The Tenderer/Service Provider/Contractor will not instigate third persons to commit offences outlined above or be an accessory to such offences.
- o) The Tenderer/Service Provider/Contractor confirms that they will uphold the ten principles of the United Nations Global Compact (UNGC) in the fields of Human Rights, Labour, Anti-Corruption and the Environment when undertaking business with Transnet as follows:

Human Rights

Principle 1: Businesses should support and respect the protection of internationally proclaimed human rights; and

Principle 2: make sure that they are not complicit in human rights abuses.

Labour

- p) Principle 3: Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining;
- Principle 4: the elimination of all forms of forced and compulsory labour;
 - Principle 5: the effective abolition of child labour; and
 - Principle 6: the elimination of discrimination in respect of employment and occupation.

Environment

- Principle 7: Businesses should support a precautionary approach to environmental challenges;
- Principle 8: undertake initiatives to promote greater environmental responsibility; and
- Principle 9: encourage the development and diffusion of environmentally friendly technologies.

Anti-Corruption

- Principle 10: Businesses should work against corruption in all its forms, including extortion and bribery.

4 INDEPENDENT TENDERING

- 4.1 For the purposes of that Certificate in relation to any submitted Tender, the Tenderer declares to fully understand that the word "competitor" shall include any individual or organisation, other than the Tenderer, whether or not affiliated with the Tenderer, who:
- a) has been requested to submit a Tender in response to this Tender invitation;
 - b) could potentially submit a Tender in response to this Tender invitation, based on their qualifications, abilities or experience; and
 - c) provides the same Goods and Services as the Tenderer and/or is in the same line of business as the Tenderer.
- 4.2 The Tenderer has arrived at his submitted Tender independently from, and without consultation, communication, agreement or arrangement with any competitor. However communication between partners in a joint venture or consortium will not be construed as collusive tendering.
- 4.3 In particular, without limiting the generality of paragraph 5 above, there has been no consultation, communication, agreement or arrangement with any competitor regarding:
- a) prices;
 - b) geographical area where Goods or Services will be rendered [market allocation];
 - c) methods, factors or formulas used to calculate prices;
 - d) the intention or decision to submit or not to submit, a Tender;
 - e) the submission of a Tender which does not meet the specifications and conditions of the RFP; or
 - f) tendering with the intention of not winning the Tender.
- 4.4 In addition, there have been no consultations, communications, agreements or arrangements with any competitor regarding the quality, quantity, specifications and conditions or delivery particulars of the Goods or Services to which his/her tender relates.
- 4.5 The terms of the Tender as submitted have not been, and will not be, disclosed by the Tenderer, directly or indirectly, to any competitor, prior to the date and time of the official Tender opening or of the awarding of the contract.
- 4.6 Tenderers are aware that, in addition and without prejudice to any other remedy provided to combat any restrictive practices related to Tenders and contracts, Tenders that are suspicious will be reported to the Competition Commission for investigation and possible imposition of administrative penalties in terms of section 59 of the Competition Act No 89 of 1998 and/or may be reported to the National Prosecuting Authority [NPA] for criminal investigation and/or may be restricted from conducting business with the public sector for a period not exceeding 10 [ten] years in terms of the Prevention and Combating of Corrupt

Activities Act No 12 of 2004 or any other applicable legislation.

- 4.7 Should the Tenderer find any terms or conditions stipulated in any of the relevant documents quoted in the Tender unacceptable, it should indicate which conditions are unacceptable and offer alternatives by written submission on its company letterhead, attached to its submitted Tender. Any such submission shall be subject to review by Transnet's Legal Counsel who shall determine whether the proposed alternative(s) are acceptable or otherwise, as the case may be.

5 DISQUALIFICATION FROM TENDERING PROCESS

- 5.1 If the Tenderer/Service Provider/Contractor has committed a transgression through a violation of section 3 of this Integrity Pact or in any other form such as to put its reliability or credibility as a Tenderer/Service Provider/Contractor into question, Transnet may reject the Tenderer's / Service Provider's / Contractor's application from the registration or tendering process and remove the Tenderer/Service Provider/Contractor from its database, if already registered.
- 5.2 If the Tenderer/Service Provider/Contractor has committed a transgression through a violation of section 3, or any material violation, such as to put its reliability or credibility into question. Transnet may after following due procedures and at its own discretion also exclude the Tenderer/Service Provider
- 5.3 Contractor from future tendering processes. The imposition and duration of the exclusion will be determined by the severity of the transgression. The severity will be determined by the circumstances of the case, which will include amongst others the number of transgressions, the position of the transgressors within the company hierarchy of the Tenderer/Service Provider/Contractor and the amount of the damage. The exclusion will be imposed for up to a maximum of 10 (ten) years. However, Transnet reserves the right to impose a longer period of exclusion, depending on the gravity of the misconduct.
- 5.4 If the Tenderer/Service Provider/Contractor can prove that it has restored the damage caused by it and has installed a suitable corruption prevention system, or taken other remedial measures as the circumstances of the case may require, Transnet may at its own discretion revoke the exclusion or suspend the imposed penalty.

6 TRANSNET'S LIST OF EXCLUDED TENDERERS (BLACKLIST)

- 6.1 The process of restriction is used to exclude a company/person from conducting future business with Transnet and other organs of state for a specified period. No Tender shall be awarded to a Tenderer whose name (or any of its members, directors, partners or trustees) appear on the Register of Tender Defaulters kept by National Treasury, or who have been placed on National Treasury's List of Restricted Suppliers. Transnet reserves the right to withdraw an award, or cancel a contract concluded with a Tenderer should it be established, at any time, that a tenderer has been restricted with National Treasury by another government institution.
- 6.2 All the stipulations on Transnet's restriction process as laid down in Transnet's Supply Chain Policy and Procurement Procedures Manual (CPM included) are included herein by way of reference. Below follows a condensed summary of this restriction procedure.

- 6.3 On completion of the restriction procedure, Transnet will submit the restricted entity's details (including the identity number of the individuals and registration number of the entity) to National Treasury for placement on National Treasury's Database of Restricted Suppliers for the specified period of exclusion. National Treasury will make the final decision on whether to restrict an entity from doing business with any organ of state for a period not exceeding 10 years and place the entity concerned on the Database of Restricted Suppliers published on its official website.
- 6.4 The decision to restrict is based on one of the grounds for restriction. The standard of proof to commence the restriction process is whether a "prima facie" (i.e. on the face of it) case has been established.
- 6.5 Depending on the seriousness of the misconduct and the strategic importance of the Goods/Services, in addition to restricting a company/person from future
- 6.6 business, Transnet may decide to terminate some or all existing contracts with the company/person as well.
- 6.7 A Service Provider or Contractor to Transnet may not subcontract any portion of the contract to a blacklisted company.
- 6.8 Grounds for blacklisting include: If any person/Enterprise which has submitted a Tender, concluded a contract, or, in the capacity of agent or subcontractor, has been associated with such Tender or contract:
- a) Has, in bad faith, withdrawn such Tender after the advertised closing date and time for the receipt of Tenders;
 - b) has, after being notified of the acceptance of his Tender, failed or refused to sign a contract when called upon to do so in terms of any condition forming part of the Tender documents;
 - c) has carried out any contract resulting from such Tender in an unsatisfactory manner or has breached any condition of the contract;
 - d) has offered, promised or given a bribe in relation to the obtaining or execution of the contract;
 - e) has acted in a fraudulent or improper manner or in bad faith towards Transnet or any Government Department or towards any public body, Enterprise or person;
 - f) has made any incorrect statement in a certificate or other communication with regard to the Local Content of his Goods or his B-BBEE status and is unable to prove to the satisfaction of Transnet that:
 - g) he made the statement in good faith honestly believing it to be correct; and
 - h) before making such statement he took all reasonable steps to satisfy himself of its correctness;
 - i) caused Transnet damage, or to incur costs in order to meet the contractor's
 - j) requirements and which could not be recovered from the contractor;
 - k) has litigated against Transnet in bad faith.
- 6.9 Grounds for blacklisting include a company/person recorded as being a company or person prohibited from doing business with the public sector on National Treasury's database of Restricted Service Providers or Register of Tender Defaulters.

6.10 Companies associated with the person/s guilty of misconduct (i.e. entities owned, controlled or managed by such persons), any companies subsequently formed by the person(s) guilty of the misconduct and/or an existing company where such person(s) acquires a controlling stake may be considered for blacklisting. The decision to extend the blacklist to associated companies will be at the sole discretion of Transnet.

7 PREVIOUS TRANSGRESSIONS

7.1 The Tenderer/Service Provider/Contractor hereby declares that no previous transgressions resulting in a serious breach of any law, including but not limited to, corruption, fraud, theft, extortion and contraventions of the Competition Act 89 of 1998, which occurred in the last 5 (five) years with any other public sector undertaking, government department or private sector company that could justify its exclusion from its registration on the Tenderer's/Service Provider's/Contractor's database or any tendering process.

7.2 If it is found to be that the Tenderer/Service Provider/Contractor made an incorrect statement on this subject, the Tenderer/Service Provider/Contractor can be rejected from the registration process or removed from the Tenderer/Service Provider/Contractor database, if already registered, for such reason (refer to the Breach of Law Returnable Form contained in the document.)

8 SANCTIONS FOR VIOLATIONS

8.1 Transnet shall also take all or any one of the following actions, wherever required to:

- a) Immediately exclude the Tenderer/Service Provider/Contractor from the tendering process or call off the pre-contract negotiations without giving any compensation the Tenderer/Service Provider/Contractor. However, the proceedings with the other Tenderer/Service Provider/Contractor may continue;
- b) Immediately cancel the contract, if already awarded or signed, without giving any compensation to the Tenderer/Service Provider/Contractor;
- c) Recover all sums already paid by Transnet;
- d) Encash the advance bank guarantee and performance bond or warranty bond, if furnished by the Tenderer/Service Provider/Contractor, in order to recover the payments, already made by Transnet, along with interest;
- e) Cancel all or any other contracts with the Tenderer/Service Provider/Contractor; and
- f) Exclude the Tenderer/Service Provider/Contractor from entering into any Tender with Transnet in future.

9 CONFLICTS OF INTEREST

9.1 A conflict of interest includes, inter alia, a situation in which:

- a) A Transnet employee has a personal financial interest in a tendering / supplying entity; and
- b) A Transnet employee has private interests or personal considerations or has an affiliation or a relationship which affects, or may affect, or may be perceived to affect his / her judgment in action in the best interest of Transnet, or could affect the employee's motivations for acting in a particular manner, or which could result in, or be perceived as favouritism or nepotism.

9.2 A Transnet employee uses his / her position, or privileges or information obtained while

acting in the capacity as an employee for:

- 9.3 Private gain or advancement; or
- 9.4 The expectation of private gain, or advancement, or any other advantage accruing to the employee must be declared in a prescribed form.
- 9.5 Thus, conflicts of interest of any Tender committee member or any person involved in the sourcing process must be declared in a prescribed form.
- 9.6 If a Tenderer/Service Provider/Contractor has or becomes aware of a conflict of interest i.e. a family, business and / or social relationship between its owner(s)/ member(s)/director(s)/partner(s)/shareholder(s) and a Transnet employee/ member of Transnet's Board of Directors in respect of a Tender which will be considered for the Tender process, the Tenderer/Service Provider/ Contractor:
 - a) must disclose the interest and its general nature, in the Request for Proposal ("RFX") declaration form; or
 - b) must notify Transnet immediately in writing once the circumstances has arisen.
- 9.7 The Tenderer/Service Provider/Contractor shall not lend to or borrow any money from or enter into any monetary dealings or transactions, directly or indirectly, with any committee member or any person involved in the sourcing process, where this is done, Transnet shall be entitled forthwith to rescind the contract and all other contracts with the Tenderer/Service Provider/Contractor.

10 DISPUTE RESOLUTION

- 10.1 Transnet recognises that trust and good faith are pivotal to its relationship with its Tenderer / Service Provider / Contractor. When a dispute arises between Transnet and its Tenderer / Service Provider / Contractor, the parties should use their best endeavours to resolve the dispute in an amicable manner, whenever possible. Litigation in bad faith negates the principles of trust and good faith on which commercial relationships are based. Accordingly, following a blacklisting process as mentioned in paragraph 6 above, Transnet will not do business with a company that litigates against it in bad faith or is involved in any action that reflects bad faith on its part. Litigation in bad faith includes, but is not limited to the following instances:
 - a) Vexatious proceedings: these are frivolous proceedings which have been instituted without proper grounds;
 - b) Perjury: where a Tenderer / Service Provider / Contractor make a false statement either in giving evidence or on an affidavit;
 - c) Scurrilous allegations: where a Tenderer / Service Provider / Contractor makes allegations regarding a senior Transnet employee which are without proper foundation, scandalous, abusive or defamatory; and
 - d) Abuse of court process: when a Tenderer / Service Provider / Contractor abuses the court process in order to gain a competitive advantage during a Tender process.

11 GENERAL

- 11.1 This Integrity Pact is governed by and interpreted in accordance with the laws of the Republic of South Africa.
- 11.2 The actions stipulated in this Integrity Pact are without prejudice to any other legal action that may follow in accordance with the provisions of the law relating to any civil or



criminal proceedings.

- 11.3 The validity of this Integrity Pact shall cover all the tendering processes and will be valid for an indefinite period unless cancelled by either Party.
- 11.4 Should one or several provisions of this Integrity Pact turn out to be invalid the remainder of this Integrity Pact remains valid.
- 11.5 Should a Tenderer/Service Provider/Contractor be confronted with dishonest, fraudulent or corruptive behaviour of one or more Transnet employees, Transnet expects its Tenderer/Service Provider/Contractor to report this behaviour directly to a senior Transnet official/employee or alternatively by using Transnet’s “Tip- Off Anonymous” hotline number 0800 003 056, whereby your confidentiality is guaranteed.

The Parties hereby declare that each of them has read and understood the clauses of this Integrity Pact and shall abide by it. To the best of the Parties’ knowledge and belief, the information provided in this Integrity Pact is true and correct.

I duly authorised by the tendering entity, hereby certify that the tendering entity are **fully acquainted** with the contents of the Integrity Pact and further **agree to abide by it** in full.

Signature

Date

T2.2-21: Supplier Code of Conduct

Transnet SOC Limited 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 Policy – A guide for Tenderers.
- 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 (BBBEE)
- The Prevention and Combating of Corrupt Activities Act (PRECCA); and
- The Construction Industry Development Board Act (CIDB Act).

This code of conduct has been included in this contract to formally appraise Transnet Suppliers

of Transnet's expectations regarding behaviour and conduct of its 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 SOC Limited will not participate in corrupt practices. Therefore, it 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, from suppliers.
- Employees may not receive anything that is calculated 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 person 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 SOC Limited 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 practices.
- Transnet does not engage with non-value adding agents or representatives solely for the purpose of increasing BBBEE spend (fronting).

3. Transnet's relationship with suppliers requires us to clearly define requirements, to 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, BBBEE 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

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 SOC Limited.

- Doing business with family members.
- Having a financial interest in another company in our industry

Where possible, contracts will be negotiated to include the above in the terms of such contracts. To the extent such terms are not included in contractual obligations and any of the above code is breached, then Transnet reserves its right to review doing business with these suppliers.

I, _____ of _____
(insert name of Director or as per Authority Resolution from Board of Directors) (insert name of Company)

hereby acknowledge having read, understood and agree to the terms and conditions set out in the "Transnet Supplier Code of Conduct."

Signed this on day (D/M/YYYY): _____
at _____

Signature

T2.2-22 Agreement in terms of Protection of Personal Information Act, 4 of 2013 (“POPIA”)

1. PREAMBLE AND INTRODUCTION

- 1.1. The rights and obligation of the Parties in terms of the Protection of Personal Information Act, 4 of 2013 (“POPIA”) are included as forming part of the terms and conditions of this contract.

2. PROTECTION OF PERSONAL INFORMATION

- 2.1. The following terms shall bear the same meaning as contemplated in Section 1 of the Protection of Person information act, No. of 2013 “(POPIA”): consent; data subject; electronic communication; information officer; operator; person; personal information; processing; record; Regulator; responsible party; special information; as well as any terms derived from these terms.
- 2.2. The Operator will process all information by the Transnet in terms of the requirements contemplated in Section 4(1) of the POPIA: Accountability; Processing limitation; Purpose specification; Further processing limitation; Information quality; Openness; Security safeguards and Data subject participation.
- 2.3. The Parties acknowledge and agree that, in relation to personal information of Transnet and the information of a third party that will be processed pursuant to this Agreement , the Operator is (.....
insert name of Tenderer/Contractor) hereinafter Operator and the Data subject is “Transnet”. Operator will process personal information only with the knowledge and authorisation of Transnet and will treat personal information and the information of a third party which comes to its knowledgeas confidential and will not disclose it, unless so required by law or subject to the exceptions contained in the POPIA.
- 2.4. Transnet reserves all the rights afforded to it by the POPIA in the processing of any of its informationas contained in this Agreement and the Operator is required to comply with all prescripts as detailedin the POPIA relating to all information concerning Transnet.
- 2.5. In terms of this Agreement, the Operator acknowledges that it will obtain and have access to personal information of Transnet and the information of a third party and agrees that it shall only process the information disclosed by Transnet in terms of this Agreement and only for the purposes as detailed in this

Agreement and in accordance with any applicable law.

- 2.6. Should there be a need for the Operator to process the personal information and the information of a third party in a way that is not agreed to in this Agreement, the Operator must request consent from Transnet to the processing of its personal information or and the information of a third party in a manner other than that it was collected for, which consent cannot be unreasonably withheld.
- 2.7. Furthermore, the Operator will not otherwise modify, amend or alter any personal information and the information of a third party submitted by Transnet or disclose or permit the disclosure of any personal information and the information of a third party to any third party without prior written consent from Transnet.
- 2.8. The Operator shall, at all times, ensure compliance with any applicable laws put in place and maintain sufficient measures, policies and systems to manage and secure against all forms of risk to any information that may be shared or accessed pursuant to the services offered to Transnet in terms of this Agreement (physically, through a computer or any other form of electronic communication).
- 2.9. The Operator shall notify Transnet in writing of any unauthorised access to personal information and the information of a third party, cybercrimes or suspected cybercrimes, in its knowledge and report such crimes or suspected crimes to the relevant authorities in accordance with applicable laws, after becoming aware of such crimes or suspected crime. The Operator must inform Transnet of the breach as soon as it has occurred to allow Transnet to take all necessary remedial steps to mitigate the extent of the loss or compromise of personal information and the information of a third party and to restore the integrity of the affected personal information as quickly as is possible.
- 2.10. Transnet may, in writing, request the Operator to confirm and/or make available any personal information and the information of a third party in its possession in relation to Transnet and if such personal information has been accessed by third parties and the identity thereof in terms of the POPIA.
- 2.11. Transnet may further request that the Operator correct, delete, destroy, withdraw consent or object to the processing of any personal information and the information of a third party relating to the Transnet or a third party in the Operator's possession in terms of the provision of the POPIA and utilizing Form 2 of the POPIA Regulations .



2.12. In signing this addendum that is in terms of the POPIA, the Operator hereby agrees that it has adequate measures in place to provide protection of the personal information and the information of a third party given to it by Transnet in line with the 8 conditions of the POPIA and that it will provide to Transnet satisfactory evidence of these measures whenever called upon to do so by Transnet.

The Operator is required to provide confirmation that all measures in terms of the POPIA are in place when processing personal information and the information of a third party received from Transnet:

YES		NO	
------------	--	-----------	--

2.13. Further, the Operator acknowledges that it will be held liable by Transnet should it fail to process personal information in line with the requirements of the POPIA. The Operator will be subject to any civil or criminal action, administrative fines or other penalty or loss that may arise as a result of the processing of any personal information that Transnet submitted to it.

2.14. Should a Tenderer have any complaints or objections to processing of its personal information, by Transnet, the Tenderer can submit a complaint to the Information Regulator on <https://www.justice.gov.za/inforeg/>, click on contact us, click on complaints.IR@justice.gov.za

3. SOLE AGREEMENT

3.1. The Agreement, constitute the sole agreement between the parties relating to the subject matter referred to in paragraph 1.1 of this and no amendment/variation/change shall be of any force and effect unless reduced to writing and signed by or on behalf of both parties.

Signed at _____ on this _____ day of _____ 2024

Name: _____ Title: _____

Signature: _____

Authorised signatory for and on behalf of who warrants that he/she is duly



authorised to
sign this Agreement.

As WITNESSES:

Name: _____ Signature: _____

Name: _____ Signature: _____

T2.2-23 SUPPLIER DECLARATION FORM

Transnet Vendor Management has received a request to load / change your company details onto the Transnet vendor master database. Please return the completed Supplier Declaration Form (SDF) together with the required supporting documents as per Appendix A to the Transnet Official who is intending to procure your company's services / products, to enable us to process this request. Please only submit the documentation relevant to your request.

Please Note: all organisations, institutions and individuals who wish to provide goods and/or services to organs of the State must be registered on the National Treasury's Central Supplier Database (CSD). This needs to be done via their portal at <https://secure.csd.gov.za/> **before applying to Transnet.**

General Terms and Conditions:

Please Note: Failure to submit the relevant documentation will delay the vendor creation / change process.

Where applicable, the respective Transnet Operating Division processing your application may request further or additional information from your company.

The Service Provider warrants that the details of its bank account ("the nominated account") provided herein, are correct and acknowledges that payments due to the Supplier will be made into the nominated account. If details of the nominated account should change, the Service Provider must notify Transnet in writing of such change, failing which any payments made by Transnet into the nominated account will constitute a full discharge of the indebtedness of Transnet to the Supplier in respect of the payment so made. Transnet will incur no liability for any payments made to the incorrect account or any costs associated therewith. In such an event, the Service Provider indemnifies and holds Transnet harmless in respect of any payments made to an incorrect bank account and will, on demand, pay Transnet any costs associated herewith.

Transnet expects its suppliers to timeously renew their Tax Clearance and B-BBEE certificates (Large Enterprises and QSEs less than 51% black owned) as well as sworn affidavits in the case of EMEs and QSEs with more than 51% black ownership as per Appendices C and D.

In addition, please take note of the following very important information:

1. **If your annual turnover is R10 million or less**, then in terms of the DTI Generic Codes of Good Practice, you are classified as an Exempted Micro Enterprise (EME). If your company is classified as an EME, please include in your submission a sworn affidavit confirming your company's most recent annual turnover is less than R10 million and percentage of black ownership and black female ownership in the company (Appendix C) OR B-BBEE certificate issued by a verification agency accredited by SANAS in terms of the EME scorecard should you feel you will be able to attain a better B-BBEE score. It is only in this context that an EME may submit a B-BBEE verification certificate. These EME sworn affidavits must be accepted by the . Government introduced this mechanism specifically to reduce the cost of doing business and regulatory burden for these entities and the template for the sworn affidavit is available at no cost on the website www.thedti.gov.za or EME certificates at CIPC from www.cipic.co.za.

The B-BBEE Commission said "that only time an EME can be verified by a SANAS accredited verification professional is when it wishes to maximise its B-BBEE points and move to a higher B- BBEEE recognition level, and that must be done use the QSE Scorecard".

2. **If your annual turnover is between R10 million and R50 million**, then in terms of the DTI codes, you are classified as a Qualifying Small Enterprise (QSE). A QSE which is at least 51% black owned, is required to submit a sworn affidavit confirming their annual total revenue of between R10million and R50 million and level of black ownership (Appendix D). QSE that does not qualify for 51% of black ownership, are required to submit a B-BBEE verification certificate issued by a verification agency accredited by SANAS their QSEs are required to submit a B-BBEE verification certificate issued by a verification agency accredited by SANAS.

Please Note: B-BBEE certificate and detailed scorecard should be obtained from an accredited rating agency (e.g. SANAS Member).

3. **If your annual turnover exceeds R50 million**, then in terms of the DTI codes, you are classified as a Large Enterprise. Large Enterprises are required to submit a B-BBEE level verification certificate issued by a verification agency accredited by SANAS.

Please Note: B-BBEE certificate and detailed scorecard should be obtained from an accredited rating agency (e.g. SANAS Member).

4. **The supplier to furnish proof to the procurement department as required in the Fourth Schedule of the Income Tax Act. 58 of 1962** whether a supplier of service is to be classified as an "employee", "personal service provider" or "labour broker". Failure to do so will result in the supplier being subject to employee's tax.

5. **No payments can be made to a vendor until the** vendor has been registered / updated, and no vendor can be registered / updated until the vendor application form, together with its supporting documentation, has been received and processed. No payments can be made to a vendor until the vendor has met / comply with the procurement requirements.

6. It is in line with PPPFA Regulations, only valid B-BBEE status level certificate issued by an unauthorised body or person OR a sworn affidavit as prescribed by the B-BBEE Codes of Good Practice, OR any other requirement prescribed in terms of the Broad- Based Black Economic Empowerment Act.

7. The B-BBEE Commission advises entities and organs of state to reject B-BBEE certificates that have been issued by verification agencies or professionals who are not accredited by South African National Accreditation Systems ("SANAS) as such B-BBEE certificates are invalid for lack of authority and mandate to issue them. A list of SANAS Accredited agencies is available on the SANAS website at www.sanas.co.za.

8. Presenting banking details. Please note: Banks have decided to enable the customers and provide the ability for customers to generate Account Confirmation/Bank Account letters via their online platform; this is a digital approach to the authentication of banking details.

SUPPLIER DECLARATION FORM

Supplier Declaration Form

Important Notice: all organisations, institutions and individuals who wish to provide goods and/or services to organs of the State must be registered on the National Treasury Central Supplier Database (CSD). This needs to be done via their portal at <https://secure.csd.gov.za/> before **applying to Transnet.**

CSD Number (MAAA xxxxxxx):

Company Trading Name						
Company Registered Name						
Company Registration No Or ID No If a Sole Proprietor						
Company Income Tax Number						
Form of Entity	CC	Trust	Pty Ltd	Limited	Partnership	Sole Proprietor
	Non-profit (NPO's or NPC)	Personal Liability Co	State Owned Co	National Govt	Provincial Govt	Local Govt
	Educational Institution	Specialised Profession	Financial Institution	Joint Venture	Foreign International	Foreign Branch Office

Did your company previously operate under another name?					Yes	No
If YES state the previous details below:						
Trading Name						
Registered Name						
Company Registration No Or ID No If a Sole Proprietor						
Form of Entity	CC	Trust	Pty Ltd	Limited	Partnership	Sole Proprietor
	Non-profit (NPO's or NPC)	Personal Liability Co	State Owned Co	National Govt	Provincial Govt	Local Govt
	Educational Institution	Specialized Profession	Financial Institution	Joint Venture	Foreign International	Foreign Branch Office

Your Current Company's VAT Registration Status	
VAT Registration Number	
If Exempted from VAT registration , state reason and submit proof from SARS in confirming the exemption status	

If your business entity is not VAT Registered, please submit a current original sworn affidavit (see example in Appendix I). Your Non VAT Registration must be confirmed annually.

Company Banking Details		Bank Name	
Universal Branch Code		Bank Account Number	

Company Physical Address		Code	
Company Postal Address		Code	
Company Telephone number			
Company Fax Number			
Company E-Mail Address			
Company Website Address			

Company Contact Person Name	
Designation	
Telephone	
Email	

Is your company a Labour Broker?	Yes	No
Main Product / Service Supplied e.g. Stationery / Consulting / Labour etc.		
How many personnel does the business employ?	Full Time	Part Time
Please Note: Should your business employ more than 2 full time employees who are not connected persons as defined in the Income Tax Act, please submit a sworn affidavit, as per Appendix II.		

Most recent Financial Year's Annual Turnover	<R10Million EME	>R10Million <R50Million QSE	>R50Million Large Enterprise
--	---------------------------	--	--

Does your company have a valid proof of B-BBEE status?					Yes	No							
Please indicate your Broad Based BEE status (Level 1 to 9)					1	2	3	4	5	6	7	8	9
Majority Race of Ownership													
% Black Ownership		% Black Women Ownership		% Black Disabled person(s) Ownership		% Black Youth Ownership							
% Black Unemployed		% Black People Living in Rural Areas		% Black Military Veterans									
Please Note: Please provide proof of B-BBEE status as per Appendix C and D:													

- Large Enterprise and QSEs with less than 51% black ownership need to obtain a B-BBEE certificate and detailed scorecard from an accredited rating agency;
- EMEs and QSEs with at least 51% black ownership may provide an affidavit using the templates provided in Appendix C and D respectively;
- Black Disabled person(s) ownership will only be accepted if accompanied with a certified letter signed by a physician on the physician’s letterhead confirming the disability;
- A certified South African identification document will be required for all Black Youth Ownership.

Supplier Development Information Required	
<p>EMPOWERING SUPPLIER</p> <p>An Empowering Supplier is a B-BBEE compliant Entity which complies with at least three criteria if it is a large Entity, or one criterion if it is a Qualifying Small Enterprise (“QSE”), as detailed in Statement 400 of the New Codes.</p> <p>In terms of the requirements of an Empowering Supplier, numerous companies found it challenging to meet the target of 25% transformation of raw materials or beneficiation including local manufacturing, particularly so, if these companies imported goods or products from offshore. The matter was further compounded by the requirement for 25% of Cost of Sales, excluding labour cost and depreciation, to be procured from local producers or suppliers.</p>	<p>YES <input type="radio"/> NO <input type="radio"/></p>
<p>FIRST TIME SUPPLIER</p> <p>A supplier that we haven’t as yet Traded within Transnet and will be registered via our database for the 1st time.</p>	<p>YES <input type="radio"/> NO <input type="radio"/></p>
<p>SUPPLIER DEVELOPMENT PLAN</p> <p>Supplier Development Plan is a plan that when we as Transnet award a supplier a long term contract depending on the complexity of the Transaction. We will negotiate supplier development obligations that they must meet throughout the contract duration. e.g. we might request that they (create jobs or do skills development or encourage procurement from designated groups. (BWO, BYO & BDO etc.).</p>	<p>YES <input type="radio"/> NO <input type="radio"/></p>
<p>DEVELOPMENT PLAN DOCUMENT</p> <p>Agreed plan that will be crafted with the supplier in regards to their development (It could be for ED OR SD in terms of their developmental needs they may require with the company.</p>	<p>YES <input type="radio"/> NO <input type="radio"/></p> <p>*If Yes- Attach supporting documents</p>
<p>ENTERPRISE DEVELOPMENT BENEFICIARY</p>	<p>YES <input type="radio"/> NO <input type="radio"/></p>

<p>A supplier that is not as yet in our value chain that we are assisting in their developmental area.</p>	
<p>SUPPLIER DEVELOPMENT BENEFICIARY</p> <p>A supplier that we are already doing business with or transacting with and we are also assisting them assisting them in their developmental area e.g. (They might require training or financial assistance etc.)</p>	<p>YES <input type="radio"/> NO <input type="radio"/></p>
<p>GRADUATION FROM ED TO SD BENEFICIARY</p> <p>When a supplier that we assisted with as an ED beneficiary then gets awarded a business and we start Transacting with.</p>	<p>YES <input type="radio"/> NO <input type="radio"/></p>
<p>ENTERPRISE DEVELOPMENT RECIPIENT</p> <p>A supplier that isn't in our value chain as yet but we have assisted them with an ED intervention</p>	<p>YES <input type="radio"/> NO <input type="radio"/></p>

By signing below, I hereby verify that I am duly authorised to sign for and on behalf of firm / organisation and that all information contained herein and attached herewith are true and correct

Name and Surname		Designation	
Signature		Date	

APPENDIX B

Affidavit or Solemn Declaration as to VAT registration status

Affidavit or Solemn Declaration

I, _____ solemnly
swear/declare that _____ is not a
registered VAT vendor and is not required to register as a VAT vendor because the combined
value of taxable supplies made by the provider in any 12 month period has not exceeded or
is not expected to exceed R1million threshold, as required in terms of the Value Added Tax
Act.

Signature: _____

Designation: _____

Date: _____

Commissioner of Oaths

Thus signed and sworn to before me at _____ on this the
_____ day of _____ 20

the Deponent having knowledge that he/she knows and understands the contents of this
Affidavit, and that he/she has no objection to taking the prescribed oath, which he/she
regards binding on his/her conscience and that the allegations herein contained are all true
and correct.

Commissioner of Oaths

ANNEXURE C

SWORN AFFIDAVIT

B-BEEE TEMPLATE

(QSEs)

APPENDIX C

AFFIDAVIT FOR B-BBEE QUALIFYING SMALL ENTERPRISES (QSE) (ISSUED IN TERMS OF THE AMENDED CONSTRUCTION SECTOR CODE (CSC000)) (Gazette Vol. 630 No. 41287)

I, the undersigned,

Full name & Surname	
Identity number	

Hereby declare under oath as follows:

- The contents of this statement are to the best of my knowledge a true reflection of the facts.
- I am a Member / Director / Owner of the following enterprise and am duly authorized to act on its behalf:

Enterprise Name:			
Trading Name (If Applicable):			
Registration Number:			
Enterprise Physical Address:			
Type of Entity (CC, (Pty) Ltd, Sole Prop etc.):			
Nature of Construction Business:	BEPs (Built Environment Professional)	Contractor	Supplier
Definition of "Black People"	<p>As per the Broad-Based Black Economic Empowerment Act 53 of 2003 as Amended by Act No 46 of 2013 "Black People" is a generic term which means Africans, Coloureds and Indians –</p> <p>(a) Who are citizens of the Republic of South Africa by birth or descent; or (b) Who became citizens of the Republic of South Africa by naturalization-</p> <p>i. Before 27 April 1994; or On or after 27 April 1994 and who would have been entitled to acquire citizenship by naturalization prior to that date</p>		

Definition of “Black Designated Groups”	<p>Black Designated Groups means:</p> <p>(a) unemployed black people not attending and not required by law to attend an educational institution and not awaiting admission to an educational institution;</p> <p>(b) Black people who are youth as defined in the National Youth Commission Act of 1996;</p> <p>(c) Black people who are persons with disabilities as defined in the Code of Good Practice on employment of people with disabilities issued under the Employment Equity Act;</p> <p>(d) Black people living in rural and under developed areas;</p> <p>(e) Black military veterans who qualifies to be called a military veteran in terms of the Military Veterans Act 18 of 2011;”</p>
--	---

3. I hereby declare under Oath that as per Amended Code Series 100 of the Amended Codes of Good Practice issued under section 9 (1) of B-BBEE Act No 53 of 2003 as Amended by Act No 46 of 2013,

- The Enterprise is _____ % Black Owned
- The Enterprise is _____ % Black Female Owned
- The Enterprise is _____ % Owned by Black Designated Group (provide Black Designated Group Breakdown below as per the definition in the table above)
 - o Black Youth % _____ %
 - o Black Disabled % _____ %
 - o Black Unemployed % _____ %
 - o Black People living in Rural areas % _____ %
 - o Black Military Veterans % _____ %

Based on the Financial Statements/Management Accounts and other information available on the latest financial year-end of _____ (DD/MM/YY), the annual Total Revenue was **equal to/or less** than the applicable amount (as per paragraph 5.1 of the CSC000) confirmed **by ticking the applicable box below.**

BEP	R6 million	
Contractor	R50 million	
Supplier	R50 million	

If the turnover exceeds the applicable amount in the table above then this affidavit is no longer applicable and an EME certificate must be obtained from a rating agency accredited by SANAS or when applicable a B-BBEE Verification Professional Regulator appointed by the Minister of Trade and Industry.

- Please confirm on the table below the B-BBEE level contributor, **by ticking the applicable box.**

100% Black Owned	Level One (135% B-BBEE procurement recognition level)	
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Transnet National Ports Authority

Tender Number: TNPA/2024/04/0009/61844/RFP

DESCRIPTION OF WORKS: FRAMEWORK CONTRACTS FOR CIVIL ENGINEERING WORKS IN VARIOUS TNPA PREMISES – EASTERN REGION - (3 YEARS)

At least 51% Black Owned but less than 100% black owned	Level Two (125% B-BBEE procurement recognition level)	
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- 4. I know and understand the contents of this affidavit and I have no objection to take the prescribed oath and consider the oath binding on my conscience and on the owners of the enterprise which I represent in this matter.
- 5. The sworn affidavit will be valid for a period of 12 months from the date signed by commissioner.

Deponent Signature: _____

Date: _____

Commissioner of Oaths
Signature & stamp

ANNEXURE D

SWORN AFFIDAVIT

B-BEEE TEMPLATE

(EMEs)

APPENDIX D

AFFIDAVIT FOR B-BBEE FOR EXEMPTED MICRO ENTERPRISES (EME) (ISSUED IN TERMS OF THE AMENDED CONSTRUCTION SECTOR CODE(CSC000)) (Gazette Vol. 630 No. 41287)

Issued in terms of paragraph 3.6.2.4.1 (B)

I, the undersigned,

Full name & Surname	
Identity number	

Hereby declare under oath as follows:

1. The contents of this statement are to the best of my knowledge a true reflection of the facts.
2. I am a Member / Director / Owner of the following enterprise and am duly authorized to act on its behalf:

Enterprise Name:			
Trading Name (If Applicable):			
Registration Number:			
Enterprise Physical Address:			
Type of Entity (CC, (Pty) Ltd, Sole Prop etc.):			
Nature of Construction Business:	BEPs (Built Environment Professional)	Contractor	Supplier
Definition of "Black People"	<p>As per the Broad-Based Black Economic Empowerment Act 53 of 2003 as Amended by Act No 46 of 2013 "Black People" is a generic term which means Africans, Coloureds and Indians –</p> <p>(a) Who are citizens of the Republic of South Africa by birth or descent; or</p> <p>(b) Who became citizens of the Republic of South Africa by naturalization-</p> <p>i. Before 27 April 1994; or</p> <p>On or after 27 April 1994 and who would have been entitled to acquire citizenship by naturalization prior to that date</p>		

Definition of “Black Designated Groups”	<p>Black Designated Groups means:</p> <p>(a) unemployed black people not attending and not required by law to attend an educational institution and not awaiting admission to an educational institution;</p> <p>(b) Black people who are youth as defined in the National Youth Commission Act of 1996;</p> <p>(c) Black people who are persons with disabilities as defined in the Code of Good Practice on employment of people with disabilities issued under the Employment Equity Act;</p> <p>(d) Black people living in rural and under developed areas;</p> <p>(e) Black military veterans who qualifies to be called a military veteran in terms of the Military Veterans Act 18 of 2011;”</p>
--	---

3. I hereby declare under Oath that as per Amended Code Series 100 of the Amended Codes of Good Practice issued under section 9 (1) of B-BBEE Act No 53 of 2003 as Amended by Act No 46 of 2013,

- The Enterprise is _____ % Black Owned
- The Enterprise is _____ % Black Female Owned
- The Enterprise is _____ % Owned by Black Designated Group (provide Black Designated Group Breakdown below as per the definition in the table above)
 - o Black Youth % _____ %
 - o Black Disabled % _____ %
 - o Black Unemployed % _____ %
 - o Black People living in Rural areas % _____ %
 - o Black Military Veterans % _____ %

Based on the Financial Statements/Management Accounts and other information available on the latest financial year-end of _____ (DD/MM/YY), the annual Total Revenue was equal to/or less than the applicable amount (as per paragraph 5.1 of the CSC000) confirmed **by ticking the applicable box below.**

BEP	R3 million	
Contractor	R10 million	
Supplier	R10 million	

If the turnover exceeds the applicable amount in the table above then this affidavit is no longer applicable and an EME certificate must be obtained from a rating agency accredited by SANAS or when applicable a B-BBEE Verification Professional Regulator appointed by the Minister of Trade and Industry.

• Please confirm on the table below the B-BBEE level contributor, **by ticking the applicable box.**

100% Black Owned	Level One (135% B-BBEE procurement recognition level)	
At least 51% Black Owned but less than 100% black owned	Level Two (125% B-BBEE procurement recognition level)	
At least 30% Black Owned but less than 51% black owned	Level Four (100% B-BBEE procurement recognition level)	

Transnet National Ports Authority

Tender Number: TNPA/2024/04/0009/61844/RFP

DESCRIPTION OF WORKS: FRAMEWORK CONTRACTS FOR CIVIL ENGINEERING WORKS IN VARIOUS TNPA PREMISES – EASTERN REGION - (3 YEARS)

Less than 30% Black Owned	Level Five (80% B-BBEE procurement recognition level)	
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4. I know and understand the contents of this affidavit and I have no objection to take the prescribed oath and consider the oath binding on my conscience and on the owners of the enterprise which I represent in this matter.

5. The sworn affidavit will be valid for a period of 12 months from the date signed by commissioner.

Signature: _____ Date: _____ Deponent

Commissioner of Oaths
Signature & stamp



GENERAL
RETURNABLE
DOCUMENTS

VENDOR REGISTRATION DOCUMENTS CHECKLIST

Please note that you will have to provide the first two documents on the list (highlighted in red) and the rest will be provided by the supplier:

	Yes	No
1. Complete the "Supplier Declaration Form" (SDF) (commissioned). See attachment.		
2. Complete the "Supplier Code of Conduct" (SCC). See attachment.		
3. Copy of cancelled cheque OR letter from the bank verifying banking details (with bank stamp not older than 3 Months & sign by Bank Teller).		
4. Certified (Not Older than 3 Months) copy of Identity document of Shareholders/Directors/Members (where applicable).		
5. Certified copy of certificate of incorporation, CM29 /CM9 (name change).		
6. Certified copy of share Certificates of Shareholders, CK1 / CK2 (if CC).		
7. A letter with the company's letterhead confirming both Physical and Postal address.		
8. Original or certified copy of SARS Tax Clearance certificate and Vat registration certificate.		
9. BBBEE certificate and detailed scorecard from a SANAS Accredited Verification Agency and/or Sworn Certified Affidavit.		
10. Central Supplier Database (CSD) Summary Registration Report.		

T2.2-24 Domestic Prominent Influential Persons (DPIP) Or Foreign Prominent Public Officials (FPPO)

Transnet is free to procure the services of any person within or outside the Republic of South Africa in accordance with applicable legislation. Transnet shall not conduct or conclude business transactions, with any Respondents without having:

- Considered relevant governance protocols;
- Determined the DPIP or FPPO status of that counterparty; and
- Conducted a risk assessment and due diligence to assess the potential risks that maybe posed by the business relationship.

As per the Transnet Domestic Prominent Influential Persons (DPIP) and Foreign Prominent Public Officials (FPPO) and Related Individuals Policy available on Transnet website <https://www.transnet.net/search/pages/results.aspx?k=FPIDP#k=DPIP>, Respondents are required to disclose any commercial relationship with a DPIP or FPPO (as defined in the Policy) by completing the following section:

The below form contains personal information as defined in the Protection of Personal Information Act, 2013 (the "Act"). By completing the form, the signatory consents to the processing of her/his personal information in accordance with the requirements of the Act. Consent cannot unreasonably be withheld.						
Is the Respondent (Complete with a "Yes" or "No")						
A DPIP/FPPO		Closely Related to a DPIP/FPPO		Closely Associated to a DPIP/FPPO		
List all known business interests, in which a DPIP/FPPO may have a direct/indirect interest or significant participation or involvement.						
No	Name of Entity /Business	Role in the Entity / Business (Nature of interest/ Participation)	Shareholding %	Registration Number	Status (Mark the applicable option with an X)	
					Active	Non-Active
1						



2						
3						

Respondents declaring a commercial relationship with a DPIIP or FPPO are to note that Transnet is required to annually publish on its website a list of all business contracts entered into with DPIIP or FPPO. This list will include successful Respondents, if applicable.

2. SERVICE LEVELS

2.1 Transnet reserves the right to request that any member of the Service provider’s team involved on the Transnet account be replaced if deemed not to be adding value for Transnet.

2.2 The Service provider guarantees that it will achieve a 95% [ninety-five per cent] service level on the following measures:

- a) Random checks on compliance with quality/quantity/specifications
- b) On-time delivery

2.3 The Service provider must provide a telephone number for customer service calls.

2.4 Failure of the Service provider to comply with stated service level requirements will give Transnet the right to cancel the contract in whole, without penalty to Transnet, giving 30 [thirty] calendar days’ notice to the Service provider of its intention to do so.

Acceptance of Service Levels:

YES	
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NO	
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T2.2-25: Insurance provided by the Contractor

Clause 84.1 in NEC3 Engineering & Construction Contract (June 2005)(amended June 2006 and April 2013) requires that the Contractor provides the insurance stated in the insurance table except any insurance which the Employer is to provide as stated in the Contract Data.

Please provide the following details for insurance which the Contractor is still to provide. Notwithstanding this information all costs related to insurance are deemed included in the tenderer's rates and prices.

Insurance against (See clause 84.2 of the ECC)	Name of Insurance Company	Cover	Premium
Liability for death of or bodily injury to employees of the Contractor arising out of and in the course of their employment in connection with this contract			
Motor Vehicle Liability Insurance comprising (as a minimum) "Balance of Third Party" Risks including Passenger and Unauthorised Passenger Liability indemnity with a minimum indemnity limit of R10 000 000			
Insurance in respect of loss of or damage to own property and equipment.			
Marine Craft insurance in respect of all marine craft or vessels utilised in performance of the Works for a sum sufficient to provide for their replacement			
Protection and Indemnity Insurance in respect of all marine craft or vessels utilised in performance of the Works extended for Specialist Operations with a minimum indemnity limit of R 50,000,000			
(Other)			

T2.2-26: Form of Intent to Provide a Performance Guarantee

It is hereby agreed by the Tenderer that a Performance Guarantee drafted **exactly** as provided in the tender documents will be provided by the Guarantor named below, which is a **bank or insurer registered in South Africa**:

Name of Guarantor
(Bank/Insurer)

Address

The Performance Guarantee shall be provided within **2 (Two)** weeks after the Contract Date defined in the contract unless otherwise agreed to by the parties.

Signed

Name

Capacity

On behalf of (name of
tenderer)

Date

NOT APPLICABLE
AT THIS STAGE

Confirmed by Guarantor's Authorised Representative

Signature(s)

Name (print)

Capacity

On behalf of Guarantor
(Bank/insurer)

Date



T2.2-27: Foreign Exchange Requirements

If Secondary Option X3 is included in the conditions of contract of the NEC3, the Tenderer to provide detailed breakdown of items that will have a foreign exchange implication.

Justification and full details supporting foreign currency requirements to be appended to this Schedule.

Items & activities	Currency	Bank	Maximum payment
<p>NOT APPLICABLE AT THIS STAGE</p>			

The exchange rates to be used are stated in the Contract Data provided by the Employer.

It is expected that the percentages of foreign currency or currencies quoted are realistic and that they adequately reflect the overall foreign component of cost.

Due to the introduction of International Financial Reporting Standards IS32 and IS39, the

Employer may not be able to accommodate a tenderer’s requirements in full or at all.



T2.2-28: Forecast Rate of Invoicing

Tenderer to submit the forecast rate of invoicing (cash-flow) based on the Tender Price and Tender Programme.

Index of documentation attached to this schedule:

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**NOT APPLICABLE
AT THIS STAGE**



T2.2-29: Three (3) years audited financial statements

Attached to this schedule is the last three (3) years audited financial statements of the single tenderer/members of the Joint Venture.

NAME OF COMPANY/IES and INDEX OF ATTACHMENTS:

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**NOT APPLICABLE
AT THIS STAGE**



FORM OF OFFER AND ACCEPTANCE



C1.1: Form of Offer & Acceptance

Offer

The Employer, identified in the Acceptance signature block, has solicited offers to enter into a contract for the procurement of:

Description of works: Framework contracts for the Civil Engineering works in various TNPA Premises– Eastern region - (3 Years)

The tenderer, identified in the Offer signature block, has examined the documents listed in the Tender Data and addenda thereto as listed in the Returnable Schedules, and by submitting this Offer has accepted the Conditions of Tender.

NOTE: The total price offers in this Framework contract are *only used for tender evaluation and comparison purposes*. Therefore, if TNPA accepts by signing Part 2 of this Contract Form, the amount/s “offered” shall revert to NIL and the awarded contract price offer for each region shall become “RATES ONLY”, in accordance with the pricing schedule for this contract.

By the representative of the tenderer, deemed to be duly authorised, signing this part of this Form of Offer and Acceptance the tenderer offers to perform all of the obligations and liabilities of the Contractor under the framework contract including compliance with all its terms and conditions according to their true intent and meaning for an amount to be determined in accordance with the conditions of contract identified in the Contract Data.

The offered total of the Prices exclusive of VAT is	R
Value Added Tax @ 15% is	R
The offered total of the Prices inclusive of VAT is	R
State the amount in words:	

(NB: The offer above will be used for comparative tender schedule purposes only. Once the evaluation process has been concluded, the quantities in the pricing schedule must revert back to zero.)

This Offer may be accepted by the Employer by signing the Acceptance part of this Form of Offer and Acceptance and returning one copy of this document including the Schedule of Deviations (if any) to the tenderer before the end of the period of validity stated in the Tender Data, or other period as agreed, whereupon the tenderer becomes the party named as the Contractor in the conditions of contract identified in the Contract Data.

Signature(s)

.....
 Name(s)

.....
 Capacity



**For the
tenderer**

:

(Insert name and address of organisation)

Name &
signature
of witness

Date

Tenderer's CIDB registration number:



Acceptance

By signing this part of this Form of Offer and Acceptance, the Employer identified below accepts the tenderer's Offer.

Acceptance of the tenderer's Offer, having made necessary adjustments as stipulated in the tender data and pricing instructions, shall form a framework contract between the Employer and the tenderer upon the terms and conditions contained in this agreement and in the framework contract that is the subject of this agreement.

The terms of the framework contract, are contained in:

Part C1	Agreements and Contract Data, (which includes this Form of Offer and Acceptance)
Part C2	Pricing Data
Part C3	Scope of Work: Works Information
Part C4	Site Information

and drawings and documents (or parts thereof), which may be incorporated by reference into the above listed Parts.

Deviations from and amendments to the documents listed in the Tender Data and any addenda thereto listed in the Returnable Schedules as well as any changes to the terms of the Offer agreed by the tenderer and the Employer during this process of offer and acceptance, are contained in the Schedule of Deviations attached to and forming part of this Form of Offer and Acceptance. No amendments to or deviations from said documents are valid unless contained in this Schedule.

The tenderer shall within two weeks of receiving a completed copy of this framework agreement, including the Schedule of Deviations (if any), contact the Employer's agent (whose details are given in the Contract Data) to arrange the delivery of any securities, bonds, guarantees, proof of insurance and any other documentation to be provided in terms of the conditions of contract identified in the Contract Data at, or just after, the date this agreement comes into effect. Failure to fulfil any of these obligations in accordance with those terms shall constitute a repudiation of this agreement.

Notwithstanding anything contained herein, this agreement comes into effect on the date when the tenderer receives one fully completed original copy of this document, including the Schedule of Deviations (if any).

Unless the tenderer (now Contractor) within five working days of the date of such receipt notifies the Employer in writing of any reason why he cannot accept the contents of this framework agreement, this agreement shall constitute a binding framework contract between the Parties.

Signature(s)

Name(s)

Capacity

**for the
Employer**

Transnet SOC Ltd

(Insert name and address of organisation)



Name &
signature of
witness

Date

.....

Schedule of Deviations

Note:

1. To be completed by the Employer prior to award of contract. This part of the Offer & Acceptance would not be required if the contract has been developed by negotiation between the Parties and is not the result of a process of competitive tendering or it is for the establishment of framework contracts.
2. The extent of deviations from the tender documents issued by the Employer prior to the tender closing date is limited to those permitted in terms of the Conditions of Tender.
3. A tenderer's covering letter must not be included in the final contract document. Should any matter in such letter, which constitutes a deviation as aforesaid be the subject of agreement reached during the process of Offer and Acceptance, the outcome of such agreement shall be recorded here and the final draft of the contract documents shall be revised to incorporate the effect of it.

No.	Subject	Details
1		
2		
3		

By the duly authorised representatives signing this Schedule of Deviations below, the Employer and the tenderer agree to and accept this Schedule of Deviations as the only deviations from and amendments to the documents listed in the Tender Data and any addenda thereto listed in the Tender Schedules, as well as any confirmation, clarification or changes to the terms of the Offer agreed by the tenderer and the Employer during this process of Offer and Acceptance.

It is expressly agreed that no other matter whether in writing, oral communication or implied during the period between the issue of the tender documents and the receipt by the tenderer of a completed signed copy of this Form shall have any meaning or effect in the contract between the parties arising from this Agreement.

For the tenderer:

For the Employer

Signature

Name

Capacity

On behalf of

(Insert name and address of organisation)

Transnet SOC Ltd

Name &
signature
of witness

Date

.....



Part C1:
Agreements and
Contract Data

C1.2 Contract Data

Part one - Data provided by the Employer

1. There is no contract to be signed after this stage of procurement.
2. Transnet National Ports Authority will use Transnet approved forms of contracts to contract with the successful contractor after a secondary procurement process (from the framework contract list) has been concluded and a tender has been awarded to a successful bidder.
3. The following are basic terms and conditions of the Framework Contract to be applied to all contractors admitted to the list (framework contract):

3.1 Management and Procurement within the Framework Contract

1. Terms and Conditions of a Framework Contract

- a) The duration of this framework contract is three (3) years.
- b) No batch / task / package order will be issued after the end date of the term of the framework contract.
- c) Any work commenced before the end of the term of a framework contract may continue until the end date provided in the batch / task / package order.
- d) Transnet reserves the right not to issue task orders where the likelihood exists that the orders in question will exceed the framework term.
- e) This framework contract is not an exclusive agreement, Transnet reserves the right to procure the same or similar Goods, Works or services from contractors not in the framework contract.
- f) There is no guarantee of being awarded a call-off contract, and no commitment will be made with regard to possible volume of Goods, Works or Services.
- g) Only equalized or averaged common rates (per item or activity) for clearly defined items in the pricing schedule will be used at this stage.
- h) Contractors' rates, cost parameters or prices must be market related and will be fixed for the 1st year of this framework contract. Rates or prices may be escalated on the anniversary of the framework contract. The escalation will be at the general inflation rate determined by the Statistics SA Publication P0141. The values of rates and lump sums (excluding percentage mark-ups for provisional sums and/or prime cost sums) shall be increased by applying the annual inflation rate, prevailing at the time.

- i) Work packages which have been issued prior the anniversary of this framework, but the work continues beyond the anniversary of the framework, only the portion of the work which falls into the next year may be escalated.
- j) For the above escalation (c) to be properly administered, at the beginning of the contract, the appointed contractor must submit a works programme / schedule to the employer and it must be approved by the representative of the employer in the project.
- k) The cancellation or termination of a contractor's participation from the framework contract is stipulated in detailed in item (sub heading) 7 under the "Removal of framework contract" topic below.

2. Procurement to establish a Framework Contract

- a) There shall be not less than two (2) contractors, and not more than fifteen (15) in a framework contract in a class of work per region.
- b) Contractors with compliant submissions and which score highest points in terms of PPPFA system will be considered for inclusion for the appointment, unless an objective criteria is used.
- c) The items / trades / activities or portions of the scope for which a total price has not been covered by the current Bill of Quantities or could not be pre-calculated and for which a rate is subsequently requested from contractors in the framework contract, e.g., rate/km, preliminaries and general, training of workers, etc., contractors would be requested to provide fresh prices or rates and would be compensated an amount calculated by multiplying the quantity completed in the Bill of Quantities by the specific rate provided pursuant to the request.
- d) All contractors to be admitted in the framework contract must have their names published on the TNPA portal, the National Treasury e-tenders portal and, if practical, on the cidb i-tender portal.
- e) The type of framework contract used for this assignment is a type of a framework contract which has all basic terms and conditions established in advance, and which contains multiple suppliers/ contractors.
- f) There will be minimal amendments to the original terms of framework contract.

3. Principles of the current Framework Contract

- a) TNPA will always prefer a competitive procurement or quotation procedure within the framework, i.e., invitation of contractors within a framework contract to submit quotations.
- b) Notwithstanding the above statement, Transnet, in certain circumstances defined by the policy, may utilize a direct selection method. Justification of using a direct selection method, whenever it is selected, must always be in terms of Transnet's policy and have obtained the required approvals.
- c) Rotation of contractors, in the case of clearly defined items or works with fixed (common) rates, may be used.
- d) Selection through ranking of suppliers, in the case of fixed (common) rates, may be used.
- e) There will be minimal amendments to the original terms of the framework contract.
- f) Framework contracts shall only be evaluated on substantive compliance, eligibility, price and preference at this stage of procurement.
- g) No new scope of works at this stage should be introduced.
- h) Electronic systems may be used to manage the ranking or rotation of contractors in the framework contract.
- i) Unsuccessful contractors will be informed about the award outcomes through the publication of their names on Transnet's tender portal.
- j) The evaluation of framework contract submissions will be done by duly appointed persons or structure of Transnet.
- k) The Accounting Officer or delegated official or structure will approve the award.

4. Procurement within the framework contract and turnaround times

- a) TNPA will use the most economic means to issue procurement documents to framework contractors.
- b) Contractors in the framework contract must have a capability to provide timeous responses to call offs. Only contractors possessing correct cidb grading and class of class of work in a framework contract will be awarded a contract.
- c) The tender period for invitation of tenders, Request for Quotations (RFQs) or call offs for firms in a Framework Contract will vary between twelve (12 hours) up to thirty (30) days,

depending on the nature and/or urgency of services or works.

- d) Contractors in the framework contract must ensure that they are capable of responding to TNPA, with their complete submission, within such limited times.
- e) The Period to respond to “call offs” or Request for Quotations is as follows:
- For Emergency works, the tender period or response time to a call Off / RFQ is anything between twelve (12) hours to fourteen (14) days.
 - For Urgent works, the tender period or response time to a call Off / RFQ is anything between forty eight (48) hours (2 days) to fourteen (14) days.
 - For Critical works, other than emergency and urgency works as defined, the tender period or response time to a call off / RFQ is anything between seven (7) days to Twenty one (21) days
 - For Major works, the tender period or response time to a Call Off / RFQ is anything between fourteen (14) – thirty (30) days.

5. Use of TNPA Framework Contracts by another Organ of State

- a) TNPA’s Framework Contracts may be used by other Transnet divisions and/or Organs of state.
- b) TNPA will avail all relevant information to Transnet division or that Organ of State requesting to utilize TNPA’s framework contracts.
- c) Such a request shall be accompanied by an outline of:
- i) the scope and anticipated quantum of work associated with the services and where such services are required;
 - ii) whether or not the services of only one framework contractor will be required, and if so, the motivation for requiring the services of such contractor; and
 - iii) the benefit to be derived from making use of the framework contract.
- d) The Accounting Officer or Accounting Authority or delegated official within TNPA may approve a request made in terms of the above to make use of the organ of state’s framework contract, conditionally or unconditionally, if:
- (i) the framework contract was put in place following a competitive tender process;
 - (ii) confirmation is obtained that the framework contract is suitable for the intended use, and the required goods, services and works fall within the scope of such contract;
 - (iii) the framework contractor agrees in writing to accept an order from that organ of

state;

(iv) the Organ of State undertakes to pay the contractor in accordance with the terms and conditions of the agreement; and

(v) the term of the framework contract does not expire before the issuing of the required orders.

e) The service provider in the framework contract may accept his services to be utilised by another organ of state, if permitted by TNPA.

6. Conduct of those admitted to the Framework Contract Register

a) Contractors in the framework contract shall abide by TNPA's policies and code of conduct, and shall:

- maintain the accuracy of the data stored on the framework contract and notify TNPA in writing of:

1) any changes in composition which will change its target group status, if any; and

2) any change in the particulars which disqualifies the contractor from being on the database or in any field of service or supply.

b) discharge all contractual obligations timeously and in accordance with the provision of the contract.

c) Any attempt to exploit or influence the operation of the framework contract register by misrepresentation of information used in the admittance to or operation of the register shall be deemed to constitute misconduct.

d) Repeated declining to submit a quotation or tender or enter into a contract following a nomination may be also regarded as misconduct.

7. Removal from the Framework Contract

a) The name of a contractor may be removed from a framework contract at any time if the contractor:

i) is no longer in possession of a required registration or license which is essential to the performance of a contract;

ii) is under restrictions preventing participating in public sector procurement;

iii) fails to discharge all contractual obligations timeously and in accordance with the

provisions of the contract;

- iv) fails to perform satisfactorily after having been informed accordingly when measured on any of the following criteria;
- v) has been convicted of any offence under any law relating to wages, hours of work or other conditions of employment;
- vi) ceases to continue to carry on business under that name or form of company the contractor was registered under on the list;
- vii) fails to enter into a contract or execute a task, batch or package order when requested to do so.
- viii) sub-contracts the whole or any portion of a contract for the supply of Goods or Services in respect of framework contract to an enterprise or person whose name does not appear on the framework contract list;
- ix) has not been awarded any business over a period of a year due to non-competitive prices;
- x) has requested in writing and approved by TNPA that its name be removed from the framework contract.
- xi) where a contractor is determined as being in the process of being liquidated, Transnet reserves the right to remove them from the framework contract.
 - i) where a director or directors of a contractor is / are determined as being in the process of being sequestered, Transnet reserves the right to remove the contractor from the framework contract.
 - ii) where a contractor has subsequently been placed in the National Treasury's list and/ or cidb's register of restricted suppliers and/or when they have been barred or interdicted to do any work for any organ of state.
 - iii) is no longer financially viable; or,
 - iv) is involved in prohibited practices.
 - v) does not adhere to Occupational Health and Safety Act and National Environment related legislation and/or
 - vi) any other action or omission which Transnet views as unacceptable, or
 - vii) without due cause, fails to submit price offers during the "call off" or secondary

procurement stage.

- b) The contractor shall, prior to being removed from a framework contract, be notified of the reason for the TNPA's intention of removing its name from the framework contract.



Part C2: Pricing Data

PART 2: PRICING DATA

Document reference	Title	No of pages
C2.1	Pricing instructions: Option B	5
C2.2	The bill of quantities	61

C2.1 Pricing instructions: Option B

1. The conditions of contract

1.1. How the contract prices work and assesses it for progress payments

Clause 11 in NEC3 Engineering and Construction Contract, June 2005 and 2013 (ECC)

Option B states: Identified and defined terms

11

11.2 (21) The Bill of Quantities is the bill of quantities as changed in accordance with this contract to accommodate implemented compensation events and for accepted quotations for acceleration.

(22) Defined Cost is the cost of the components in the Shorter Schedule of Cost Components whether work is subcontracted or not excluding the cost of preparing quotations for compensation events.

(28) The Price for Work Done to Date is the total of

- the quantity of the work which the Contractor has completed for each item in the Bill of Quantities multiplied by the rate and
- a proportion of each lump sum which is the proportion of the work covered by the item which the Contractor has completed.

Completed work is work without Defects which would either delay or be covered by immediately following work.

(31) The Prices are the lump sums and the amounts obtained by multiplying the rates by the quantities for the items in the Bill of Quantities.

This confirms that Option B is a re-measurement contract and the bill comprises only items measured using quantities and rates or stated as lump sums. Value related items are not used. Time related items are items measured using rates where the rate is a unit of time. Function of the Bill of Quantities

Clause 55.1 in Option B (NEC3) states, "Information in the Bill of Quantities is not Works Information or Site Information". This confirms that instructions to do work or how it is to be done are not included in the Bill, but in the Works Information. This is further confirmed by Clause 20.1 which states, "The Contractor Provides the Works in accordance with the Works Information". Hence the Contractor does **not** Provide the Works in accordance with the Bill of Quantities. The Bill of Quantities is only a pricing document.

1.2. Guidance before pricing and measuring

Pricing Notes for Framework Contracts

Employers preparing tenders or contract documents, and tendering contractors are advised to consult the sections dealing with the bill of quantities in the NEC3 Engineering and

Construction Contract (June 2005) Guidance Notes before preparing the bill of quantities or before entering rates and lump sums into the bill.

Historically bill of quantities based contracts in South Africa have been influenced by the different approaches of the civil engineering and building sectors of the industry through their respective discipline based standard forms of contract and methods of measurement. This is particularly apparent in the approach to the Preliminary and General bill. On the other hand, because ECC caters for a number of disciplines in the same contract, including electrical works, a different approach not currently found in local methods of measurement to the Preliminary & General bill items may have been used.

The NEC approach to the P & G bill assumes use will be made of method related charges for Equipment applied to Providing the Works based on durations shown in the Accepted Programme, fixed charges for the use of Equipment that is required throughout the construction phase, time related charges for people working in a supervisory capacity for the period required, and lump sum charges for other facilities or services not directly related to performing work items typically included in other parts of the bill.

1.3. Pricing Notes for Framework Contracts

- 1) Bill of Quantities has been prepared from commonly used items or works, not based on any specific works or scope. The attached Bill of Quantities is covering a broad scope of work. The Contractor is expected to price each item provided, except where instructed otherwise. The rates provided by the bidder will be verified for their reasonableness. TNPA reserves the right to adjust the final prices once the tenderer has been found to have complied with other tender conditions.
- 2) TNPA also reserves the right to balance the rates, cost parameters and prices offered for any activity by compiling an averaged (equalized) set of common rates and prices that would apply across the board to all the Service providers for that region and type of works or services during the execution of this framework.
- 3) If TNPA opts to execute the aforementioned right, service providers will be provided an opportunity to accept or reject the calculated average price on condition that the offer is not above market related rates for any type of service or works selected. Service Providers who reject the calculated average price or who refuse to have their rates lowered through negotiations will not be included on this framework agreement.
- 4) The contractor will be paid for the requested service or work performed, an amount in accordance with the accepted average price or rates multiplied by quantities of works or service rendered, inclusive of VAT.
- 5) Those items for which a total price cannot be determined in advance and for which a rate is requested, e.g. rate / km, service providers will be compensated an amount calculated by multiplying the quantity completed by the rate provided by the contractor.
- 6) For those instances where services or items, which are not covered in the attached Bill of Quantities, but are covered by the broad scope of the Framework Contract, service providers will be compensated the amount as quoted and agreed upon by TNPA.



- 7) Tenderers must take note that there is a possibility that some items, activities, line items, descriptions (i.e., items of the Scope of work) may appear in more than one section in the Bills of Quantities (BoQ), tenderers will be expected to price each item of the BoQ. In the event the tenderer submits a rate or price which differs from the other for the same item, TNPA will consider the rate or price of the tenderer which is the lowest. That price, cost or rate will be one used for purposes of establishing a framework contract.
- 8) Tenderers must take note that when they build up their rates or prices for this tender, due consideration on the minimum local content threshold (designated sectors) is made. Prices must be cognizant of the reality that some part or the components or products would have to be made locally (South Africa) and/or purchased from South African suppliers. A list of designated products for local production with minimum local content threshold is available from the website of Department of Trade, Industry and Competition: <http://www.thedtic.gov.za/sectors-and-services-2/industrial-development/industrial-procurement/>
- 9) Framework Contracts do not specify or guarantee any quantum of work at the tendering stage, and the financial offer of this tender is a representative amount for tender evaluation purposes only. It does not reflect the actual value of any work to be done during the Framework Contracts period.

1.4. Guidance to the Pricing Schedule / Bill of Quantities

- 10) Bill of Quantities covering a broad scope of work **is attached**. The rates and prices offered by the tenderer must be physically written into the Pricing schedule or Bill of Quantities of this tender document, completed in full. Failure to do so could disqualify the tender.
- 11) Bill of Quantities is to be completed as per the MS Excel spreadsheets or pdf Bill of Quantities supplied as part of the tender documentation. The MS Excel spreadsheet to be completed is password protected and only allows the tenderer to enter his/her tendered rates or lump sums for items in the indicated light orange filled cells. Tender must ensure that their MS Excel programme is set to automatic calculation. All calculations for item amounts, totals for pages, totals carried forward to summary page, totals carried forward to tender sum summary page and total of tender sum are done by means of built-in calculation functions.
- 12) A Microsoft Excel BoQ version of this tender is accessible from a copy of this tender advertised in the National Treasury's eTender Portal.
- 13) A Microsoft Excel BoQ version of this tender is accessible from a copy of this tender advertised in the National Treasury's eTender Portal.
- 14) An item against which no price or zero (0) is entered will be declared by the Employer as an imbalanced rate or lump sum in terms C.3.9.5 of the Conditions of Tender.
- 15) Due to the nature of possible work packages in terms of a framework agreement the quantities set out in Bill of Quantities are approximate for a typical work package, for purposes of establishing a framework contract only.
- 16) For certain items, the Employer has made allowance for different materials to be used. The tenderer is required to price for each as indicated.
- 17) Tenderers must return a fully priced Pricing Schedule / Bill of Quantities for each element of works or services. Pricing must be in consideration that work may be performed in anywhere in the TNPA region (Western, Central and Eastern region) selected and its prices / rates shall



be valid for a period of 3 years. There will be Contract Price Adjustment / escalation of prices on the anniversary of the framework contract. The values of rates and lump sums (excluding percentage mark-ups for provisional sums and/or prime cost sums) shall be increased by applying the annual inflation rate, prevailing at the time.

18) All items in the Pricing Schedule / Bill of Quantities must be priced, subject to the following:

- a) Where pricing for any item is intentionally included in the rate or Price of another item, this must always be clearly indicated so and cross-referenced to the item in question in the Pricing Schedule / Bill of Quantities.
- b) Tenders showing unpriced items without due reference to where the omitted prices are included in other items in the Pricing Schedule / Bill of Quantities, could result in the disqualification of the tender.

19) Summarizing parts or sections of the Pricing Schedule / Bill of Quantities into single lump sums or rates without providing the breakdown of pricing of items as per the Pricing Schedule / Bill of Quantities is not acceptable and could result in disqualification of the tender.

20) Where an item is encountered against which no Price or rate is entered, and it can be reasonably attributed to an error on the part of the tenderer, that item will be treated as covered by other Prices or rates in the Pricing Schedule/Bill of Quantities.

21) Where there is a discrepancy between the amounts in figures and the amount in words, the amount in words will govern. The cidb inform practice notes (#5), the cidb's Standard for Uniformity in Engineering and Construction Procurement and Transnet policies on procedures of dealing with errors and discrepancies will apply.

22) The tenderer's prices in the Pricing schedule / Bill of Quantities (and which has been negotiated and moderated) constitute his Framework Contract quotation information which is to be used for all future quotations for call-offs / task order / batch order / package works under the Framework during the set contract term, should he be appointed as a Service provider under this Framework.

23) Most of the item numbers appearing in the PRICING SCHEDULES / BILL OF QUANTITIES with a prefix "CE" refer to the corresponding item numbers with a prefix "B", "C", "D", etc. in the COLTO Standard Specification for Road and Bridge Works for State Authorities (1998 edition).

24) For the purposes of this Bill of Quantities, the following words shall have the meanings hereby assigned to them:

2. Measurement and payment

2.1. Symbols

The units of measurement described in the Bill of Quantities are metric units abbreviated as follows:

Abbreviation	Unit
%	percent
h	hour
ha	hectare
kg	kilogram
kl	kilolitre
km	kilometre
km-pass	kilometre-pass
kPa	kilopascal
kW	kilowatt
l	litre
m	metre
mm	millimetre
m ²	square metre
m ² -pass	square metre pass
m ³	cubic metre
m ³ -km	cubic metre-kilometre
MN	meganewton



MN.m

meganewton-metre

MPa	megapascal
No.	number
Prov sum ¹	provisional sum
PC-sum	prime cost sum
R/only	Rate only
sum	Lump sum
t	ton (1000kg)
W/day	Work day

2.2. General assumptions

- 2.2.1. Unless otherwise stated, some items are measured net in accordance with the information based on the historical data.
- 2.2.2. The Prices and rates stated for each item in the Bill of Quantities shall be treated as being fully inclusive of all work, risks, liabilities, obligations, overheads, profit and everything necessary as incurred or required by the Contractor in carrying out or providing that item.
- 2.2.3. Clause 63.13 in Option B provides that these rates and Prices may be used as a basis for assessment of compensation events instead of Defined Cost.
- 2.2.4. Where this contract requires detailed drawings, designs or other information to be provided, and no rates or prices are included in the bill specifically for such matters, then the Contractor is deemed to have allowed for most costs associated with such requirements within the tendered rates and Prices in the Bill of Quantities.
- 2.2.5. An item against which no price is entered will be treated as covered by other Prices or rates in the bill of quantities. If a number of items are grouped together for pricing purposes, this will be treated as a single lump sum.
- 2.2.6. There are no designs or drawings at this stage of tendering process. Contractors in the framework may be expected to provide detailed designs and also manage the construction processes of a project. A design and build or management contractor contracting strategy.

¹ Provisional Sums should not be used unless absolutely unavoidable. Rather include specifications and associated bill items for the most likely scope of work, and then change later using the compensation event procedure if necessary. This is because tenderers cannot programme effectively for unknown scopes of work

- 2.2.7. The quantities contained in the Bill of Quantities may not be final and do not necessarily represent the actual amount of work to be done. The quantities of work assessed and certified for payment by the Project Manager at each assessment date will be used for determining payments due and not the quantities given in the Bill of Quantities.
- 2.2.8. The short descriptions of the items of payment given in the bill of quantities are only for the purposes of identifying the items. More detail regarding the extent of the work entailed under each item is provided in the Works Information.
- 2.2.9. The Bill of Quantities has been prepared using commonly used or acquired items or works by Transnet, they may not necessarily be accurate or reflect the actual work to be done. Tenderers must study the Bill of Quantities thoroughly and apply their minds in the determination of the rates or prices they offer. Where an item has not been properly described, the tenderer must assume that it includes obtaining it, delivering, installation and making good, therefore its price must be all inclusive.

2.3. Departures from the method of measurement

Amplification of or assumptions about measurement items

For the avoidance of doubt the following is provided to assist in the interpretation of descriptions given in the method of measurement. In the event of any ambiguity or inconsistency between the statements in the method of measurement and this section, the interpretation given in this section shall be used.



PART C2.2

BILLS OF QUANTITIES

C2.2 The Bill of Quantities

Refer to Annexure B for the bill of quantities

PROJECT: FRAMEWORK CONTRACTS FOR CIVIL ENGINEERING CONTRACTS - ROADS UPGRADES & NEW

ITEM NO.	SHORT DESCRIPTION	UNIT	QTY	RATE	AMOUNT
CE.1200	CONTRACTOR'S ESTABLISHMENTS ON SITE AND GENERAL OBLIGATIONS				
CE12.01	Protection, removal, realignment and replacement of existing services:				
	(i) Watermains under 200mm diameter	m	100		
	(ii) Watermains over 200mm diameter	m	80		
	(iii) Sewer pipelines under 150mm diameter	m	100		
	(iv) Sewer pipelines over 150mm to 450mm	m	80		
	(v) Stormwater pipelines over 200mm diameter	m	80		
	(vi) Underground power cables	m	85		
	(vii) Underground Telecommunication Cables	m	85		
	(viii) Fibre Cables	m	85		
	(ix) Temporary protection of other existing services	PC Sum	1	Work package stage	
	(x) Contractor's handling cost, profit and all other charges in respect of item CE12.01(ix)	%	200000	Work package stage	
	(b) Permanent Protection of Existing Services by concrete encasement (as per typical detail drawing)	PC Sum	1	Work package stage	
	(c) Realignment of Existing Services	PC Sum	1	Work package stage	
	(i) Contractor's handling cost, profit and all other charges in respect of item CE12.01(c)	%	100000	Work package stage	
12.02	Temporary Removal and re-establishment of access control equipment, including concrete work and electrical installation, complete	PC Sum	1	Work package stage	
	(i) Contractor's handling cost, profit and all other charges in respect of item 12.02	%	120000	Work package stage	
12.04	Demolish and remove from site reinforced concrete plinths and platform	m3	50		
12.05	Demolish and remove from site reinforced concrete surface bed	m3	115		
12.06	Demolish and remove from site reinforced concrete edge beam 200x250mm high, laser or thermal cut in new outline of new projecting beam	m	90		
12.07	Break up and remove existing asphalt surfaces	m2	120		
SUBTOTAL SECTION CE1200 CARRIED FORWARD TO SUMMARY					

PROJECT: FRAMEWORK CONTRACTS FOR CIVIL ENGINEERING CONTRACTS - ROADS UPGRADES & NEW

ITEM NO.	SHORT DESCRIPTION	UNIT	QTY	RATE	AMOUNT
CE.1300	CONTRACTOR'S ESTABLISHMENTS ON SITE AND GENERAL OBLIGATIONS				
CE13.01	The contractor's general obligations:				
	a) Fixed obligations	Lump Sum	1	Work package stage	
	b) Value-related obligations	Lump Sum	1	Work package stage	
	c) Time-related obligations	Month	15	Work package stage	
	d) Other fixed obligations	Lump Sum		Work package stage	
	i) Health & safety obligations as per H&S specifications, including provision of risk assessments, project specific H&S plan, H&S safety file, training, medical assessments.	Lump Sum	1		
	ii) Compliance with COVID 19 regulations	Lump Sum	1		
	e) Other Time-related obligations				
	i) Health & safety obligations as per H&S specifications	Month	15		
	ii) Environmental obligations as per the Environmental Management Plan.	Month	15		
	iii) Security on site	Month	15		
	iv) Compliance with Integrated Report Standards and Policies	Month	15		
SUBTOTAL SECTION CE1300 CARRIED FORWARD TO SUMMARY					

PROJECT: FRAMEWORK CONTRACTS FOR CIVIL ENGINEERING CONTRACTS - ROADS UPGRADES & NEW

ITEM NO.	SHORT DESCRIPTION	UNIT	QTY	RATE	AMOUNT
CE.1400	CONTRACTOR'S ESTABLISHMENTS ON SITE AND GENERAL OBLIGATIONS				
CE14.01	Provision of fully furnished office (min 40m2) for 2 Engineers, including air-conditioning, kitchen area with utensils/basic equipment and dedicated ablution facilities.	Lump Sum	1		
	b) Prime cost items and items measured and paid for in a lump sum:				
	i) Provision of Engineers cellular and internet data phone cost	Month	1		
14,4	Car Ports	No.	2		
14,8	Services				
	The provision of water, electricity, low pressure gas, sewerage and rubbish removal, cleaning services, maintenance and repairs, including the construction and maintenance of access roads, footpaths, etc				
	(a) Services at offices and laboratories:				
	(i) Fixed costs	Lump sum	1		
	(ii) Running costs	month	15		
14.11	Provision of mobile outdoor weather station	no	1		
	i) ECSA Registered Engineer for road engineering services (for reviewal, acceptance of the existing designs, provision of construction drawings, etc.)	Month	3		
	ii) Technical Management Packs - incl. data books, quality control documentation, operation and maintenance manuals, as-built drawings, technical monthly reports, engineering technical monthly queries, Final close out reports, etc.	Month	15		
	iii) Supervision for duration of construction (monitoring, quality control, etc.)	Month	15		
	iv). Project Progress Meetings	Month	15		
SUBTOTAL SECTION CE1400 CARRIED FORWARD TO SUMMARY					

PROJECT: FRAMEWORK CONTRACTS FOR CIVIL ENGINEERING CONTRACTS - ROADS UPGRADES & NEW

ITEM NO.	SHORT DESCRIPTION	UNIT	QTY	RATE	AMOUNT
CE.1500	ACCOMODATION TRAFFIC				
15.01	Accommodating traffic and maintaining temporary deviations				
	(a) Flagmen	man-day	320		
	(b) Portable STOP and GO-RY signs	no	6		
	(e) Road signs, R- and TR- series				
	(i) 1200 mm diameter	no	15		
	(f) Road signs, TW-series				
	(ii) 1500 mm sides	no	15		
	(g) Road signs, STW- DTG- TGS- & TG- series (excluding delineators and barricades)	m ²	5		
	(h) Delineators (TW 401 and TW402):				
	(i) Single (800mm x 200mm)	no	250		
	(ii) Double sided blade (800mm x 200mm)	no	500		
	(iii) Moveable barricade /road sign combination (2400mm x 400mm with 1220)	no	5		
	(j) Traffic cones	no	50		
	(l) Movable barriers (Plastic water filled barriers)	m	20		
	(m) Two way communication device sets	no	2		
	(n) Other traffic control measures ordered by the engineer:				
	(i) Provision of other traffic control measures	Prov Sum	1		
	(o) Road signs, TIN-Series - 1200mm x 400mm	no	10		
15,05	Gravelling and repair of temporary deviations and existing gravel shoulders used as temporary deviations				
	(a) Temporary deviations (G6 Quality Min)	m3	20		
15,6	Repairs, alternations and/or additions to existing roads used as temporary deviations	Prov Sum	1		
	(i) Handling costs and profit in respect of sub-item 15.06	%			
15,7	Temporary Culverts:				
	(a) Provision and laying of temporary prefabricated culverts complete:				

ITEM	SHORT DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	(i) 600mm Class 75 D pipe in Class C bedding	m	15		
	(ii) 900mm Class 75 D pipe in Class C bedding	m	20		
	(iii) 150mm Class 100D Interlocking Joint Pipe	m	30		
	(iv) 300mm Class 100D Interlocking Joint Pipe	m	30		
	(b) Re-use of prefabricated culverts complete				
	(i) 450mm dia pipe on class C bedding	m	15		
	(ii) 600mm dia pipe on class C bedding	m	45		
	(c) Eventual removal of prefabricated culverts	m	160		
SUBTOTAL SECTION CE1500 CARRIED FORWARD TO SUMMARY					

PROJECT: FRAMEWORK CONTRACTS FOR CIVIL ENGINEERING CONTRACTS - ROADS UPGRADES & NEW

ITEM NO.	SHORT DESCRIPTION	UNIT	QTY	RATE	AMOUNT
CE.2100	DRAINS				
21.02	Cleaning and shaping existing open drains	m ³	5		
CE21.18	Excavation for the clearing of existing drainage systems				
a)	Manholes and inlet and outlet structures	m ³	145		
	ii) Pipe sizes 0 - 600mm	m ³	80		
	ii) Pipe sizes 600mm -1000mm	m ³	60		
21.19	Selected backfill (G5 Quality) material under concrete-lined side drains compacted to 95% of modified AASHTO density	m ³	35		
21.20	Cleaning and Clearing existing blocked sewers & CCTV Camera inspections of Sewers within the project boundaries.				
	(a) Cleaning and Clearing Existing Blocked Sewers (100mm to 375mm)	Prov Sum	1	Work package stage	
	(b) CCTV Camera inspections by a qualified services provider approved by the engineer	Prov Sum	1	Work package stage	
	(c) Refurbishment/replacement of damaged/broken sewer pipes	Prov Sum	1	Work package stage	
	(d) Handling costs and profit in respect of sub-item CE21.20 (a),(b) & (c)	%		Work package stage	
SUBTOTAL SECTION CE2100 CARRIED FORWARD TO SUMMARY					

PROJECT: FRAMEWORK CONTRACTS FOR CIVIL ENGINEERING CONTRACTS - ROADS UPGRADES & NEW

ITEM NO.	SHORT DESCRIPTION	UNIT	QTY	RATE	AMOUNT
CE.2200	PREFABRICATED CULVERTS				
CE22.01	Excavation				
	(i) 0m up to 1,5 m	m ³	210		
	(ii) Exceeding 1,5 m and up to 3, 0m	m ³	225		
22,02	Backfilling				
	(a) Using excavated material	m ³	225		
	(b) Using imported selected material				
	(i) Imported selected material from commercial sources (medium grade)	m ³	140		
	(c) Extra over subitems 22.02 (a) and (b) for soil cement backfilling (3% CEM II 32.5 or similar)	m ³	50		
22,3	Concrete pipe culverts:				
	(a) Concrete encased bedding				
	(i) 300 mm diameter, class 100 D	m	60		
	(iii) 450 mm diameter, class 100 D	m	60		
	(iv) 600 mm diameter, class 100 D	m	20		
	(b) On class B bedding:				
	(i) 300 mm diameter, class 100 D	m	60		
	(ii) 375 mm diameter, class 100 D	m	60		
	(iv) 600 mm diameter, class 100 D	m	20		
22,07	Cast in situ concrete and formwork:				
	(a) In class A bedding, screeds and the encasing for pipes, including formwork				
	(i) Class 20/19	m ³	120		
	(c) In inlet and outlet structures, skewed ends, catchpits, manholes, thrust and anchor blocks, excluding formwork but including class U2 surface finish				
	(i) Class 30/19	m ³	30		

ITEM	SHORT DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	(d) Formwork of concrete under subitem 22.07 (c) above:				
	(i) F1 surface finish on unexposed surfaces	m ²	70		
22.10	Steel reinforcement:				
	(a) Mild steel bars (Hot Dipped Galvanised)	t	1		
	(b) High-tensile steel bars (Hot Dipped Galvanised)	t	4		
	(c) Welded steel fabric (Hot Dipped Galvanised)	kg	500		
22,11	Dowels for joining old and new concrete (Hot dipped Galvanised as per B63.1)	kg	360		
22.12	Removing existing concrete & brickwork:				
	(a) Plain concrete and masonry	m ³	20		
	(b) Reinforced concrete	m ³	20		
	(c) Brickwork (up to 345mm thick)	m ²	120		
22.15	Treating existing concrete and steel surfaces for joining new to old concrete				
	(a) Epoxy resin (wet to dry)	l	10		
	(b) Coating of cut steel with suitable rust inhibitor	l	10		
22,18	Brickwork:				
	(a) 115mm thick	m ²	20		
	(b) 230mm thick	m ²	70		
	(c) 345mm thick	m ²	40		
22,2	Benching	m ²	30		
22.21	Accessories:				
	(a) Manhole covers and grid inlets including frames	Prov Sum	1	Work package stage	
	(b) Handling costs and profit in respect of sub-item 22.21 (a)	%		Work package stage	
22,23	Service ducts:				
	(a) Ordinary pipes (11mm dia)	m	100		
	Duct Marker Blocks	no	10		

ITEM	SHORT DESCRIPTION	UNIT	QTY	RATE	AMOUNT
SUBTOTAL SECTION CE2200 CARRIED FORWARD TO SUMMARY					

PROJECT: FRAMEWORK CONTRACTS FOR CIVIL ENGINEERING CONTRACTS - ROADS UPGRADES & NEW

ITEM NO.	SHORT DESCRIPTION	UNIT	QTY	RATE	AMOUNT
CE2300	CONCRETE KERBING, CONCRETE CHANNELLING, CHUTES AND DOWNPIPES, AND CONCRETE LININGS FOR OPEN DRAINS				
23,01	Concrete kerbing (a) Pre-cast kerbing to SABS 927 (typical designs) (i) Radii less than 12 meters (ii) Radii in excess of 12 meters	m	100		
23,02	(a) Pre-cast Figure 4 kerb and channel (20/19)	m	200		
23,03	Concrete chutes (typical designs) : Galvanised metal downpipes	m	80		
23,05	Inlet, outlet, transition and similar structures (typical designs): (a) Insitu, inlet structures for downpipes (typical designs), class 25/19 concrete (b) Insitu, outlet structures for downpipes (typical designs), class 25/19 concrete (c) Insitu, transition (typical designs), class 25/19 concrete (d) Down chute inlet at catchwater banks (typical designs), class 25/19 concrete	m	10		
23,05	Trimming of excavations for concrete-lined open drains: (a) In soft material (a) In hard material	m ²	129		
23,08	Concrete lining for open drains: (a) Cast in situ concrete lining (Class 30/19 concrete) lining in concrete drains: 125mm thick (i) Trapezoidal open drain (ii) 1m wide side drain Concrete V-drain (iii) Box channel (iv) Concrete lining for mini-circles splitter islands and walkways: (1) Cast in situ concrete lining (Class 30/19 concrete, 100mm thick)	m ³	100		
		m ³	85		
		m ³	25		
		m ³	75		

ITEM	SHORT DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	(2) Class U2 surface finish to cast in situ concrete for mini-circles splitter islands and walkways	m ²	95		
	(b) Class U2 surface finish to cast in situ concrete for all drain types	m ²	95		
23,09	Formwork to cast in situ concrete lining for open drains (Class F2 surface finish):				
	(b) To sides with formwork on both internal and external faces (each face measured)	m ²	105		
	(c) To ends of slabs	m ²	120		
23,1	Sealed joints in concrete linings of open drains:				
	(a) Silicone sealant in expansion joints at 10m intervals	m	150		
23,12	Steel reinforcement:				
	(c) Welding steel fabric (ref. 311)	m ²	125		
23,13	Polyethylene sheeting (0.15mm thick) for concrete-lined open drains	m ²	125		
23.16	Demolition and removal of existing kerbs and/or channel, concrete lined drains:				
	(a) On curves of radii more than or equal to 5,0m but less than 20,0 m	m	174		
	(b) On on curves with radii more than or equal to 1,0m but less than 5, m	m	20		
	(c) On curves with radii less than 1,0 m	m	20		
23.18	Construction/Rehabilitation of miscellaneous stormwater related infrastructure	Prov Sum	1	Work package stage	
	(a) Handling costs and profit in respect of sub-item CE23.18 (a)	%		Work package stage	
SUBTOTAL SECTION CE2300 CARRIED FORWARD TO SUMMARY					

PROJECT: FRAMEWORK CONTRACTS FOR CIVIL ENGINEERING CONTRACTS - ROADS UPGRADES & NEW

ITEM NO.	SHORT DESCRIPTION	UNIT	QTY	RATE	AMOUNT
CE2400	THE RE-INSTATEMENT AND UPGRADING OF THE 40 TON ROAD SURFACE				
	SITE CLEARANCE				
24,01	Demolish, removal and disposal from site 9of miscellaneous structures consisting):				
	(a) Unreinforced concrete	m ³	4		
	(b) Masonry and stone pitching	m ³	8		
	(c) Reinforced concrete	m ³	2		
	(d) Pipe culvert (450mm-600mm)	m ³	15		
24,02	Demolish and remove from site reinforced concrete surface bed	m ³	200		
24,03	Demolish and remove from site reinforced concrete edge beam 200x250 mm high,laser or thermal cut in new outline of new projecting beam	m	50		
	EARTHWORKS				
24,04	Cut to spoil in all materials	m ³	550		
24,05	Restricted Excavation in all materials and dispose to a site provided by the Contractor:				
(a)	Foundations	m ³	38		
24,06	Excavate in all materials and use for backfill:				
(b)	next to Foundations	m ²	80		
	Extra over for:				
24,07	Intermediate excavate	m ³	38		
24,08	Allowance for dewatering	sum		Work package stage	
	EARTHWORKS (SMALL WORKS)				
24,09	Over Excavation in all materials and dispose to a site provided by the Contractor:				

ITEM	SHORT DESCRIPTION	UNIT	QTY	RATE	AMOUNT
24.10	Imported G5 Layer in 150mm thicklayers,constructed from material imported from commercial sources compacted to 95% of	m ³	600		
24,11	Imported G6 Layer in 150mm thicklayers, constructed from material imported	m ³	120		
	(c) Welded steel fabric	kg	15		
SUBTOTAL SECTION CE2400 CARRIED FORWARD TO SUMMARY					

PROJECT: FRAMEWORK CONTRACTS FOR CIVIL ENGINEERING CONTRACTS - ROADS UPGRADES & NEW

ITEM NO.	SHORT DESCRIPTION	UNIT	QTY	RATE	AMOUNT
CE2500	EARTHWORKS (ROADS, SUBGRADE)				
25,01	Insitu layer preparation to a depth of 150mm and compaction of insitu material to a minimum of 93% Mod. AASHTO density	m ²	150		
25,02	One layer of 375mm micron waterproof sheeting sealed at laps with Gunplas Pressure sensitive tape or similar approved under concrete	m ²	150		
SUBTOTAL SECTION CE2500 CARRIED FORWARD TO SUMMARY					

PROJECT: FRAMEWORK CONTRACTS FOR CIVIL ENGINEERING CONTRACTS - ROADS UPGRADES & NEW

ITEM NO.	SHORT DESCRIPTION	UNIT	QTY	RATE	AMOUNT
CE.2600	PRECAST CONCRETE				
26,01	Supply Precast reinforced concrete beams. Length of beams may need modification depending on actual position of piles therefore lengths to be verified on site after piling is complete:	m ²	200		
26,03	Beam PB2 size 450x600mm high overall with notch 100x120mm high on 2edges, overall length of 7290mm	No	13		
26,05	Beam PB4 size 450x400mm high overall with notch 100x120mm high on 2edges, overall length of 2185mm	No	3		
26,06	Beam PB5 size 450x400mm high overall with notch 100x120mm high on 2edges, overall length of 2790mm	No	3		
26,07	Beam PB6 size 450x400mm high overall with notch 100x120mm high on 2edges, overall length of 2685mm	No	10		
26,08	Beam PB9 size 450x400mm high overall with notch 100x120mm high on 2edges, overall length of 2300mm	No	2		
26,09	Beam PB7 size 450x600mm high overall with notch 100x120mm high on 1 edge, overall length of 2685mm	No	1		
26,10	Beam PB8 size 450x600mm high overall with notch 100x120mm high on 1 edge, overall length of 5315mm	No	1		
26,11	Beam PB10 size 450x600mm high overall with notch 100x120mm high on 1 edge, overall length of 2300mm	No	2		
26,12	Beam PB11 size 450x600mm high overall with notch 100x120mm high on 2edges, overall length of 7290mm	No	2		
SUBTOTAL SECTION CE2500 CARRIED FORWARD TO SUMMARY					

PROJECT: FRAMEWORK CONTRACTS FOR CIVIL ENGINEERING CONTRACTS - ROADS UPGRADES & NEW

ITEM NO.	SHORT DESCRIPTION	UNIT	QTY	RATE	AMOUNT
CE.3300	CONCRETE KERBING, CONCRETE CHANNELLING, CHUTES AND ND DOWNPIPES, AND CONCRETE LININGS FOR OPEN DRAINS				
33,01	Cut and borrow to fill, including free-haul up to 1.0km (a) Material in compacted layer thickness of 200mm and less: (i) Compacted to 93 % of modified AASHTO density (b) Material in compacted layer thickness of 200mm - 500mm : (i) Compacted to 90 % of modified AASHTO density (ii) Compacted to 93 % of modified AASHTO density (iii) Eight roller passes compaction (c) Rock fill (as specified in subclause 3209 (d) Pioneer layer (as specified in subclause 3207 (m³	1500		
33.03	Extra over item 33.01 for excavating and breaking down material in: (a) Intermediate excavation (b) Hard excavation (c) Boulder excavation class A (d) Boulder excavation class B	m³	150		
33.04	Cut and borrow to fill, including free-haul up to 1.0km, material obtained from: (a) Soft excavation (a) Intermediate excavation	m³	35		
		m³	20		

ITEM	SHORT DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	(c) Boulder excavation class A	m ³	15		
	(d) Boulder excavation class B	m ³	15		
	(a) Non-plastic sand with up to 2% passing through the 0.075 sieve, compacted to 100% Mod AASHTO density	m ³	115		
33,7	Removal of unsuitable material (including free-haul up to 1.0 km):				
	(a) In layer thicknesses of 200 mm and less:				
	(i) Stable material	m ³	110		
	(b) In layer thicknesses exceeding 2 mm:				
	(i) Stable material	m ³	375		
33,1	Roadbed preparation and the compaction of material:				
	(b) Compaction to 93 % of modified AASHTO density	m ³	43		
33,11	Three roller passes compaction:				
	(a) Vibratory roller	m ²	150		
	(c) Grid roller	m ²	150		
	(f) Pneumatic-tyred roller	m ²	150		
33,12	In-situ treatment of roadbed (cutting):				
	(a) In situ treatment by ripping	m ³	400		
	(b) In situ treatment by blasting	m ³	86		
33,13	Finishing-off cut and fill slopes, medians and interchange areas				
	(a) Cut slopes	m ²	400		
	(b) Fill slopes	m ²	200		
SUBTOTAL SECTION CE3300 CARRIED FORWARD TO SUMMARY					

PROJECT: FRAMEWORK CONTRACTS FOR CIVIL ENGINEERING CONTRACTS - ROADS UPGRADES & NEW

ITEM NO.	SHORT DESCRIPTION	UNIT	QTY	RATE	AMOUNT
CE.3400	CONCRETE KERBING, CONCRETE CHANNELLING, CHUTES AND ND DOWNPIPES, AND CONCRETE LININGS FOR OPEN DRAINS				
CE34.01	Pavement layers constructed from gravel taken from cut or borrow, including free-haul up to 1.0km				
	(a) Gravel Subbase (unstabilised gravel) compacted to:				
	(i) 93% of Mod AASHTO density, 150mm G5	m ³	210		
	(ii) 95% of Mod AASHTO density, 150mm G5	m ³	210		
	(d) Gravel sub base (chemically stabilised material), compacted to:	m ³	210		
	(i) 97 % of Mod AASHTO density virgin material G6 minimum - 150mm	m ³	850		
	(g) Gravel shoulders compacted to:				
	(i) 95% of Mod AASHTO density, 150mm G5	m ³	120		
34.02	Extra over item 34.01 for excavating and breaking down material in:				
	(a) Intermediate excavation	m ³	350		
	(b) Hard excavation	m ³	250		
34.03	Overhaul on Material hauled in excess of 1.0km	m ³ km	1300		
SUBTOTAL SECTION CE3400 CARRIED FORWARD TO SUMMARY					

PROJECT: FRAMEWORK CONTRACTS FOR CIVIL ENGINEERING CONTRACTS - ROADS UPGRADES & NEW

ITEM NO.	SHORT DESCRIPTION	UNIT	QTY	RATE	AMOUNT
CE.3500	CONCRETE KERBING, CONCRETE CHANNELLING, CHUTES AND ND DOWNPIPES, AND CONCRETE LININGS FOR OPEN DRAINS				
35,01	Chemical stabilization extra over unstabilized compacted layers (a) Sub base (i) 150mm thick C4	m ³	1200		
35.2	Chemical stabilizing agent (a) CEM II, 32.5 A-S or similar (b) Road lime (slaked road lime)	t	110		
35,6	Provision and application of water for curing	kl	150		
35,7	Extra over item 35.01 for chemical stabilization in restricted areas (a) Mixing in Mechanical Mixers (b) In situ mixing	m ³	200		
SUBTOTAL SECTION CE3500 CARRIED FORWARD TO SUMMARY					

PROJECT: FRAMEWORK CONTRACTS FOR CIVIL ENGINEERING CONTRACTS - ROADS UPGRADES & NEW

ITEM NO.	SHORT DESCRIPTION	UNIT	QTY	RATE	AMOUNT
CE.3800	CONCRETE KERBING, CONCRETE CHANNELLING, CHUTES AND DOWNPIPES, AND CONCRETE LININGS FOR OPEN DRAINS				
38.01	Excavating and removing existing bituminous material (except milled				
	(i) Not exceeding 30mm	m2	200		
	(ii) Exceeding 3mm but not exceeding 6mm	m2	600		
	(a) Non-cemented material	m3	900		
	(b) Cemented material	m3	100		
	(c) Cemented crushed stone (Bitumen Emulsion Treated Crushed Stone G5)	m3	300		
38,05	Excavating material from existing pavement and or underlying fill in restricted areas:				
	(a) Extra over item 38.01 for bituminous material excavated seperately	m2	550		
	(b) Extra over item 38.05 for other existing pavement and/or fill material:				
	(i) Non-cemented material	m3	200		
	(ii) Cemented material	m3	20		
38,08	Sawing or Cutting asphalt or cemented pavement layers:				
	(a) Sawing asphalt	m2	50		
SUBTOTAL SECTION CE3800 CARRIED FORWARD TO SUMMARY					

PROJECT: FRAMEWORK CONTRACTS FOR CIVIL ENGINEERING CONTRACTS - ROADS UPGRADES & NEW

ITEM NO.	SHORT DESCRIPTION	UNIT	QTY	RATE	AMOUNT
CE.4100	PRIME COAT				
41,01	Prime coat				
	(a) MC-30 cut-back bitumen	l	20		
	(a) ColPrime E	l	1200		
	(c) Inverted Bitumen Emulsion (MSP1 or similar approved)	l	1450		
41,02	Aggregate for blinding - 4.75mm nominal size aggregate	m ²	155		
41,03	Extra over item 41.01 for applying the prime coat in areas accessible only to hand held equipment	l	200		
SUBTOTAL SECTION CE4100 CARRIED FORWARD TO SUMMARY					

PROJECT: FRAMEWORK CONTRACTS FOR CIVIL ENGINEERING CONTRACTS - ROADS UPGRADES & NEW

ITEM NO.	SHORT DESCRIPTION	UNIT	QTY	RATE	AMOUNT
CE.4200	ASPHALT BASE & SURFACING				
42,01	Asphalt base: Asphalt surfacing 40mm thick using 50/70 penetration grade bitumen				
	(a) 40mm, Continuously graded Hot Mix Asphalt with 35/50 Pen Grade binder	m2	Rate Only		
42,04	Tack coat of 30% stale-grade emulsion	l	Rate Only		
42,05	Binder variations				
	(a) 60/70 Penetration Grade Binder	t	Rate Only		
42,06	Variation in active filler content				
	(a) Cement	t	Rate Only		
	(b) Lime	t	Rate Only		
42.08	1mm cores in asphalt paving	no	5		
42,13	Placing and compacting asphalt in restricted areas:				
	(a) Extra over item 42.01	m2	48		
42,14	Extra over item 42.04 for applying tack coat in restricted areas	l	48		

						SUBTOTAL SECTION CE4200 CARRIED FORWARD TO SUMMARY	
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PROJECT: FRAMEWORK CONTRACTS FOR CIVIL ENGINEERING CONTRACTS - ROADS UPGRADES & NEW

ITEM NO.	SHORT DESCRIPTION	UNIT	QTY	RATE	AMOUNT
CE.4500	DOUBLE SEALS				
45,01	Double seal using:				
(i)	14mm and 7mm double seal using a 70/100 pen road-grade bitumen in tack coat and a 65% cationic spray grade emulsion (diluted with 40% water) fogspray as final binder application	m2	1200		
(i)	14mm and 7mm double seal using a Cat 65 Spray grade emulsion or similar approved in tack coat and a 65% cationic spray grade emulsion (diluted with 40% water) fogspray as final binder application	m2	500		
45,02	Bitumious binder variations:				
(i)	70/100 pen road-grade bitumen hot applied	l	120		
(i)	Cat 65 Spray grade emulsion or similar approved cold applied	l	85		
45,03	Aggregate variations				
(a)	14.0mm aggregate	m ³	100		
(b)	7.0mm aggregate	m ³	120		
45,05	Precoating aggregate variation (Colcote S or similar approved)				
(a)	14.0mm aggregate	m ³	230		
(b)	7.0mm aggregate	m ³	115		
SUBTOTAL SECTION CE4500 CARRIED FORWARD TO SUMMARY					

PROJECT: FRAMEWORK CONTRACTS FOR CIVIL ENGINEERING CONTRACTS - ROADS UPGRADES & NEW

ITEM NO.	SHORT DESCRIPTION	UNIT	QTY	RATE	AMOUNT
CE.4600	BITUMIOUS SINGLE SEAL WITH SLURRY (CAPE SEAL)				
46,01	Bituminous single seal with 19.0mm aggregate and double slurry				
(a)	Cat 65 Spray grade emulsion or similar approved in tack coat and a 30% cationic 2nd emulsion. 19mm grade 1 surfacing aggregate	m2	1200		
(b)	70/100 pen road-grade bitumen in tack coat and a 30% cationic in 2nd emulsion. 19mm grade 1 surfacing aggregate	m2	1200		
46,02	Bituminous binder variations:				
(i)	80/100 pen road-grade bitumen hot applied	l	300		
(ii)	Spray-grade emulsion 93% bitumin)	l	300		
(ii)	Cationic stable-grade (60% bitumen)	l	300		
46,03	Aggregate variations				
(a)	19.0mm nominal sized aggregate	m³	55		
(b)	Slurry application application rate variations	t	85		
46,03	Extra over items for 46.01 and 46.03 for work in areas inaccessible to mechanical equipment	m2	200		
SUBTOTAL SECTION CE4600 CARRIED FORWARD TO SUMMARY					

PROJECT: FRAMEWORK CONTRACTS FOR CIVIL ENGINEERING CONTRACTS - ROADS UPGRADES & NEW

ITEM NO.	SHORT DESCRIPTION	UNIT	QTY	RATE	AMOUNT
CE.5100	PITCHING, STONWORK AND PROTECTION AGAINST EROSION				
(a)	Grouted stone pitching on concrete bed (100mm thickness)	m ²	130		
(b)	Riprap: Packed riprap (7.5kg critical mass)	m ³	100		
SUBTOTAL SECTION CE5100 CARRIED FORWARD TO SUMMARY					

PROJECT: FRAMEWORK CONTRACTS FOR CIVIL ENGINEERING CONTRACTS - ROADS UPGRADES & NEW

ITEM NO.	SHORT DESCRIPTION	UNIT	QTY	RATE	AMOUNT
CE.5200	GABIONS				
52.01	Foundation trench excavation: (a) Excavating soft material situated within the following depth ranges below the surface level:	m ³	15		
	(b) Extra over subitem 52.01(a) for excavation in hard material and bolder material, irrespective of depth	m ³	10		
52.02	Surface preparation for bedding the gabions	m ³	15		
52.03	Gabions: (a) Galvanized gabion boxes (2,7 mm nominal diameter of mesh wire and 80 x 100 mm mesh size): (i) 1.0 m by 0,5 m deep box (ii) 1.0 m by 1,0 m deep box (iii) 1.0 m by 2,0 m long (iv) 1.0 m by 3,0 m long (b) PVC-coated gabion boxes (all galvanised wire to be coated by heat bonded heavy duty PVC coating of nominal 0,5 mm wall thickness, 2,7 mm diameter of mesh wire and 80 x 100 mm mesh size): (i) 1.0 m by 0,5 m deep box (ii) 1.0 m by 1,0 m deep box (c) Galvanized gabion mattresses (2,2 mm nominal diameter of mesh wire, 60 x 80 mm mesh size and 1,0 m diaphragm spacing): (i) 2,0 m wide by 0,3 m deep mattress	m ³ m ³ m ³ m ³ m ³ m ³ m ³ m ³ m ³	15 15 15 15 15 15 20		

ITEM	SHORT DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	(d) PVC-coated gabion mattresses (all galvanised wire to be coated by heat bonded heavy duty PVC coating of nominal 0,5 mm wall thickness, 2,2 mm diameter of mesh wire, 60 x 80 mm mesh size and 1,0 m diaphragm spacing):				
	(i) 2,0 m wide by 0,3 m deep mattress	m ³	20		
52.04	Geotextiles:				
	a) Non-woven needle punched, Grade 1	m ³	20		
52.05	Polymer film sheeting, for gabions				
	a) 0,15mm thick	m ²	50		
52.08	Extra over subitems B52.03(c) and (d) for cutting gabion mattresses to suit	m ³	70		
52.09	Removal of existing gabion structures	m ³	20		
SUBTOTAL SECTION CE5200 CARRIED FORWARD TO SUMMARY					

PROJECT: FRAMEWORK CONTRACTS FOR CIVIL ENGINEERING CONTRACTS - ROADS UPGRADES & NEW

ITEM NO.	SHORT DESCRIPTION	UNIT	QTY	RATE	AMOUNT
CE.5400	GUARDRAILS				
54.01	Guardrails on timber posts				
	(a) Galvanised	m	250		
	(b) Extra over subitem 54.01(a) for horizontally curved guardrails factory bent to radius less than 45m	m	110		
54.03					
54.04	End treatments:				
	(e) End treatments in accordance with the drawings where double guardrail sections are used	No	10		
54.05	Additional guardrail posts:				
	(i) Timber posts				
	(a) Up to 2000m	m	150		
	(b) Exceeding 2000m up to 4000m	m	180		
	(c) Exceeding 4000m	m	190		
54.06	Reflective plates	No	105		
54.07	Removing existing guardrails				
	{1} Up to 1 000 m	m	180		
	(2) Exceeding 1000m up to 2000m	m	200		
	(3) Exceeding 2000m	m	200		
54.12	Extra over item 54.01 for drilling and blasting holes for guardrail posts	No	Rate only		
SUBTOTAL SECTION CE5400 CARRIED FORWARD TO SUMMARY					

TNPA/2024/01/0023/53831/RFP

PROJECT: FRAMEWORK CONTRACTS FOR CIVIL ENGINEERING CONTRACTS - ROADS UPGRADES & NEW

ITEM NO.	SHORT DESCRIPTION	UNIT	QTY	RATE	AMOUNT
CE.5600	ROAD SIGNS				
56.01	Road sign boards with painted or coloured semi-matt background. Symbols, lettering and borders in semi-matt black or in Class I retro-reflective material, where the sign boards is constructed from:				
	(i) Area not exceeding 2m ²	m ²	10		
	(ii) Area exceeding 2m ² but not 10m ²	m ²	15		
	f) Permanent Regulatory Signs, constructed from prepainted galvanized steel plate (chromadek):				
	(a) Background of retro-reflective material				
	(iii) Class III	m ²	25		
	(b) Lettering, symbols, numbers, arows, emblems and borders on retro-reflective material:				
	Class III	m ²	25		
56.03	Road sign supports				
	(a) Steel Tubing - Galvanised Mild Steel pipe 76mm x 3mm	m	60		
	(c) Timber:				
	(i) 100 mm dia. (CCA treated)	m	150		
	ii) 150 mm dia. (CCA treated)	m	55		
	ii) 175 mm dia. (CCA treated)	m	45		
56,05	Excavation and backfilling for road sign supports	m ³	5		
56,06	Extra over item 56.05 for cement treated soil backfill	m ³	5		
56,09	Dismantling and storing road signs with a surface area of:				
	(a) up to 2m ²	No	10		
	b) Exceeding 2 m ² but not 10 m ²	No	8		

ITEM	SHORT DESCRIPTION	UNIT	QTY	RATE	AMOUNT
56.10	Danger plates complete at culverts and guardrail ends				
	a) 600x150 mm (height x width) (includes sign, pole, excavation and backfill)	No	50		
	b) 800x200 mm (height x width) (includes sign, pole, excavation and backfill)	No	35		
56.11	Extra over item 56.05 for concrete backfill class 20/19 excluding marker signs	m ³	5		
SUBTOTAL SECTION CE5600 CARRIED FORWARD TO SUMMARY					

PROJECT: FRAMEWORK CONTRACTS FOR CIVIL ENGINEERING CONTRACTS - ROADS UPGRADES & NEW

ITEM NO.	SHORT DESCRIPTION	UNIT	QTY	RATE	AMOUNT
CE.5700	ROAD MARKINGS				
CE57.01	Road-marking paint:				
	a) White lines (broken and unbroken)				
	(i) 100 mm wide	km	2		
	(ii) 200 mm wide	km	1		
	(iii) 300 mm wide	km	1		
	b) Yellow lines (broken and unbroken)				
	(i) 100 mm wide	km	25		
	(c) Red lines (unbroken) 100mm wide	km	2		
	(d) White lettering and symbols	m ²	55		
	(e) Yellow lettering and symbols	m ²	25		
	(f) Transverse lines, painted island and arrestor ben markings (any colour)	m ²	150		
	(g) Kerb markings (any colour)	m ²	50		
57,04	Variation in rate of application				
	(a) White paint	l	10		
	(b) Yellow paint	l	10		
	(c) Red Paint	l	10		
57.06	Setting out and premarking the lines (excluding traffic-island markings, lettering and symbols)	km	15		
57.12	Traffic calming bituminous applications				
	(a) Rumble strips (BRP or similar approved):				
	(i) 100mm wide and 50mm high bar module (20mm aggregate)	m	130		

PROJECT: FRAMEWORK CONTRACTS FOR CIVIL ENGINEERING CONTRACTS - ROADS UPGRADES & NEW

ITEM NO.	SHORT DESCRIPTION	UNIT	QTY	RATE	AMOUNT
CE.7100	CONCRETE FOR STRUCTURES				
71.02	Concrete Pavement excluding texturing - 250mm Thick 50/19 (Fibre reinforced with Sika F- Macro Fibres 40/0.8 at 1200g/m3 or similar approved)	m2	200		
71.04	Texturing and curing the concrete pavement (a) Burlap-dragged and grooved texture	m2	200		
71.06	(iii) Sewer pipelines under 150mm diameter (a) Expansion joints complete (Softboard against building as per typical detail) (c) Sealed contraction joints sawn in two separate operation as shown on the typical detail drawing (d) Dowel Bars (Galvanised High Tensile Steel) complete as per typical detail drawing	m	115		
	(i) Installed in new concrete	no	115		
71.08	Steel Reinforcement in concrete pavement: (g) Forming and sealing the joints between asphalt and concrete pavements complete with 50mm x 50mm x 3mm Galvanised Steel Edge Protector as per detail drawing. (c) Welded steel fabric (Galvanised)	m	120		
		kg	150		
SUBTOTAL SECTION CE7100 CARRIED FORWARD TO SUMMARY					

PROJECT: FRAMEWORK CONTRACTS FOR CIVIL ENGINEERING CONTRACTS - ROADS UPGRADES & NEW

ITEM NO.	SHORT DESCRIPTION	UNIT	QTY	RATE	AMOUNT
CE.8100	TESTING MATERIALS AND WORKMANSHIP				
CE81,02	Other special tests requested by the engineer	Prov Sum	1	Work package stage	
	Handling costs and profit in respect of sub-item CE81.02	%		Work package stage	
81,03	Providing testing equipment:				
	(a) Rolling straight edge	no	1		
	(iii) Sewer pipelines under 150mm diameter	no	1		
SUBTOTAL SECTION CE8100 CARRIED FORWARD TO SUMMARY					

**SCHEDULE A : ROUTINE ROADS MAINTENANCE
PART A : MANAGEMENT**

RD.M01

ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
RD.M01	<u>CONTRACTOR'S ESTABLISHMENT ON SITE AND GENERAL OBLIGATIONS</u>				
	FIXED RELATED ITEMS				
RD.M01.1	Contractual requirements, including NEC 3 Core, Dispute Resolution, Secondary Option	LS	1	Work package stage	
RD.M01.2	Establishment of Facilities on the Site	LS	1	Work package stage	
	a) Furnished offices - TYPE 2 -PSAB 3.2.1	month	1		
	b) Telephones.	month	1		
	c) Name boards.	LS	1	Work package stage	
	d) Rented Housing	PROV. SUM	1	Work package stage	
	Handling costs and profit in respect of sub-item RD.M01.2(d) above	%		Work package stage	
RD.M01.4	Facilities for Contractor See PS A 4.2 : Offices and storage sheds.				
	a) Workshops	m2	150		
	b) Laboratories	m2	200		
	c) Living accomodation	month	12		
	d) Ablution and latrine facilities (chemical portable toilets to be well maintained / serviced for the entire duration of the contract).	month	1		
	e) Open concrete working floors, 150 mm thick	m2	100		
	f) Roofs over open concrete working floors	m2	80		
	g) Kitchen unit (for a contractor and his employees)	No	2		
	h) Change room with shower (for different genders)	m2	3 500		

ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
RD.M01.5	Tools and equipment (basic)	Sum	1		
	The Contractor is to note that all Security and Access Control requirements must be in accordance with and conform to TNPA requirements	month	12		
	Office and laboratory furniture:				
	(a) Chairs:				
	(i) Office swivel chair	No	6		
	(ii) Office chair	No	12		
	(c) High chairs for laboratory	No	12		
	d) Office desk with 3 drawers (at least one lockable drawer)	No	8		
	(f) Conference table (including 12 No. sturdy chairs)	No	1		
RD.M01.9	Office and laboratory fittings Installations and equipment:				
	a) Items measured by number:				
	(i) 220/250 volt power outlet plug point	No	50		
	(ii) 400/231 volt 3-phase power outlet plug point	No	1		
	(iii) Single 80 watt fluorescent tube ceiling light complete with ballast and tubes	No	1		
	(iv) Double 80 watt fluorescent tube ceiling light complete with ballast and tubes	No	20		
	(vii) Laboratory basins complete with swan-neck taps and drains	No	8		
	(viii) Extractor fans installed complete with own power connections	No	1		
	(x) Fire extinguishers (9,0 kg), all purpose dry powder type, complete, mounted on wall with brackets	No	12		
	(xi) Air-conditioning unit with own power connection	No	12		

ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	(xiii) Curing chamber for UCS specimens, complete with water connection, including the provision of brick partitions, plaster, paint and shelving, all complete according the drawings	No	4		
	xiv) General-purpose steel cupboards with shelves	No	4		
	xv) General-purpose steel cupboards with drawers	No	4		
	(xviii) UPS / Voltage stabilizer for use with a single computer	No	6		
	(xix) Plan holder	No	6		
	(xx) Floodlights complete with poles, 500 Watt (minimum) globes and photocell for security	No	6		
	(xxi) Rain gauge	No	1		
	(xxii) Minimum/maximum atmospheric temperature gauge	No	1		
	(xxiii) Digital thermometer	No	1		
	(xxiv) Mobile outdoor weather station	No	1		
	(xxv) Measuring wheel	No	3		
	xxvii) First aid kit	No	3		
RD.M01.10	Environmental obligations: The Contractor is to take cognizance of the Environmental Management Programme Act the Contractor is to allow a lump-sum price which he deems sufficient to enable him to meet any costs he will encounter in the application of the various clauses in the Environmental Management Programme, for the entire duration of the contract.	Sum	1	Work package stage	
RD.M01.10.1	Reporting obligations	Month	10		
RD.M01.11	Health and Safety obligations: The Contractor is to allow for compliance with ALL CURRENT Ports Authority Health and Safety requirements, procedures & legislation (OHSACT), which includes the employment of registered safety Personnel, as required in terms of the Conditions of Contract				

ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
RD.M01.11.1	Reporting obligations	Month	10		
RD.M01.11.2	The Contractor is to allow for the procurement of ALL necessary PPE wear for the duration of the project. This allowance is to include for own workers and personnel, as well as sub- contractors working on this project	Month	12		
RD.M01.12	Prime-cost items and items paid for in a lump sum:				
	i) The Contractor is to allow for the provision of all required communication equipment on site (includes fax machine, printers, copier machine, scanner, land telephone lines, 3G cards, Cell phones costs, including pro-rata rentals, for calls made in connection with contract administration)	Month	12		
	ii) The provision of internet connectivity and Wi-Fi data for Employer's Agent's site staff	Month	12		
RD.M01.13	Items measured by area:				
	(i) Notice boards (not exceeding 5m2)	m2	4		
	ii) Whiteboards and pens (not exceeding 5m2)	m2	4		
RD.M01.14	Car ports:				
	Car ports, as specified, at offices and laboratory buildings	No	2 000		
RD.M01.15	Services:				
	a) Services at office and laboratories (including backup power generation)				
	(i) Fixed costs	month	1		
	(ii) Running costs	month	1		
RD.M01.16	The Contractor is to allow for the preparation, compilation and submission of all design drawings (as specified in the Scope of Work - plans, sections, elevations, electrical, plumbing, etc.) for Client approval	Sum	1		
RD.M01.17	The Contractor is to allow for the compilation and submission of all as-built drawings, warranties, test certificates, certificates of compliance, etc., complete (electrical, plumbing, roof trusses, weedkiller, compaction tests, concrete cube tests, etc.)	Sum	1		

ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
RD.M01.18	Removal of entire site establishment, upon completion of the project, including making good and rehabilitation of areas utilized, all in accordance with the latest Environmental Management requirements.	Sum	1		
RD.M01.19	Tenders Process for Targeted Enterprises				
RD.M01.19(a)	Contractor's charge for the management and execution of the Targeted Enterprise procurement process:				
RD.M01.19(a)(i)	Procurement process for the totality of all tenders concluded for the appointment of Targeted Enterprise subcontractors of CIDB 1 CE and 2 CE contractor grading	No	5		
RD.M01.19(a)(ii)	Procurement process for the totality of all tenders concluded for the appointment of Targeted Enterprise subcontractors of CIDB 3 CE and 4 CE contractor grading	No	3		
RD.M01.19(a)(ii)	Procurement process for the totality of all tenders concluded for the appointment of Targeted Enterprise subcontractors of CIDB 5 CE and higher contractor grading	No	1		
RD.M01.21(a)	Preparing and maintaining a Portfolio of Evidence for each subcontractor	Fortnightly	30		
RD.M02	<u>GENERAL REQUIREMENTS AND PROVISIONS</u>				
RD.M02.01	Information sign boards				
RD.M02.01(a)	Type 1 (large)	No	8		
RD.M02.01(a)	Type 2 (small)	No	16		
RD.M02.03	Advertising cost				
RD.M02.03(a)	Advertising cost	LS	1		
RD.M02.04	Stakeholder and Community Liaison and Social Facilitation				
RD.M02.04(a)	Cost of Liaison, Social Facilitation and PLC Support	Month	12		
RD.M02.05	Target Group Participation:				
RD.M02.05(a)	Contract Participation Performance Bonus	LS	1		

ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
RD.M02.06	Training, coaching, guidance, mentoring and assistance				
RD.M02.06(a)	Training Costs:				
RD.M02.06(a)(i)	Accredited generic skills training	Prime.Cost	1	Work package stage	
RD.M02.06(a)(ii)	Community skills training	Prime.Cost	1	Work package stage	
RD.M02.06(a)(iii)	Handling cost and profit in respect of subitems RD.M02.06(a)(i) and (ii)	%	R -	Work package stage	
RD.M02.06(b)	Training Venue	Lump Sum	1	Work package stage	
RD.M02.07	Wellness Program				
RD.M02.06(a)	Office Facilities for Wellness Champion	Month	60		
RD.M02.06(b)	Wellness Champion	Lump Sum	1		
RD.M02.06(c)	Venue for ACT process	Lump Sum	1	Work package stage	
RD.M02.06(d)	Transport for workers and their immediate families for ACT process	Lump Sum	1	Work package stage	
RD.M02.06(e)	Remuneration for workers during ACT process	Lump Sum	1	Work package stage	
RD.M02.08	Transport for Wellness Champion:				
RD.M02.08(a)	Transport for Wellness Champion	Lump Sum	1	Work package stage	
RD.M03	<u>ROUTE PATROL SERVICES</u>				
RD.M03.01	Route Patrol	Month	12		
RD.M03.02	Temporary repair of potholes	Month	12		
RD.M03.03	Procurement and implementation of visual capturing devices for route patrol services				
RD.M03.03(a)	Procurement and implementation of visual capturing devices for route patrol services	Lump Sum	1	Work package stage	
RD.M03.03	Temporary pothole repair material for the route patrol				
RD.M03.03(a)	Cold mix asphalt	kg	1 200		

ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
RD.M04	<u>SKILLS DEVELOPMENT</u>				
RD.M04.01	Skills Development:				
RD.M04.01(a)	Contract Skills Development Goals (CSDG)(formula to be inserted 0.25% of Subtotal of Construction works	Prime.Cost	1	Work package stage	
RD.M05	<u>EMERGENCY STANDBY TEAM</u>				
RD.M05.01	Emergency standby				
RD.M05.01(a)	Emergency team on standby	month	12		
RD.M05.01(b)	Emergency equipment on standby	month	12		
RD.M05.01(c)	Call out cost	km	50 000		
RD.M06	<u>ALL-EMERGENCY NORMALISATION</u>				
RD.M06.01	All-emergency normalisation				
RD.M06.01(a)	Accident restoration and cleaning of spillages	hour	2 000		
RD.M06.01(b)	Sheltering of animals (whilst waiting to be collected)	hour	100		
RD.M06.01(c)	Fire fighting	hour	100		
RD.M06.01(d)	Safeguarding of dangerous area	hour	1 000		
RD.M06.02	Procurement of materials:				
RD.M06.02(a)	Procurement of materials	LS	1	Work package stage	
RD.M06	TOTAL CARRIED TO SUMMARY				R -

**SCHEDULE A : ROUTINE ROADS MAINTENANCE
PART B : OPERATIONAL**

RD.W01

ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
RD.W01	<u>ACCOMMODATION OF TRAFFIC</u>				
RD.W01.1	Provision of temporary traffic control facilities				
RD.W01.1(a)	Portable STOP/GO signs: 750mm	No	20		
RD.W01.1(b)	Road signs:R- and TR- series				
RD.W01.1(b)(i)	900mm	No	80		
RD.W01.1(c)	Road signs: TW- series:				
RD.W01.1(c)(i)	1500mm	No	20		
RD.W01.1(c)(ii)	1200mm	No	10		
RD.W01.1(d)	Rectangular road signs:TGS-, TIN- and TW-series (excluding delineators and barricades)	m ²	50		
RD.W01.1(e)	Delineators:				
RD.W01.1(e)(i)	1000mm x 250mm	No	50		
RD.W01.1(e)(ii)	800mm x 200mm	No	50		
RD.W01.1(e)(iii)	Solid rubber moulded heavy duty Bases for (e) (i)	No	50		
RD.W01.1(e)(iv)	Solid rubber moulded heavy duty Bases for (e) (ii)	No	100		
RD.W01.1(f)	Barricades:				
RD.W01.1(f)(ii)	2400mm x 400mm	No	10		
RD.W01.1(f)(iii)	1800mm x 300mm	No	10		
RD.W01.1(f)(iv)	Traffic Cones: 750mm	No	50		
RD.W01.1(f)(v)	Work undertaken by contractor	Month	20		
RD.W01.2.3	Work undertaken by subcontractor	Month	20		
RD.W01.2.4	Traffic Safety Officer	Month	20		
RD.W03	<u>PAVEMENT LAYERS REPAIR</u>				
RD.W03.1	Removal and excavating material from existing pavements (except milled material)				
RD.W03.1(a)	Area up to 50m ²	m ³	250		

ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
RD.W03.1 (b)	Area exceeding 50m ² but smaller than 100m ²	m ³	250		
RD.W03.1 (c)	Area exceeding 100m ²	m ³	300		
RD.W03.2	Milling out material from existing pavements				
RD.W03.2 (a)	Not exceeding 30 mm	m ³	300		
RD.W03.2 (b)	Exceeding 30mm but not 60mm	m ³	300		
RD.W03.2 (c)	Exceeding 60mm but not exceeding 150mm	m ³	300		
RD.W03.2 (d)	Exceeding 150mm but not exceeding 250mm	m ³	300		
RD.W03.2 (e)	Exceeding 250mm but not exceeding 350mm	m ³	300		
RD.W03.2 (f)	Establishing of milling machine on site	No	4		
RD.W03.2 (g)	Moving the milling machine on site for distance exceeding 5,0 km	No	4		
RD.W03.2	Backfilling of base layer for surface failures with (98% of modified AASHTO density):				
RD.W03.2(a)	Chemically stabilised gravel excavated from the existing pavement				
RD.W03.2(a) (i)	Areas up to 50m ²	m ³	100		
RD.W03.2(a) (ii)	Areas exceeding 50m ² up to 100m ²	m ³	120		
RD.W03.2(a) (iii)	Areas exceeding 100m ²	m ³	90		
RD.W03.2(a) (iv)	Extra over sub-item (a)(i), (ii) and (iii) for procuring and importing gravel material	m ³	120		
RD.W03.2(b)	Emulsion-treated crushed stone pavement:				
RD.W03.2(b)(i)	Areas up to 50m ²	m ³	100		
RD.W03.2(b)(ii)	Areas exceeding 50m ² up to 100m ²	m ³	120		
RD.W03.2(b)(iii)	Areas exceeding 100m ²	m ³	50		
RD.W03.2(b)(iv)	Extra over sub-item (a)(i), (ii) and (iii) for importing crushed stone	m ³	60		
RD.W03.2(c)	Asphalt base (hot mix– continuously graded 28mm max.)				

ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
RD.W03.2(c) (i)	Areas up to 50m ²	ton	30		
RD.W03.2(c) (ii)	Areas exceeding 50m ² up to 100m ²	ton	30		
RD.W03.2(c) (iii)	Areas exceeding 100m ²	ton	30		
RD.W03.4	Surfacing of base layer repairs with:				
RD.W03.4(a)	Asphalt surfacing (hot mix - continuously graded medium)				
RD.W03.4(b)(iii)	Areas exceeding 100m ²	ton	15		
RD.W03.5	Establishment and moving of asphalt paver on site				
RD.W03.5(a)	Establishment of asphalt paver	No	1		
RD.W03.5(b)	Moving the paver on site for distance exceeding 5,0 km	No	3		
RD.W03.6	Backfilling of pavement layers				
RD.W03.6(a)	Subbase layer				
RD.W03.6(a)(i)	Areas up to 50m ²	m ³	25		
RD.W03.6(a)(ii)	Areas exceeding 50m ² up to 100m ²	m ³	25		
RD.W03.6(a)(iii)	Areas exceeding 100m ²	m ³	25		
RD.W03.6(b)	Selected layer				
RD.W03.6(b)(i)	Areas up to 50m ²	m ³	15		
RD.W03.6(b)(ii)	Areas exceeding 50m ² up to 100m ²	m ³	15		
RD.W03.6(b)(iii)	Areas exceeding 100m ²	m ³	10		
RD.W03.6(c)	Fill layer				
RD.W03.6(c)(i)	Areas up to 50m ²	m ³	10		
RD.W03.6(c)(ii)	Areas exceeding 50m ² up to 100m ²	m ³	10		
RD.W03.6(c)(iii)	Areas exceeding 100m ²	m ³	15		
RD.W03.7	Binder Variation				
RD.W03.7(a)	Penetration grade bitumen	ton	10		
RD.W03.7(b)	Anionic bitumen emulsion	litre	80		
RD.W03.7(c)	Cationic bitumen emulsion	litre	80		
RD.W03.7(d)	Invert bitumen emulsion	litre	80		
RD.W03.8	Variation in active filler content				
RD.W03.8(a)	Cement	ton	5		
RD.W03.8(b)	Lime	ton	5		

ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
RD.W03.9	Overhaul of material hauled in excess of 1,0 km	m ³ -km	120		
RD.W03.10	Milling and Paving				
RD.W03.10(a)	Milling and Paving	Prov.Sum	1	Work package stage	
RD.W03.10(b)	Overhead charges and profit in respect of subitem RD.W03.10(a)	%	R -	Work package stage	
RD.W03.11	100mm cores in asphalt paving	No	15		
RD.W04	<u>REPAIR OF POTHOLES</u>				
RD.W04.01	Pothole repair (non-performance based)				
RD.W04.01(a)	Hot mix continuously graded asphalt	No	150		
RD.W04.01(b)	Cold mix asphalt	No	150		
RD.W04.02	<u>REPAIR OF EDGE BREAKS</u>				
RD.W04.02.1	Repair of edge breaks (non performance based)				
RD.W04.02.01(a)	Hot mix continuously graded asphalt	m	200		
RD.W04.02.01(b)	Cold mix asphalt	m	200		
RD.W04.03	<u>REPAIR OF SURFACE FAILURES</u>				
RD.W04.03	Repair of Surface failures (non performance based)				
RD.W04.03(a)	Hot mix continuously graded asphalt	No	50		
RD.W04.03(b)	Cold mix asphalt	No	55		
RD.W04.04	<u>ASPHALT AND CONCRETE BERMS</u>				
RD.W04.04(a)	Asphalt berms:				
RD.W04.04(a)(i)	Placed where there are no guardrails (Cold premix)	m	10		
RD.W04.04(a)(ii)	Placed at existing guardrails (Cold premix)	m	10		
RD.W04.04(b)	Prime and tack coats:				
RD.W04.04(b)(i)	Prime coat: Under asphalt berms (MC-30 cutback bitumen)	m ²	10		
RD.W04.04(b)(ii)	Tack coat	m ²	10		
RD.W04.05	<u>BITUMINOUS SINGLE SEAL WITH SLURRY (CAPE SEAL)</u>				
RD.W04.05(a)	Bituminous single seal with 13.2mm aggregate and slurry:	m ²	60		
RD.W04.05(b)	Bituminous binder variations:				
RD.W04.05(b)(i)	MC-3000 cut back bitumen	litre	10		

ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
RD.W04.05(b)(ii)	Spray grade emulsion (65% bitumen content)	litre	10		
RD.W04.05(c)	Aggregate variations: 13.2mm nominal sized aggregate	m ³	3		
RD.W07	<u>CRACK SEALING</u>				
RD.W07.01	Cleaning and sealing the cracks				
RD.W07.01(a)	Cleaning cracks per metre with:				
RD.W07.01(a)(i)	Cold compressed air	m	200		
RD.W07.01(b)	Cleaning cracks per area with:				
RD.W07.01(b)(i)	Cold compressed air	m ²	25		
RD.W07.01(c)	Applying herbicides for sealing cracks	litre	20		
RD.W07.01(d)	Priming of cracks	m	150		
RD.W07.01(e)	Sealing the cracks with:				
RD.W07.01(e)(i)	C-E1 modified binder	m	85		
RD.W07.01(e)(ii)	CC-E1 modified binder	m	85		
RD.W07.01(e)(iii)	C-R1 modified binder	m	85		
RD.W07.01(f)	Extra over RD.W07.01(e) for filling wide cracks with fine sand to underside of base layer as specified	m	85		
RD.W07.01(g)	Heating of surface before rolling	m	120		
RD.W07.01(h)	Rolling the cracks	m	120		
RD.W07.02	Geotextile crack sealing				
RD.W07.02(a)	Sealing cracks with 200mm wide geotextile "bandage" using:				
RD.W07.02(a)(i)	65% Cationic bitumen emulsion (solvents omitted)	m	120		
RD.W07.02(a)(ii)	SC-E1 modified emulsion (solvents omitted)	m	120		
RD.W07.02(a)(iii)	Other appropriate product	m	120		
RD.W07.02	Sealing "crocodile" cracks with geotextile over areas using:				
RD.W07.02(b)(i)	65% Cationic bitumen emulsion (solvents omitted)	m ²	220		
RD.W07.02(b)(ii)	SC-E1 modified emulsion (solvents omitted)	m ²	210		
RD.W07.03	Prefabricated road patch for crack sealing				
RD.W07.03(a)	Sealing "crocodile" cracks with pre-fabricated road patch over areas using:				
RD.W07.03(a)(i)	10mm nominal size aggregate (single seal)	m ²	215		

ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
RD.W07.03(a)(ii)	14mm nominal size aggregate (single seal)	m ²	85		
RD.W08	<u>BLEEDING REPAIR</u>				
RD.W08.01	Repair of bleeding (Method 1)				
RD.W08.01(a)	Using 14,0 mm aggregate	m ²	20		
RD.W08.01(b)	Using 10,0 mm aggregate	m ²	30		
RD.W08.01(c)	Using 7,0 mm aggregate	m ²	35		
RD.W08.01(d)	Using 5,0 mm aggregate	m ²	30		
RD.W08.02	Repair of bleeding (Method 2)				
RD.W08.02(a)	Using 14,0 mm aggregate	m ²	50		
RD.W08.02(b)	Using 10,0 mm aggregate	m ²	12		
RD.W08.02(c)	Using 7,0 mm aggregate	m ²	15		
RD.W08.03	Repair of bleeding (Method 3)				
RD.W08.03(a)	Using 14,0 mm aggregate	m ²	12		
RD.W08.03(b)	Using 10,0 mm aggregate	m ²	13		
RD.W08.03(c)	Using 7,0 mm aggregate	m ²	15		
RD.W08.04	Precoating of aggregate	m ³	10		
RD.W08.05	Aggregate Variation				
RD.W08.05(a)	14,0 mm aggregate	m ³	10		
RD.W08.05(b)	10,0 mm aggregate	m ³	10		
RD.W08.05(c)	7,0 mm aggregate	m ³	10		
RD.W08.06	Application of fog spray				
RD.W08.06(a)	60 % Spray-grade emulsion	Litre	200		
RD.W08.06(b)	30 % Spray-grade emulsion	Litre	120		
RD.W08.07	Aggregate for blinding using				
RD.W08.07(a)	Natural sand	m ³	50		
RD.W08.07(b)	Crusher sand	m ³	50		
RD.W08.08	Bleeding Repair by water cutting				
RD.W08.08(a)	Bleeding Repair by water cutting	Prov Sum	1	Work package stage	
RD.W08.08(b)	Contractor overhead charges and profit in respect of subitem RD.W08.08(a)	%		Work package stage	
RD.W09	<u>SURFACE TREATMENT - TEXTURE CORRECTION</u>				
RD.W09.01	Application of slurry mixed on site				

ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
RD.W09.01(a)	Tack coating using 30 % stable grade bitumen emulsion	Litre	220		
RD.W09.01(b)	Slurry applied for texture treatment (Fine Slurry Fine Grade with 60% stable-grade anionic bitumen emulsion)				
RD.W09.01(b)(i)	Applied by hand	m ³	10		
RD.W09.01(c)	Slurry applied for texture treatment (Fine Slurry Fine Grade,60% stable-grade anionic bitumen emulsion + 3% Latex)				
RD.W09.01(c)(i)	Applied by hand	m ³	10		
RD.W09.01(c)(ii)	Applied by spreader box	m ³	10		
RD.W09.02	Application of slurry from commercial soures				
RD.W09.02(a)	Tack coating using 30 % stable grade bitumen emulsion	Litre	120		
RD.W09.02(b)	Slurry applied for texture treatment (Fine Slurry Fine Grade with 60% stable-grade anionic bitumen emulsion)				
RD.W09.02(b)(i)	Applied by hand	m ³	10		
RD.W09.02(b)(ii)	Applied by spreader box	m ³	10		
RD.W09.03	Application of slurry for rut filling from commercial sources				
RD.W09.03(a)	Application of slurry for rut filling from commercial sources	Prov Sum	1	Work package stage	
RD.W09.03(b)	The Contractors overhead charges and profit in respect of sub-item RD.W09.03(a)	%		Work package stage	
RD.W10	<u>REPAIR OF SLOPE FAILURES AND WASHAWAYS</u>				
RD.W10.01	Reconstruction of slope failures and washaways - mass earth works				
RD.W10.01 (a)	Excavation and removing excavated material to spoil or stockpile as directed by Engineer. A distinction shall be made between:				
RD.W10.01 (a)(i)	Soft Material	m ³	250		
RD.W10.01 (a)(ii)	Intermediate material	m ³	75		
RD.W10.01 (a)(iii)	Hard and boulder class material	m ³	65		
RD.W10.01 (b)	Drying excavated material suitable for re-use	m ³	60		
RD.W10.01 (c)	Roadbed compaction to 90% of modified AASHTO density	m ³	60		
RD.W10.01 (d)	Backfill at excavated area in				

ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
RD.W10.01 (d)(i)	Fill embankments to 90% of modified AASHTO density	m ³	120		
RD.W10.01 (d)(ii)	Cut embankments to 90% of modified AASHTO density including haul for a free distance of 1.0km	m ³	120		
RD.W10.02	Reconstruction pavement layers				
RD.W10.02(a)	Natural gravel selected subgrade	m ³	20		
RD.W10.02(b)	Cement stabilised natural gravel subbase	m ³	20		
RD.W10.02(c)	Emulsion treated crushed stone base	m ³	20		
RD.W10.02(d)	Crushed stone base	m ³	20		
RD.W10.02(e)	Hot mix asphalt(continously graded medium)	m ³	20		
RD.W10.03	Prime and Tack coats				
RD.W10.03(a)	30% Stable grade emulsion	Litre	30		
RD.W10.03(b)	Inverted bitumen emulsion prime	Litre	30		
RD.W10.03(c)	PRIME COAT				
RD.W10.03 (c)(i)	RTH 3/12P or RTL 3/12P tar prime	Litre	5		
RD.W10.03 (c)(ii)	Quick drying RTH 1/4P tar prime	Litre	5		
RD.W10.03 (c)(iii)	MC-30 cut-back bitumen	Litre	15		
RD.W10.03 (c)(iv)	MC-70 cut-back bitumen	Litre	15		
RD.W10.03 (c)(v)	Invert bitumen emulsion	Litre	15		
RD.W10.03 (c)(vi)	MC - 30 SP	Litre	15		
RD.W10.04	Overhaul on natural gravel material	m ³ -km	230		
RD.W10.05	Repair of slope failures and washaways				
RD.W10.05(a)	Provisional sum for repair of slope failures and washaways	Prov Sum	1	Work package stage	
RD.W10.05(b)	The contractors overhead charges and profit in respect of sub-item RD.W10.05(a)	%	R -	Work package stage	
RD.W11.01	Excavation				
RD.W11.01(a)	Excavating soft material (not exceeding 1.5m deep)	m ³	13		
RD.W11.01(b)	Excavating hard material (not exceeding 1.5m deep)	m ³	13		
RD.W11.02	Backfilling				

ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
RD.W11.02(a)	Using the excavated material	m ³	13		
RD.W11.02(b)	Using stabilised excavated material	m ³	8		
RD.W11.03	Reconstruction of inlet and outlet structures				
RD.W11.03(a)	In concrete (class indicated)				
RD.W11.03(a)(i)	25/19	m ³	10		
RD.W11.03(b)	In brickwork	m ³	10		
RD.W11.03(c)	Plastering	m ²	20		
RD.W11.04	Demolition of existing structures				
RD.W11.04(a)	Plain concrete	m ³	5		
RD.W11.04(b)	Reinforced concrete	m ³	5		
RD.W11.04(c)	Brickwork	m ³	10		
RD.W11.04(d)	Stone masonry	m ³	5		
RD.W11.05	Repairing of existing structures (type indicated)				
RD.W11.05(a)	Concrete (class indicated)				
RD.W11.05(a)(i)	25/19	m ³	30		
RD.W11.05(b)	Brickwork	m ³	10		
RD.W11.05(c)	Stone masonry with rock material obtained from				
RD.W11.05(c)(i)	Natural sources	m ³	10		
RD.W11.05(c)(ii)	Commercial sources	m ³	10		
RD.W11.05(d)	Plastering	m ²	20		
RD.W11.06	Steel reinforcement				
RD.W11.06(a)	Mild steel bars	ton	1		
RD.W11.06(b)	High tensile steel bars	ton	1		
RD.W11.06(c)	Welded steel mesh	kg	100		
RD.W11.07	Overhaul on materials for haul in excess of 1.0 km				
RD.W11.07(a)	Excavated materail to spoil	m ³ -km	200		
RD.W11.07(b)	Existing structured demolished	m ³ -km	85		
RD.W12	<u>SUBSOIL DRAIN INSTALLATION AND MAINTENANCE</u>				
RD.W12.01	Excavation				
RD.W12.01(a)	Excavating soft material	m ³	50		
RD.W12.01(b)	Excavating hard material	m ³	10		

ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
RD.W12.02	Impermeable backfilling	m ³	20		
RD.W12.03	Natural permeable material				
RD.W12.03(a)	Crushed stone from commercial source (state grade)				
RD.W12.03(a)(i)	Course grade	m ³	10		
RD.W12.03(b)	Sand obtained from approved source on site				
RD.W12.03(b)(i)	Course grade	m ³	20		
RD.W12.03(c)	Sand from commercial source				
RD.W12.03(c)(i)	Course grade	m ³	50		
RD.W12.04	Pipes				
RD.W12.04 (a)	Unplasticized PVC pipes and fittings, normal duty, complete with couplings				
RD.W12.04a(i)	110 mm slotted pipe	m	50		
RD.W12.04a(ii)	110 mm perforated pipe	m	50		
RD.W12.04a(iii)	150mm Perforated pitchfibre pipe	m	50		
RD.W12.04a(vi)	150mm Non perforated pitchfibre pipe	m	50		
RD.W12.04 (b)	High density type polyethylene pressure pipes and fittings, complete with couplings (state size, type and class and whether or not perforated)				
RD.W12.04 (b)(i)	110 mm	m	10		
RD.W12.05	Polyethylene sheeting 0,25 mm thick	m ²	100		
RD.W12.06	Synthetic fibre filter fabric (grade 2)	m ²	100		
RD.W12.07	Composite in-place drainage systems (fin drain)	m	20		
RD.W12.08	Inlet and outlet structures				
RD.W12.08(a)	Rodding eyes	No	5		
RD.W12.08(b)	Outlet structures	No	5		
RD.W12.09	Exposing of existing drains	m ³	50		
RD.W12.10	Clearing of subsoil drains	m	100		
RD.W12.11	Overhaul for material hauled in excess of 1,0 km free-haul	m ³ -km	100		
RD.W13	<u>CLEANING OF WATERWAY STRUCTURES</u>				
RD.W13.01	Cleaning of waterway structures, inlet and outlets areas				

ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
RD.W13.01(a)	Cleaning of waterway structures, inlets and outlets areas	Prov Sum	1	Work package stage	
RD.W13.01(b)	The Contractor's overhead charges and profit in respect of sub-item RD.W13.01(a)	%	R -	Work package stage	
RD.W13.02	Overhaul of material in excess of the free-haul distance of 1,0 km	m ³ -km	150		
RD.W14	<u>CLEANING OF PREFABRICATED CULVERTS</u>				
RD.W14.01	Initial Cleaning of prefabricated culverts (non performance based)				
RD.W14.01(a)	0-10km Route				
RD.W14.01(a)(i)	Pipes with an internal diameter up to and including 750mm	No.	85		
RD.W14.01(a)(ii)	Pipes with an internal diameter exceeding 750mm	No.	85		
RD.W14.01(a)(iii)	Box culverts up to and including 1,5 m vertical dimension	No.	15		
RD.W14.01(a)(iv)	Box culverts exceeding 1,5 m vertical dimension	No.	15		
RD.W14.01(b)	11-30km Route				
RD.W14.01(b)(i)	Pipes with an internal diameter up to and including 750mm	No.	85		
RD.W14.01(b)(ii)	Pipes with an internal diameter exceeding 750mm	No.	50		
RD.W14.01(b)(iii)	Box culverts up to and including 1,5 m vertical dimension	No.	10		
RD.W14.01(b)(iv)	Box culverts exceeding 1,5 m vertical dimension	No.	10		
RD.W14.02	New Prefabricated culverts				
RD.W14.02(a)	Excavating soft material situated within the following depth ranges below the level surface level	No.	10		
RD.W14.02(a)(i)	i) 0m up to 1,5m	m ³	25		
RD.W14.02(a)(ii)	ii) Exceeding 1,5m and up to 3,0m	m ³	25		
RD.W14.02(b)	Extra over sub item 14.02(a) for excavation in hard material, irrespective of depth	m ³	5		
RD.W14.03	Backfilling				
RD.W14.03(a)	Using the excavated material	m ³	10		
RD.W14.03(b)	Using imported selected material	m ³	10		
RD.W14.03(c)	Extra over subitem RD.W14.03(a) and (b) for soil cement backfilling	m ³	5		
RD.W14.04	Concrete pipe culvert				

ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
RD.W14.04(a)	On Class B bedding				
RD.W14.04(a)(i)	600 mm dia class 100D	m	10		
RD.W14.04(a)(ii)	900 mm dia class 100D	m	10		
RD.W14.04(a)(iii)	Box Culvert 1,2m X 1.8m W	m	10		
RD.W14.05	Cast in situ concrete and formwork				
RD.W14.05(a)	In Class A bedding, screeds and encasing of pipes, Class 25/19 concrete	m ³	10		
RD.W14.05(b)	In inlet and outlet structures, skewed ends, catchpits, manholes, thrust and anchor blocks, excluding formwork but including class U2 surface finish (25MPa / 19)	m ³	10		
RD.W14.05(c)	Formwork for concrete under subitem RD.W14.05(a) and (b) above	m ²	70		
RD.W14.06	Steel reinforcement				
RD.W14.06(a)	High tensile steel	t	10		
RD.W14.06(b)	Welded mesh	kg	70		
RD.W14.07	Removing and re-laying existing pipes				
	600mm dia	m	10		
RD.W14.08	Removing and disposing of existing pipes	m	10		
RD.W14.09	Overhaul on excavated material as described, in excess of the free haul distance of 1.0 km	m ³ -km	10		
RD.W15	<u>CLEANING OF CONCRETE DRAINS AND CHANNELS</u>				
RD.W15.01(a)	Initial cleaning of concrete drains (including all Side walks)				
RD.W15.01(a)(i)	0-10km	Lump Sum	1		
RD.W15.01(a)(ii)	11-30km	Lump Sum	1		
RD.W15.01(b)	Cleaning of concrete drains (including all Side walks)				
RD.W15.01(b)(i)	0-10km	Month	6		
RD.W15.01(b)(ii)	11-30km	Month	6		
RD.W16	<u>CLEANING AND MAINTENANCE OF EXISTING EARTH CHANNELS</u>				
RD.W16.01	Cleaning earth drains and channels	m ³	110		
RD.W16.02	Repairing of earth drains and channels	m ³	250		
RD.W16.03	Banks and dykes	m ³	50		
RD.W16.04	Construction of new earth drains	m ³	50		

ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
RD.W16.05	Overhaul of material in excess of the free-haul distance of 1,0 km	m ³ -km	150		
RD.W17	<u>EDGE BUILD-UP REMOVAL</u>				
RD.W17.01	Removal edge build-up				
RD.W17.01(a)	Removal edge build-up				
RD.W17.01(a)(i)	Remove material by hand and dispose of adjacent to road	m	15 000		
RD.W17.01(a)(ii)	Remove material by hand and load for spoil	m	9 000		
RD.W17.01(a)(iii)	Remove material by machine and dispose of adjacent to the road	km	50		
RD.W17.01(a)(iv)	Remove material by machine and load for spoil	km	100		
RD.W17.01(b)	Overhaul on material hauled in excess of 1,0 km	m ³ -km	1 000		
RD.W18	<u>CONCRETE CHANNEL CONSTRUCTION AND MAINTENANCE OF EXISTING CHANNELS</u>				
RD.W18.01	Excavation				
RD.W18.01(a)	For open drains				
RD.W18.01(a)(i)	Soft material	m ³	50		
RD.W18.01(a)(ii)	Hard material	m ³	15		
RD.W18.01(b)	Chutes and kerb-channel combinations				
RD.W18.01(b)(i)	Soft material	m ³	50		
RD.W18.01(b)(ii)	Hard material	m ³	10		
RD.W18.02	Cast in situ concrete				
RD.W18.02(a)	Linings (Grade 25/19)	m ³	50		
RD.W18.02(b)	Chutes (Grade 25/19)	m ³	10		
RD.W18.02(c)	Channels for kerb and channel (Grade 25/19)	m ³	10		
RD.W18.02(d)	Concrete berms	m ³	5		
RD.W18.03	Concrete screed or backfill below chutes (Grade 25/19)	m ³	10		
RD.W18.04	Precast concrete kerbing and chutes				
RD.W18.04(a)	Kerbing (Figure 6)	m	100		
RD.W18.04(b)	Chutes (500mm)	m	50		
RD.W18.05	Steel reinforcement				
RD.W18.05(a)	Mild steel bars	ton	1		
RD.W18.05(b)	High tensile steel bars	ton	1		
RD.W18.05(c)	Welded steel mesh	kg	15		

ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
RD.W18.06	Sealed joints in concrete lining of open drains (12mm Bitumen impregnated softboard)	m	15		
RD.W18.07	Demolition and removal of damaged existing structures				
RD.W18.07(a)	Plain concrete	m ³	10		
RD.W18.07(b)	Reinforced concrete	m ³	10		
RD.W18.07(c)	Kerbing and channelling	m ³	10		
RD.W18.08	Down chutes				
RD.W18.08(a)	Corrugated steel (450mm diameter)	m	10		
RD.W18.08(b)	Plastic (450mm diameter)	m	10		
RD.W18.09	Overhaul on material for haul in excess of 1,0 km				
RD.W18.09(a)	Excavated material to spoil	m ³ -km	50		
RD.W18.09(b)	Existing structures demolished	m ³ -km	50		
RD.W18.10	Asphalt Berms	ton	3		
RD.W19	<u>SHOULDER REPAIRS</u>				
RD.W19.01	Reinstating gravel shoulder				
RD.W19.01(a)	Ripping, watering, mixing, placing and compacting existing shoulders to 93 % of Mod AASHTO density	m ³	250		
RD.W19.01(b)(i)	Extra over sub-item RD.W19.01(a) for adding extra material				
RD.W19.01(b)(ii)	Commercial sources	m ³	140		
RD.W19.01(b)(iii)	Milled material	m ³	100		
RD.W19.01(c)	Extra over for sub-item RD.W19.01(a) for stabilising material	m ³	118		
RD.W19.01(d)	Extra over for sub-item RD.W19.01(a) for adding chemical stabilising agent				
RD.W19.01(d)(i)	Ordinary Portland cement	ton	1		
RD.W19.02	Blading of gravel shoulders				
RD.W19.02(a)	Blading of gravel shoulders	km	40		
RD.W19.02(b)	Cutting of mitre drains	m	110		
RD.W19.03	Overhaul on material in excess of the free-haul distance of 1,0km	m ³ - km	126		
RD.W20	<u>ERECTION AND REPAIR OF PERMANENT ROAD TRAFFIC SIGNS</u>				
RD.W20.01	Erection or re-erection of road sign boards				
RD.W20.01(a)	Area not exceeding 2 m ²	m ²	100		

ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
RD.W20.01(b)	Area exceeding 2 m ² but not 10 m ²	m ²	50		
RD.W20.01(c)	Area exceeding 10 m ²	m ²	50		
RD.W20.01(d)	Overhead road sign boards	m ²	10		
RD.W20.02	Hazard plates				
RD.W20.02(a)	Hazard plate and post (W401/402)				
RD.W20.02(a)(i)	600 mm x 150 mm	No	10		
RD.W20.02(a)(ii)	800 mm x 150 mm	No	400		
RD.W20.02(a)(iii)	1200 mm x 300 mm	No	50		
RD.W20.02(b)	Hazard Plate (W401/402)				
RD.W20.02(b)(i)	600 mm x 150 mm	No	10		
RD.W20.02(b)(ii)	800 mm x 150 mm	No	50		
RD.W20.02(b)(iii)	1200 mm x 300 mm	No	10		
RD.W20.02(c)	Hazard plate and post (W405/406)				
RD.W20.02(c)(i)	450mmx450mm	No	10		
RD.W20.02(c)(ii)	600mmx600mm	No	20		
RD.W20.02(c)(iii)	900mmx900mm	No	10		
RD.W20.02(d)	Hazard Plate (W405/406)				
RD.W20.02(d)(i)	450mmx450mm	No	10		
RD.W20.02(d)(ii)	600mmx600mm	No	20		
RD.W20.02(d)(iii)	900mmx900mm	No	10		
RD.W20.03	Reference marker boards				
RD.W20.03(a)	Reference marker board and post				
RD.W20.03(a)(i)	km Triangular board	No	50		
RD.W20.03(a)(ii)	Board Drawing No SP-S-1-3/3	No	60		
RD.W20.10(a)(i)	SABS 1519 Class II material	m ²	5		
RD.W20.10(a)(ii)	SABS 1519 ClassIII material	m ²	5		
RD.W20.10(a)(iii)	SABS 1519 ClassIV material	m ²	5		
RD.W20.10(a)(iv)	1mm thick chromadek plate only	m ²	10		
RD.W20.10(a)(v)	1.4 mm thick Chromadek or approved plate as per SANS 1519-2	m ²	5		
RD.W20.11	Gravel drainage layer below road sign footings	m ³	10		
RD.W20.12	Procurement of road sign boards:				
RD.W20.12(a)	Procurement of road sign boards	Prov.sum	1	Work package stage	

ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
RD.W20.12(b)	Overhead charges and profit in respect of subitem RD.W20.12(a)	%	R -	Work package stage	
RD.W20.13	Erection and repairs of gantry structures				
RD.W20.13(a)	Erection and repairs of gantry structures	Prov.sum	1	Work package stage	
RD.W20.13(b)	Overhead charges and profit in respect of subitem RD.W20.13(a)	%	R -	Work package stage	
RD.W20.14	Supply of Road Signs				
RD.W20.14(a)	Road signs: R - and TR- series				
RD.W20.14(a)(i)	900mm	No	5		
RD.W20.14(a)(ii)	1200mm	No	5		
RD.W20.14(b)	Road signs: W- series				
RD.W20.14(b)(i)	1200mm	No	10		
RD.W20.14(b)(ii)	1500mm	No	5		
RD.W20.14(c)	Road signs: TW- series				
RD.W20.14(c)(i)	1200mm	No	10		
RD.W20.14(c)(ii)	1500mm	No	5		
RD.W21	<u>ROAD SIGN CLEANING</u>				
RD.W21.01	Road sign cleaning				
RD.W21.01(a)	Cleaning of guard rail reflectors (all types)				
RD.W21.01(a)(i)	Cleaning of guard rail reflectors	No	150		
RD.W21.01(a)(ii)	Re-taping of standard guard rail reflectors - Type V Diamond Grade	No	120		
RD.W21.01(b)	Cleaning of road signs				
RD.W21.01(b)(i)	Area up to 2 m ²	No	85		
RD.W21.01(b)(ii)	Area exceeding 2 m ² up to 10 m ²	No	40		
RD.W21.01(b)(iii)	Area exceeding 10 m ²	No	12		
RD.W21.01(c)	Cleaning of overhead road signs (all sizes)	No.	2		
RD.W21.01(d)	Cleaning of danger plates				
RD.W21.01(d)(i)	W401/402	No.	120		
RD.W21.01(d)(ii)	W405/W406	No.	110		
RD.W21.02	Removal of graffiti				
RD.W21.02(a)	From road signs	m ²	10		
RD.W21.02(b)	From structures	m ²	20		
RD.W21.03	Painting of metal road sign elements				
RD.W21.03(a)	Road sign supports	Litre	100		

ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
RD.W21.03(b)	Road sign frames	Litre	20		
RD.W21.04	<u>REMOVAL OF ILLEGAL SIGNS</u>				
RD.W21.04.1	Removal of illegal signs				
RD.W21.04.1(a)	Signs within the road reserve:				
RD.W21.04.1(a)(i)	Area exceeding 0,5 m ² up to 2 m ²	No	10		
RD.W21.04.1(a)(ii)	Area exceeding 2 m ² up to 10 m ²	No	5		
RD.W21.04.1(a)(iii)	Area exceeding 10 m ²	No	5		
RD.W21.04.2	Signs outside the road reserve:				
RD.W21.04.2(a)(i)	Signs outside the road reserve (Any size)	Prov Sum	1	Work package stage	
RD.W21.04.2(a)(ii)	The Contractor's overhead charges and profit in respect of sub-item RD.W21.04.2(a)(i)	%		Work package stage	
RD.W22	<u>ROADSTUDS</u>				
RD.W22.01	Procurement and Installation of roadstuds				
RD.W22.01(a)	Procurement and Installation of roadstuds	Prov Sum	1	Work package stage	
RD.W22.01(b)	The Contractor's overhead charges and profit in respect of sub-item RD.W22.01(a)	%	R -	Work package stage	
RD.W22.02	Removal of damaged roadstuds				
RD.W22.02(a)	Surface type				
RD.W22.02(a)(i)	Bituminous pavements	No	150		
RD.W22.02(a)(ii)	Concrete pavements	No	115		
RD.W22.02(b)	Embedded type				
RD.W22.02(i)	Bituminous pavements	No	110		
RD.W22.02(ii)	Concrete pavements	No	10		
RD.W24	<u>Road-marking paint:</u>				
RD.W24.01	Removal of existing, temporary or permanent road markings by:				
RD.W24.01(a)	Sand Blasting	m ²	10		
RD.W24.01(b)	Overpainting as a temporary measure	m ²	20		
RD.W24.02	Road markings:				
RD.W24.02.1	Retro-reflective road-marking paint:				
RD.W24.02.1(a)	White lines:				
RD.W24.02.1(a)(i)	100mm wide solid	km	25		
RD.W24.02.1(a)(ii)	100mm wide broken	km	25		
RD.W24.02.1(a)(iii)	100mm wide solid (Wet Reflective Tape Series 380 WR ES or similar approved	km	25		

ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
RD.W24.02.1(a)(iv)	100mm wide broken (Wet Reflective Tape Series 380 WR ES or similar approved)	km	20		
RD.W24.02.1(b)	Yellow lines: 150mm wide solid	km	15		
RD.W24.02.1(c)	White lettering and symbols	m ²	10		
RD.W24.02.1(d)	Yellow lettering and symbols	m ²	10		
RD.W24.03	"Glowline" or similar approved Retro-reflective cementitious road marking compound	m ²	10		
RD.W24.04	Variations in rate of application:				
RD.W24.04(a)	White paint	Litre	10		
RD.W24.04(b)	Yellow paint	Litre	10		
RD.W24.04(c)	Retro-reflective beads	Litre	10		
RD.W24.04(d)	Retro-reflective beads	Litre	10		
RD.W24.04(e)	Glowline compound	Litre	10		
RD.W24.05	Roadstuds (Rhino Yellow/Red or similar approved)	No	10		
RD.W24.06	Setting out and premarking the lines (excluding traffic island markings, lettering and symbols)	km	10		
RD.W24.07	Removal of existing, temporary and permanent road markings by: Sandblasting	m ²	10		
RD.W24.08	Removal of existing roadstuds	No	10		
RD.W24.09	Supply and lay "Vuka" bumps (or similar approved) as per Manufacturer's specifications, inclusive of fitment complete	No	10		
RD.W25	<u>MAINTENANCE OF LAY-BYES AND REST AREAS</u>				
RD.W25.01	Maintenance of lay-byes and rest areas				
RD.W25.01(a)	Maintenance of lay-byes and rest areas	Prov Sum	1	Work package stage	
RD.W25.01(b)	The Contractor's overhead charges and profit in respect of sub-item RD.W25.01(a)	%	R -	Work package stage	
RD.W29	<u>CHEMICAL CONTROL OF UNDESIRABLE VEGETATION</u>				
RD.W29.01	Annual chemical eradication of undesirable vegetation				
RD.W29.01(a)	Reserve with dual carriageway including intersections and interchanges				
RD.W29.01(a)(i)	5 - 10km Route	No	1		
RD.W29.01(a)(ii)	11 - 30km Route	No	1		

ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
RD.W29.01(b)	<u>Reserve with single carriageway including intersections and interchanges</u>				
RD.W29.01(b)(i)	5 - 10km Route	No	1		
RD.W29.01(b)(ii)	11 - 30km Route	No	1		
RD.W29.02	Additional chemical eradication of undesirable vegetation and control of vegetation growth on instruction from the Engineer				
RD.W29.02(a)	Isolated areas	m ²	900		
RD.W29.02(b)	Dense areas (areas more than 20% infested)	ha	0,20		
RD.W29.02(c)	Shoulder weedspray	km	2		
RD.W29.02(d)	Extra over sub-item RD.W29.02(c) under guardrails	km	15		
RD.W29.02(e)	Between road reserve fence and neighbouring solid wall				
RD.W29.02(e)(i)	5 - 10km Route	m ²	500		
RD.W29.02(e)(ii)	11 - 30km Route	m ²	150		
RD.W29.02(f)	Around road signs, marker boards and traffic counting stations				
RD.W29.02(f)(i)	Reserve with dual carriageway including intersections and interchanges				
RD.W29.02(f)(i)(a)	5 - 10km Route	No	1		
RD.W29.02(f)(i)(b)	11 - 30km Route	No	1		
RD.W29.02(f)(ii)	<u>Reserve with single carriageway including intersections and interchanges</u>				
RD.W29.02(f)(ii)(a)	5 - 10km Route	No	1		
RD.W29.02(f)(ii)(b)	11 - 30km Route	No	1		
RD.W30	<u>REMOVAL OF UNDESIRABLE VEGETATION: PHYSICAL ERADICATION</u>				
RD.W30.01	Eradication of undesired vegetation				
RD.W30.01(a)	Initial eradication				
RD.W30.01(a)(i)	Undesirable vegetation and trees with a girth of 0 to 150mm (specify section and km distance incl interchanges)				
RD.W30.01(a)(i)1	5 - 10km Route	LS	1		
RD.W30.01(a)(i)2	11 - 30km Route	LS	1		
RD.W30.01(b)	Annual eradication				
RD.W30.01(b)(i)	5 - 10km Route	No	1		

ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
RD.W30.01(b)(ii)	11 - 30km Route	No	1		
RD.W30.02	Tree felling on instruction from the Engineer				
RD.W30.02(a)	Girth exceeding 150 mm to 500 mm	No	10		
RD.W30.02(b)	Girth exceeding 500 mm up to 1 000 mm	No	10		
RD.W30.02(c)	Girth exceeding 1 000 mm up to 2 000 mm	No	2		
RD.W30.02(d)	Girth exceeding 2 000 mm up to 4 000 mm	No	1		
RD.W30.02(e)	Girth exceeding 4 000 mm	No	1		
RD.W30.03	Burning of fire breaks per operation				
M630.03(b)	5 m wide fire breaks from edge of road surface to road reserve fence				
RD.W30.03(b)(i)	5 - 10km Route	No	3		
RD.W30.03(b)(ii)	11 - 30km Route	No	3		
M630.03(b)	5m wide fire breaks next to road reserve fence	km	3		
RD.W30.04	Additional eradiction of undesired vegetation as instructed by the Engineer	ha	1		
RD.W31	<u>SMALL REPAIRS OF STRUCTURES</u>				
RD.W31.01	Minor repairs to structures				
RD.W31.01(a)	Minor repairs to structures	Prov Sum	1	Work package stage	
RD.W31.01(b)	The Contractor's overhead charges and profit in respect of sub-item RD.W31.01(a)	%	R -	Work package stage	
RD.W32	<u>DAYWORKS SCHEDULE</u>				
RD.W32.01	Labour during normal working hours				
RD.W32.01(a)	Unskilled	hour	150		
RD.W32.01(b)	Semi-skilled	hour	150		
RD.W32.01(c)	Skilled	hour	85		
RD.W32.01(d)	Team Leader (Ganger)	hour	100		
RD.W32.01(e)	Flagmen	hour	150		
RD.W32.02	Labour outside normal working hours				
RD.W32.02(a)	Outside normal working hours and Saturdays				
RD.W32.03	Equipment and Transport				
RD.W32.03(a)	Tipper Trucks				
RD.W32.03(a)(i)	3 to 5 ton capacity	hour	25		
RD.W32.03(a)(ii)	More than 5 ton capacity	hour	25		
RD.W32.03(b)	Loader (0,5 m3) bucket	hour	16		
RD.W32.03(c)	Grader(CAT 140G or similar)	hour	16		

ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
BROUGHT FORWARD					
RD.W32.03(d)	Compactor (Bomag BW 90)	hour	16		
RD.W32.03(e)	Water truck (5 000 l)	hour	16		
RD.W32.03(f)	Mechanical broom	hour	16		
RD.W32.03(g)	Tractor-trailer combination (43 kW, 3 ton min.)	hour	16		
RD.W32.03(h)	Suitable truck/bus for transporting labourers (40 seater)	hour	16		
RD.W32.03(i)	Safety vehicle for pre-marking purposes	hour	16		
RD.W32.03(j)	Compressor (air) including hoses and tools (up to 10m ³ / min)	hour	16		
RD.W32.03(k)	Dewatering pump including generators and accessories (500lt/ min)	hour	10		
RD.W32.03(l)	Mobile electric welding sets and accessories (up to 10kw: 50-190 amp)	hour	20		
RD.W32.03(m)	Cutting torch with mobile electric & oxy acetylene installation	hour	20		
RD.W32.03(n)	Mobile concrete mixers (150lt)	hour	20		
RD.W32.03(o)	Flat bed truck (specify size)				
RD.W32.03(o)(i)	6 ton	hour	50		
RD.W32.03(o)(ii)	10 ton	hour	50		
RD.W32.03(p)	Light delivery vehicle (LDV)	hour	50		

ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
RD.W321.03(q)	Centremount cranes (20t)	hour	10		
RD.W32.03(r)	Portable generator set (6.5 KVa)	hour	100		
RD.W32.03(s)	TLB	hour	50		
RD.W32.03(t)	Bobcat	hour	25		
RD.W32.03(u)	Excavator (18-22 ton tracked)	hour	10		
RD.W32.03(v)	Establishment of loader (bucket 0,5 cubic metre) to site	No	1		
RD.W32.03(w)	Establishment of grader (CAT 140 G or similar)	No	1		
RD.W32.03(x)	Establishment of Excavator (18-22 ton tracked)	No	1		
RD.W32.04	Procurement of materials				
RD.W32.04(a)	Procurement of materials	Prov Sum	1	Work package stage	
RD.W32.04(b)	The Contractor's overhead charges and profit in respect of sub-item RD.W32.04(a)	%		Work package stage	
RD.W32.05	Extra over item RD.W32.03 for establishment, within 24 hours of				
RD.W32.05(a)	Tipper trucks				
RD.W32.05(a)(i)	3 to 5 ton capacity	No	2		
RD.W32.05(a)(ii)	More than 5 ton capacity	No	2		
RD.W32.05(b)	Dewatering pump including generators and accessories (1000 l/min)	No	2		
RD.W32.05(c)	Water truck (5 000 l)	No	2		
RD.W32.05(d)	TLB	No	3		
RD.W32.05(e)	Bobcat (Skid steer loader)	No	3		
RD.W32.06	Repairs to the road network				
RD.W32.06(a)	Repairs to the road network	Prov Sum	1	Work package stage	
RD.W32.06(b)	The Contractor's overhead charges and profit in respect of sub-item RD.W32.06(a)	%	R -	Work package stage	
RD.W32.07	Minor road infrastructure				
RD.W32.07(a)	Minor Infrastructure	Prov Sum	1	Work package stage	
RD.W32.07(b)	The Contractors overhead charges and profit in respect of subitem RD.W32.07(a)	%	R -	Work package stage	
RD.W32	TOTAL CARRIED TO SUMMARY				

SUMMARY OF BILL OF QUANTITIES**SCHEDULE A :ROUTINE ROADS MAINTENANCE****PART B : OPERATIONAL**

SECTION	DESCRIPTION	AMOUNT
	PART A : MANAGEMENT SECTION	
RD.M01	GENERAL REQUIREMENTS AND PROVISIONS	
RD.M02	CONTRACTOR'S ESTABLISHMENT ON SITE AND GENERAL OBLIGATIONS	
RD.M03	ROUTE PATROL SERVICES	
RD.M04	SKILLS DEVELOPMENT	
RD.M05	EMERGENCY STANDBY TEAM	
RD.M06	ALL-EMERGENCY NORMALISATION	
	SUB-TOTAL PART A : MANAGEMENT SECTION	
	PART B : OPERATIONAL SECTION	
RD.W01	ACCOMMODATION OF TRAFFIC	
RD.W03	PAVEMENT LAYERS REPAIR	
RD.W04	REPAIR OF POTHOLES, EDGE BREAKS AND SURFACE FAILURES	
RD.W07	CRACK SEALING	
RD.W08	BLEEDING REPAIR	
RD.W09	SURFACE TREATMENT OF SURFACED ROADS	
RD.W10	REPAIR OF SLOPE FAILURES AND WASHAWAYS	
RD.W11	REPAIR AND MAINTENANCE OF INLET AND OUTLET STRUCTURES	
RD.W12	SUBSOIL DRAIN INSTALLATION AND MAINTENANCE	
RD.W13	CLEANING OF WATERWAY STRUCTURES	
RD.W14	CLEANING OF PREFABRICATED CULVERTS	
RD.W15	CLEANING OF CONCRETE DRAINS AND CHANNELS	
RD.W16	CLEANING AND MAINTENANCE OF EXISTING EARTH CHANNELS	
RD.W17	EDGE BUILD-UP REMOVAL	
RD.W18	CONCRETE CHANNEL CONSTRUCTION AND MAINT. OF EXISTING CHANNELS	
RD.W19	SHOULDER REPAIRS	
RD.W20	ERECTION AND REPAIR OF PERMANENT ROAD TRAFFIC SIGNS	
RD.W21	ROAD SIGN CLEANING AND REMOVAL OF ILLEGAL SIGNS	
RD.W22	ROADSTUDS	

RD.W23	GUARDRAIL ERECTION AND MAINTENANCE	
RD.W24	ROAD MARKINGS	
RD.W25	MAINTENANCE OF LAY-BYES AND REST AREAS	
RD.W26	GENERAL EROSION PROTECTION	
RD.W27	GABION PROTECTION	
RD.W28	CONTROLLING VEGETATION GROWTH: MOWING AND CUTTING	
RD.W29	CHEMICAL CONTROL OF VEG. AND ERADICATION OF UNDESIRABLE VEGETATION	
RD.W30	REMOVAL OF UNDESIRABLE VEGETATION: PHYSICAL ERADICATION	
RD.W31	MINOR REPAIRS TO STRUCTURES	
RD.W32	DAYWORKS SCHEDULE	

CALCULATION OF TENDER AMOUNT

SUB-TOTAL PART A : MANAGEMENT SECTION

SUB-TOTAL PART B : OPERATIONAL SECTION

SUB TOTAL AMOUNT CARRIED FORWARD TO "RRMs" - "ROUTINE ROAD MAINTENANCE" LINE ITEM (NEXT PAGE)

Notes to tenderer:

- 1 Each page of the Bill of Quantities must be initialled by the tenderer.

COMPANY NAME OF TENDERER: _____

SIGNED ON BEHALF OF THE TENDERER: _____

**PROJECT: FRAMEWORK CONTRACTS FOR CIVIL ENGINEERING CONTRACTS -
ROADS UPGRADES & NEW**

ITEM NO.	SHORT DESCRIPTION	AMOUNT
	CONTRACTOR'S ESTABLISHMENTS ON SITE AND GENERAL OBLIGATIONS	
CE.1200	CONTRACTOR'S ESTABLISHMENTS ON SITE AND GENERAL OBLIGATIONS	
CE.1300	CONTRACTOR'S ESTABLISHMENTS ON SITE AND GENERAL OBLIGATIONS	
CE.1400	HOUSING, OFFICES AND LABORATORY FOR THE ENGINEER'S SITE PERSONNEL	
CE.1500	ACCOMMODATION OF TRAFFIC	
CE.2100	DRAINS	
CE.2200	PREFABRICATED CULVERTS	
CE.2300	CONCRETE KERBING, CONCRETE CHANNELLING, CHUTES AND DOWNPIPES, AND CONCRETE LININGS FOR OPEN DRAINS	
CE.2400	THE RE-INSTATEMENT AND UPGRADING OF THE 40 TON ROAD SURFACE	
CE.2500	THE RE-INSTATEMENT AND UPGRADING OF THE 40 TON ROAD SURFACE	
CE.2600	PRECAST CONCRETE	
CE.3300	MASS EARTHWORKS	
CE.3400	PAVEMENT LAYERS OF GRAVEL MATERIAL	
CE.3500	STABILIZATION	
CE.3800	CONCRETE KERBING, CONCRETE CHANNELLING, CHUTES AND DOWNPIPES, AND CONCRETE LININGS FOR OPEN DRAINS	
CE.4100	PRIME COAT	
CE.4200	ASPHALT BASE & SURFACING	
CE.4500	DOUBLE SEALS	
CE.4600	BITUMIOUS SINGLE SEAL WITH SLURRY (CAPE SEAL)	
CE.5100	PITCHING, STONEMWORK AND PROTECTION AGAINST EROSION	
CE.5200	GABIONS	

CE.5400	GUARDRAILS	
CE.5600	ROAD SIGNS	
CE.5700	ROAD MARKINGS	
CE.7100	CONCRETE FOR STRUCTURES	
CE.8100	TESTING MATERIALS AND WORKMANSHIP	
RRMs	SUMMARY OF ROUTINE ROAD MAINTENANCE	
SUB TOTAL A: TOTAL OF PRICED ITEMS (EXCL VAT)		
(ADD 15% VAT)		
TOTAL (TENDER AMOUNT TO BE CARRIED TO FORM OF OFFER)		

COMPANY NAME OF TENDERER: _____

SIGNED ON BEHALF OF THE TENDERER: _____
DATE: _____



Part C3: Scope of Works

PART C3: SCOPE OF WORK

Document reference	Title	No of page
C3.1	This cover page	1
	<i>Employer's Works Information</i>	9
	Total number of pages	9

PART C3: Scope of Work

Definitions and abbreviations:

- **call off** – a call off is just another way of 'placing an order' from framework contractors. A call off contract is an individual contract that falls under a framework agreement.
- **framework agreement:** "An agreement between an employer and one or more contractors, the purpose of which is to establish the terms governing orders to be awarded during a given period, in particular with regard to price and, where appropriate, the quantity envisaged" (SANS/ISO 10845-1:2015). For ease of reference, Transnet has kept the word "Framework Contract" in the document instead of "Framework Agreement" and can be used inter-changeably.
- **mini – competition or multi bidding** means a tender competition between the Framework Service Providers conducted in accordance with Transnet policies; it means an invitation to submit a Quotation or Proposal issued by the TNPA pursuant to fulfilment of scope of works.
- **RFQ** – Request for Quotation. A request for price offers from contractors in the framework contract.
- **task-order** contract means a contract for services that does not procure or specify a firm quantity of services (other than a minimum or maximum quantity) and that provides for the issuance of orders for the performance of tasks during the period of the contract.
- **TNPA** – The employer. Transnet National Ports Authority
- **work package** – a work package / task is work within the scope of work of a framework agreement which is instructed within a stated period of time (start and end date) • A package order is an instruction to carry out a package and may only be issued within the term of the agreement.

1.1 Employers' objectives

Transnet National Ports Authority's (TNPA's) objective is to put in place a number of framework contracts for a range of commonly encountered works in the surfaced roads infrastructure, which can be readily accessed by Transnet in order to meet Transnet's mandate.

The framework contract will be valid for over a three-year term with contractors for the construction, maintenance, repair and/or rehabilitation of TNPA's surfaced roads infrastructure on an as and when instructed basis.

The objective is also to secure the services of construction contracts capable of serving the emerging TNPA's needs for such services within all the identified regions as indicated in [Figure 2](#).

[Figure 3](#) depicts the current conditions of TNPA's roads.

The ultimate goal is to streamline the procurement of construction services from the open market in order to fulfil.

TNPA's strategic objectives, while maintaining transparency, fairness and equitability in the procurement process. Framework contracts are agreements with contractors which set out the terms and conditions under which specified works and services may be procured during the period of the agreement. Such framework contracts do not constitute a contract or guarantee of work but rather sets out the terms and conditions for specific purchases which are known as request for quotations and/or call-offs. A contract is only concluded once a quotation or mini competition or call-off has been awarded.

TNPA will issue Request for Prices or call-offs for the execution of work during the set term of the Framework contract.

1.2 Background

Transnet National Ports Authority (TNPA) is an Operating Division of Transnet SOC Ltd, mainly responsible for the management of the eight (8) commercial Sea Ports in South Africa. The Property and Facilities management sections under Commercial department own and operate extensive portfolio of assets as follows:

- a. Offices,
- b. Warehouses,
- c. Vacant land,
- d. Water site,
- e. Residential,
- f. Lighthouses and;
- g. Terminal Infrastructure (Roads, walkways, pathways and Buildings)
- h. Internal roads

TNPA is struggling to maintain these assets into a world class standard to keep up with nation's economic demands.

This framework contract deals with roads infrastructure which is part of the TNPA assets mentioned above.

Some of these challenges are caused by the following:

- Insufficient number of trained and qualified technical staff to maintain and manage the infrastructure at the ports and critical assets of the entity;
- Poor performance of existing assets, requiring the construction of new or major upgrade or refurbishment of existing infrastructure assets;
- Unsafe infrastructures used by users;
- Ageing buildings and associated infrastructure, requiring repairs, refurbishment or renovation;
- Inadequate maintenance of existing buildings and roads assets and associated infrastructure;
- Poor operation of drinking water and wastewater treatment plants and pump stations;
- Weak systems and processes for setting tariffs and collecting revenue from consumers of water and sanitation services, including non-existent or faulty water meters requiring repair or replacement; and
- Leaks in plumbing pipes, distribution systems and illegal connections, resulting in loss of revenue

Poor and inefficient supply chain management (SCM) practices underlie many of these challenges, particularly in the securing contractors on urgent basis. Efficient SCM practices which reduce costs, enable a rapid response to critical needs and result in quality outcomes can contribute significantly to the improvement of responsive assets of Transnet which will contribute in fulfilling the mandate of the entity.

TNPA is establishing a framework contract that would ensure the timeous response to augment urgent infrastructure needs. A framework contract is an agreement between an organ of state and one or more contractors, the purpose of which is to establish the terms governing orders to be awarded during a given period, in particular with regard to price and, where appropriate, the quantity envisaged. An order, on the other hand, is an instruction to provide goods, services or any combination thereof under a framework agreement. Framework agreements enable TNPA to procure on an as-instructed basis (call offs) over a set term without necessarily committing to any quantum of work.

It is against this background that TNPA has chosen to establish and enter into a number of framework contracts with a small number of contractors, following a competitive selection process for the **Civil Engineering works** for a term of 3 years, based on the forms of contracts prescribed by cidb and Transnet.

1.3 Extent of the works or services

The services over the term in various parts of the country (see C4: Site Information) may include:

- a) Surfaced roads infrastructure – Capital infrastructure improvements:
 - 1) the design and construction of new roads infrastructure and related works;
 - 2) rehabilitation and upgrades of paved or surfaced roads infrastructure and related works.
- b) Paved and surfaced infrastructure – maintenance, alterations and repairs:
 - 1) the repairs, removal, replacement and/or alterations of paved and surfaced infrastructure and related works;

The contractor may be required to subcontract the design services to a suitably experienced consultants or to a consultant contracted by TNPA in terms of a framework contract. There could be instances where Contractors in the Framework contract could be expected to perform activities or services of a Management contractor i.e. produce both the designs and perform the construction services.

1.4 Procurement strategy

The Employer intends entering into a pre-contract with a limited number of contractors for the improvements of TNPA's infrastructure facilities following a competitive selection process (Open procedure).

The prescribed form of contracts with Bill of Quantities or Schedule of Rates or Lump Sum pricing strategy may be used by the employer.

The contractor's responsibilities for construction works are the same as those of a contractor working under one of the other options provided in the any form of contract used. However, the main contractor appointed from the Framework Contract list is expected to execute work with a short space of time or limited period. The turnaround time to establish and execute work will usually be shorter. The contractor will be expected to ensure that its compliance to Construction Health and Safety is of utmost importance. The submission of a complete Health and Safety File and other contractual obligations is expected to be done within a period of 14 days. The contractor must meet all these requirements as well as all appointed sub-contractors.

Where feasible, the main contractor could be expected to sub contract a minimum of **30%** to any of the identified designated groups (local sub-contractors owned by any of the identified designated groups and/or implement cidb B.U.I.L.D programme obligations). The responsibility to identify, appoint, manage and pay sub-contractors rests with the main contractor. The client may only assist where necessary.

Firms will apply for accreditation or admission to the Framework Contract list by completing their information and make a comprehensive submission through this Invitation to TNPA. After initial closure of the process, firms will be evaluated against the criteria as stipulated in this document before they are registered on the list.

The framework contract list of contractors shall enable TNPA to identify the B-BBEE Status level, EMEs or QSEs status, Capacity and capability, cidb grading Level. It will assist TNPA to identify development opportunities for contractors. Once a Contractor is admitted on the Framework Contract list, the Contractor will have access only to update their own information and will be able to update it. A prospective contractor should provide accurate and up-to-date information about its offices, Capacity and resources changes, B-BBEE Status Level, Ownership patterns or Emerging Micro Enterprises (EME) or Qualifying Small Enterprises (QSE) and cidb grading level and valid status.

The tender period for invitation of tenders in the Framework Contract may vary between 7 days up to 30 days. Contractors must ensure that they are capable of responding to the department, with their complete submission, within such limited time.

Tender period intervals:

Turnaround periods to respond to RFQs or mini-competition may be shorter (i.e. from 24 hours to 30 days) depending on the nature of works required.

Unsuccessful tenderers will be informed through many ways, which inter alia, could include publication of winners on TNPA website, information on notice boards, email correspondences, on cidb platforms, etc.

TNPA or Employer will give written instruction to the Contractor or contractors in the Framework Contract to submit quotations for proposed works or call-off. This will happen by issuing a Request For Quotation (RFQ) document in an electronic copy, to the contractor(s). The quotation enquiry document contains all the relevant forms, the scope of work and related information describing and defining the works, including any additional contract information. If a request for quotation instruction or a call-off is subject to a multi-source bidding or mini-competition process (i.e. competing with other service providers), this will be stated in the RFQ document. The contractor(s) will prepare his/her quotation for the call-off based on his quotation information (the pricing data provided in the Pricing Schedule).

The Contractor(s)'s rates and prices in his quotation information are binding and apply as the maximum allowable rates and prices quoted for any call-off under this Framework Contract.

1.5 Potential users of this framework agreement

Potential users as determined in these Terms of Reference (TOR) are TPNA described under the Site Information section, and may include other Operating Divisions of Transnet and any other Organ of State as defined in the PFMA and MFMA.

1.6 Development procurement objectives and obligations

The employer's development objectives are to promote broad based black economic empowerment in support of the economic transformation of South Africa.

*Clarification note: In the context of infrastructure within the Republic of South Africa, **development objectives means** "secondary objectives" as per SANS/ISO 10845-1 "construction procurement-part 1: processes, methods and procedures" (South African Bureau of standards).

1.7 Location of the services

Location of the works – The works are located at various regions of TNPA premises. Depending on where the contractor has elected to be placed, the ports where the request for service could emanate from are in Saldanha, Cape Town, Mossel Bay, Port Elizabeth, Port of Ngqura, East London, Durban, Port of Nolloth, Port of BoegoeBaai and Richards Bay. TNPA is a process of establishing new ports. Contractors in the framework could be expected to respond to such requests for quotations.

2 General requirements

The Contractor shall in providing the works observe all statutes, by-laws and associated regulations and industry norms established in relevant South African national standards published in terms of the Standards Act of 2008 or standards recommended by professional associations.

The Contractor shall only utilize in the provision of the services materials (substances that can be incorporated into the works), products (item manufactured or processed for incorporation into the works), components (products manufactured as distinct units to serve a specific function or functions) and assemblies (set of related components attached to each other) which are:

- a) fit for their intended purpose; and
- b) capable of fulfilling required functions under intended use conditions or when in use, with planned maintenance, under the influence of the environmental actions or a result of a self-ageing process for a period of time within industry accepted norms.

3 Management

3.1 General

The Contractor shall:

- a) provide a fortnightly progress report covering work which is the subject of a Task Order.
- b) be required to participate in regular progress meetings with TNPA officials or TNPA's representatives within the **Ports of Transnet**.

3.2 Health and safety

The Contractor shall manage health and safety in accordance with the latest edition of the TNPA's Occupational Health and Safety Specification for Construction Works Contracts as well as all applicable legislation, codes and by-laws. A detailed Health and Safety specification will be issued and be part of the RFQ for each call off or Task order

3.3. Completion strategy

- a) The Contractor shall develop a completion strategy to minimize the correction of defects after Completion and to achieve Completion on or before the Completion Date. Such a strategy shall include a systematic approach to ensuring that employees and subcontractors search for defects as the work progresses, programme their work in such a manner that defects are corrected ahead of Completion and sufficient time is allowed for commissioning.
- b) The completion strategy should be framed around the systematic acceptance and / or testing of materials, plant, workmanship and subsystems as the works proceed in order to address issues ahead of completion and the allocation of tasks to ensure satisfactory completion.

3.4 Programme

The additional information to be shown on the programme are the dates for submission of end of stage deliverables associated with the latest edition of the National Treasury's Framework for Infrastructure Delivery and Procurement Management and Transnet Policies.

4. Reporting

The Contractor shall report on the socio-economic indicators such as subcontracting, jobs created and employment of local labour specified in a Task Order.

5. Communications

All communications with the Employer which are made in terms of the contract should be made using the standard templates provided by TNPA.

6. Issuing of Task Orders

Depending on the nature of works to be executed and the urgency thereof, TNPA will issue a Task Order to a single contractor in accordance with the TRANSNET policies and/or other relevant provisions from Treasury and *cidb* prescripts; it will call for a mini competition, where prices and other submissions stated in the conditions of tender will be evaluated, then an appointment letter or a task order will be given to a successful contractor.

7. Invoices

Invoices submitted shall be a Tax invoices. The invoice shall comply with requirements, if any, established by the Employer.

8. Vendor registration

The Contractor shall complete vendor registration forms before the first assessment date. Such forms and the submission requirements shall be obtained from the Employer.

9 DELIVERABLES

A. Project Deliverables

When appointed from a Framework Contract, a successful contractor will be responsible for the complete project implementation, including assessment, final design and implementation / construction, required to achieve the deliverables as indicated below.

The contractor will therefore also be required to include the services of a registered Professional with proven, relevant project experience, to implement the proposed architectural or engineering design and contract management in their professional capacity.

1. Deliverables

The successful tenderer will be requested to deliver the following upon completion of the project (where applicable);

- a) All relevant tests, and installation certificates
- b) Additional Project Specifications, Bill of Quantities, Construction drawings, as-built drawings and social facilitation (ISD) reports;
- c) Secured fully building structures equipped with power supply, lightning protection, pipework and plumbing works
- d) Warranty and guarantee certificates for installed infrastructure;

- e) Health and Safety Act and Regulations (OHSAct, 1993) and Environmental Management (NEMA, 2003) related documentation and project records;
- f) Close Out Report and As-built drawings.

2. Additional Deliverables

- Site Assessment Report and Condition Assessment Reports for the project
- Project Implementation Plan,
- Detailed Design Report and Summary of General Legislative Authorisations
- Monthly Implementation Progress Reports
- Monthly Site Meetings Agenda, Minutes and Arrange Site Visits for Relevant Stakeholders
- Close-Out Report including pictures before and after the Works and a file of all Contractual Documentation.
- Approved Work Orders.

Transnet National Ports Authority

Tender Number: TNPA/2024/04/0009/61844/RFP

DESCRIPTION OF WORKS: FRAMEWORK CONTRACTS FOR CIVIL ENGINEERING WORKS IN VARIOUS TNPA PREMISES – EASTERN REGION - (3 YEARS)



C3.1 EMPLOYER'S WORKS INFORMATION

PART C4: SITE INFORMATION

Document reference	Title	No of pages
C4.1	Site Information	7

C4: Site Information

Sites are located in various TNPA regions and Ports (Figure 1 below). The list of facilities where the successful tenderer would be expected to work when appointed are listed below (the list on Annexure 2) is per each city or Port):

FIGURE 1:

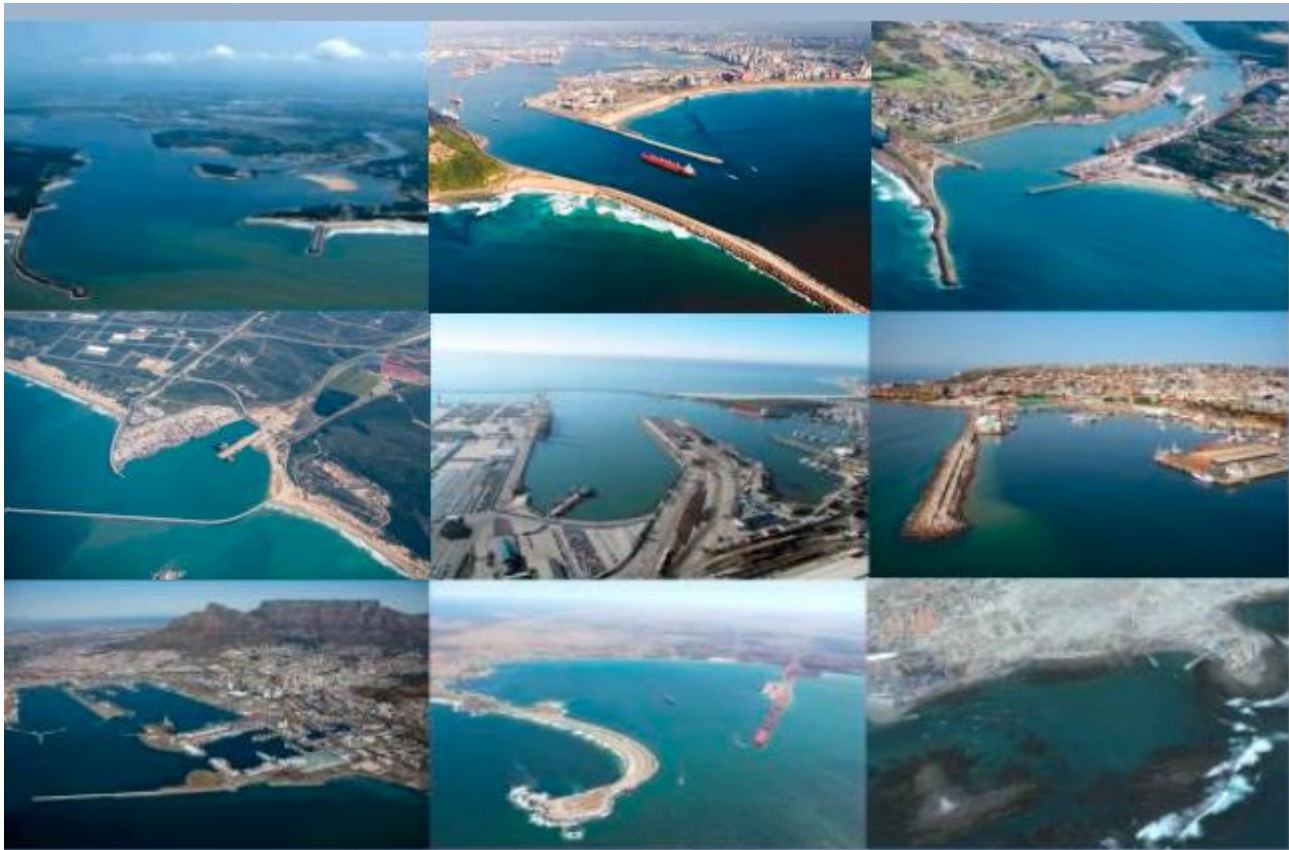


FIGURE 2:

CAPE TOWN FACILITIES:

Business Description	BLD Square Meters	Business Description	BLD Square Meters	Business Description	BLD Square Meters or Size
Workshop and Storage	225.8	Office Facility	894.8	Engineering workshop and storage of equipment	4,235.4
Office Facility	198.9	Pump House	59.1	Blast Shed	847.2
Ship repair and manufacturing	2,082.0	Filling station	773.0	Cold Storage	10,084,8

Ship building and ship repair	756.0	Storage facility	307.9	Cold Storage	4,684.4
Ship building and ship repair	2845	Offices	314.8	Office Facility	173.7
Office Facility	13.6	Storage facility	-	Ship building and ship repair	228.1
Storage & Office	379.8	Yacht Building, repairs and offices.	6,783.0	Storage & Office	20.7
Art Gallery/Coffee shop	164.6	Offices	205.6	Light engineering services	111.0
Office accommodation, storage and operation of Jetty for offshore mining.	1,460.0	Storage	14.5	Network Coverage	4.0
Offices for Ship building and ship repair	6,685.0	Multi Purpose Terminal: handle all products	3,309.2	Duty free shop	954.0
Ship building and ship repair	758.0	Multi Purpose Terminal: handle all products	32,477.0	Liquid Bulk Terminal	6,224.8
Art Gallery	1034.16	Design Studio and office	240	Office Facility	2,936.5
Ship building and ship repair	4,390.8	Storage facility	77.3	Police station	897.0
Engineering workshop and storage of equipment	846.5	Design Studio and office	157.9	Yacht Club	278.0
Storage	929.6	Fabricate components of vessels	929.6	Length of Asphalt roads (m)	20,554m
Cold Storage	1,841.0	Café	132.9		
Warehousing, storage and distribution.	1,793.0	Engineering & Marine Workshop	920.0		
Cold storage and workshop.	4,209.2	Container Terminal	19,409.0		
Clubhouse Facility	136.9	Multi Purpose Terminal: handle all products	22,812.0		
Office Facility	173.7	Office Facility	101.7		
Workshop for electrical and plumbing services	258.6	Workshop	493.0		
Network Coverage	9.8	Network Coverage	17.5		

Storage of equipment	14.0	Tuck Shop	296.6		
		Storage facility	0.0		

SALDANHA FACILITIES:

Business Description	BLD Square Meters / Size
SAMSA Offices	660
Customs	148
Cargo Logistics	51
Curio Retail	165
Oil Pollution	991
Liquid Bulk Terminal	195
Sampling Plant	413
Special Economic Zone	3,268
Home Affairs Offices	111
MPT Terminal Operations	208,000
BTS Terminal Operations	795,014
Offshore Services	1,039
Length of Asphalt roads (m)	17,340m
Length of Gravel Roads (m)	4,770m

MOSSEL BAY

Business Description	BLD Square Meters / Size
Restaurant	370.0
Cannery Factory	5,215.0
Fish pump	6.0
Kaai 4	145.0
Oyster Bar & London Bus	117.0
Offices	36.0
Restaurant	18.0
Fishing	82.0
NSRI	352.0
Cargo Handling Facilities	2,630.0
Petroleum Oil & Gas	1,000.0
Factory Site	124.0
Building space	12.0

Café	360.0
Factory Site	6,040.0
Storage	374.0
Slipway	13.0
Cargo Shed	2,731.0
Office/ Parking of Vessel/Recreation	36.0
Length of Asphalt roads (m)	1,299m
Length of Gravel Roads (m)	0m
Braai Area	80.0

EAST LONDON

Business Description
Facility for the storage, handling and distribution of liquid bulk petroleum products.
Wayleave Agreements
Clubhouse
Sea rescue workshop to store boats
Land area for truck turning
Office space and workshop for the stevedore company
Fish market place.
Hi-Site Mast for SAPS Radio technical branch for the operation of the communication antennae
Encroachment of SAPS garages on TNPA land.
Offices for Department of Fisheries and Port SAPS
various stormwater, drainage pipes and electricity cables.
Electricity substation
Electrical cable
Office
Parking facility
Training Facility
Automotive Terminal
Multi-purpose Terminal
Dry-Bulk Terminal
Office Space
Length of Asphalt roads (m) - 7,007m
Length of Gravel – 1,450m Roads (m)

PORT ELIZABETH

Business Description	BLD Square Meters	Business Description	BLD Square Meters / Size
Fishing Industry	1,594.0	Recreation	708.0
Spill Management	502.0	Stevedoring	782.0
SA Navy	1,741.0	Bunkering	47.0
Missionary	21.0	Bulk Fuel Operator	19.0
Fishing Industry	945.0	Duty Free Shop	117.0
Leisure and Recreation	872.0	Boat Repair Workshop	503.0
Commercial	142.0	Offshore Services	211.0
Fishing Industry	1,571.0	Shed 12	2,188.0
Education and Training	175.6	Offices	501.0
Commercial	860.0	Offices	860.0
Cell Phone Mast	13.3	Offices	1,340.0
Fishing Industry - Ice plant	146.0	Offices	104.0
Fishing Industry	101.0	Offices	126.0
Fishing Industry	825.0	Offices	36.0
Fishing Industry	1,965.0	Offices	581.0
Stevedoring	227.0	Office and Workshop	1334
Fishing Industry	447.0	Lighthouse	241
Fishing Industry	140.0	Length of Asphalt roads (m)	10,000m
Recreation	629.0	Length of Asphalt roads (m) (Port of Ngqura)	16,000m
Missionary	194.0	Length of Gravel Roads (m) - (Port of Ngqura)	2000m
Leisure and Recreation	985.0		
Aquaculture	943.7		
MPT Operator	9,063.0		
Aquaculture	327.0		
Fishing Industry	820.0		

RICHARDS BAY

Business Description	BLD Square Meters / Size
Shop	65.4
Reception, storage, handling & distribution in bulk liquids & liquified products	37.2
Restaurant Operations	84.0
Office & operation centre for xport of steel	

Installation of instrument & electrical control for the Acid stripping pump sump	51.6
Stevedores activities	976.1
storage of coal and chrome	7,796.7
Office for stevedores working	108.0
Sales of traditional Indian foods	53.0
Length of Asphalt roads (m)	50,120m

DURBAN

Business Description	BLD Square Meters	Business Description	BLD Square Meters /Size
Astron Energy (Pty) Ltd	9734	Thembisizwe Trading and Projects (Pty) Ltd	229
Blackhammer Distribution CC	279	TNI (Pty) Ltd	1576.6
Cargo Lash and Trading CC	120.8	Total SA P/L (Land)	7754
H and R Global Special Products P/L (Land)	2600	Total SA P/L (Land)	1133
SA Sugar Terminals Land and Buildings	22025	Veetech Oil P/L (land)	1631
SA Sugar Terminals Land and Buildings	32573	Dormac a Division of Southey Holdings (Pty) Ltd	102.024
SA Sugar Terminals Land and Buildings	9700	Sprint Warehouse Operations (Pty) Ltd	3767
Sasol Oil P/L & Total SA P/L Land	1750	Sprint Warehouse Operations (Pty) Ltd	1516.5
Shell and BP (Land)	149	Luristax (Pty) Ltd	2159
South African Cargo Services	317	Length of Asphalt roads (m)	65,079m
Thembisizwe Trading and Projects (Pty) Ltd	229		
TNI (Pty) Ltd	1576.6		
Total SA P/L (Land)	7754		
Total SA P/L (Land)	1133		
Veetech Oil P/L (land)	1631		
Dormac a Division of Southey Holdings (Pty) Ltd	102.024		
Sprint Warehouse Operations (Pty) Ltd	3767		
Sprint Warehouse Operations (Pty) Ltd	1516.5		
Luristax (Pty) Ltd	2159		

Business Description	BLD Square Meters	Business Description	BLD Square Meters /Size
Mediterranean Shipping Company (Pty) Ltd	5082		
AMG Freight Logistics (Pty) Ltd	27165		
BBBEE Tyre Holdings (Pty) Ltd	413		
BBBEE Tyre Holdings (Pty) Ltd	2682		
Salamat Ship Chandlers	582		
Mediterranean Shipping Company (Pty) Ltd	5082		

FIGURE 2:

Roads Conditions in each Port

02. 2023/24 Asset Condition Rating



2023/24 Asset Condition Rating* (*2023/24 data subject to ratification)

Port	Saldanha (SLD)	Cape Town (CPT)	Mossel Bay (MSB)	Port Elizabeth (PE)	Ngqura (NGQ)	East London (EL)	Durban (DBN)	Richards Bay (RCB)
Road	83.8	63.5	85.0	75.3	84.5	77.0	68.6	65.0

Legend: (As per AMPP)	Rating (%)	1-10	11-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100
		Unsafe	Very Poor to Unsafe	Very Poor	Poor	Fair to Poor	Fair	Good to Fair	Good	Perfect to Good	Perfect

FIGURE 3:

Length of surfaced Roads in each Port

Item	SLD	CPT	MSB	PE	NGQ	EL	DBN	RCB
Length of Asphalt Roads (m)	17 340	20 554	1 299	10 000	16 000	7 007	65 079	50 120
Length of Gravel Roads (m)	4 770	0	0	0	2 000	1 450	0	0

ANNEXURE A

Environmental and Sustainability Specification and Guidelines and Standard Operating Procedures

STANDARD OPERATING PROCEDURE

CONSTRUCTION ENVIRONMENTAL MANAGEMENT

Document number	009-TCC-CLO-SUS-11386
Version number	1.0
Classification	Unclassified
Effective date	01 October 2023
Review date	30 September 2028



DOCUMENTATION SIGN-OFF SHEET

I, the undersigned hereby approve this procedure.



ROLE	CAPACITY/ FUNCTION	SIGNATURE	DATE
Process Owner:	Senior Specialist: Environmental Compliance and Permitting		01/10/2023
Accepts document for adequacy and practicability. Comments:			
Sponsor:	General Manager: Corporate Sustainability		01/10/2023
Approves document for use. Comments:			

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Annexure 8.3 Construction Environmental Management Process Flow 35

1. PURPOSE

1.1 The purpose of this Standard Operating Procedure (SOP) is to define how environmental management will be practiced on any construction project under the management of Transnet to ensure that the environment is considered, negative impacts avoided or minimized, and positive impacts are optimized and/or enhanced throughout the lifecycle of the asset.

1.2 It further defines environmental management responsibilities for key stakeholders involved in the construction management process.

1.3 It must be read in conjunction with the Contractor Environmental and Sustainability Specification Guidelines (CESSG) and the Project Environmental Specification (PES) relevant to the project.

1.4 In this document, unless the context clearly indicates otherwise:

- Words importing any one gender shall include the other gender.
- The singular shall include the plural and vice versa; and
- Any reference in this document to legislation or subordinate legislation is to such legislation or subordinate legislation at the date of promulgation thereof and as amended and/or re-enacted from time to time.

2. APPLICABILITY

2.1 The SOP applies to any construction project under the management of Transnet SOC Ltd or its Construction Agent.

3. REFERENCE DOCUMENTS

Name	Applicable Section
Constitution of South Africa, Act 108 of 1996	Section 24 (a) right to an environment that is not harmful to health or wellbeing Section 24(b) (i) right to have environment protected for current and future generations through legislation and measures that prevents pollution and ecological degradation.
Capital Governance and Assurance Policy	Entire document
Capital Governance and Assurance Framework	Entire document
Capital governance and Assurance Manual	Entire document.
PLP Manual – Execution	Entire document
National Environmental Management Act, 107 of 1998	Section 2 National Environmental Management Principles (4) (viii), (e), (h), (j) and (p).
National Water Act, 36 of 1998	Section 164, Permissible Water Use Section 19
National Environmental Management: Waste Act, 58 of 2008	Part 1 15 (1) (i) and (2) Part 6 26 (10) (a) and (b) Scheduled 3, Defined Wastes Category B: Hazardous Wastes Part 8: Contaminated Land
Environment Conservation Act, 73 of 1989	Section 20
Occupational Health and Safety Act, 85 of 1993	Asbestos Regulations, 2001 Government Notice R155 in Government Gazette 23108 of February 2002

Name	Applicable Section
	General Safety Regulations-Reg. 2 (2) PPE
GNR 326, 7 April 2017 as amended, EIA Regulations	Chapter 15
Integrated Management System – Policy Statement Procedure (TRN-IMS-GRP-PROC-002)	Whole document
Integrated Management System – Competency, Awareness and Training Procedure	Whole document
Integrated Management System¹ – Document, Data and Record Management Procedure (TRN-IMS-GRP-PROC-010)	Whole document
Integrated Management System – Occurrence and Non-Conformance Management Procedure (TRN-IMS-GRP-PROC-013)	Whole document
Transnet Environmental Risk Management Strategy and Framework	2015:42
Environmental Management Systems ISO 14001: 2015	Clause 5, 6, 7, 8, 9 and 10

¹ Management of certain documents, data and records will be in accordance with NEC3 – Engineering and Construction Contract prescripts

4. DEFINITIONS AND ABBREVIATIONS

4.1 DEFINITIONS

Compliance	The action or fact of complying with legislation or regulations.
Conformance	The action or fact of conforming to this standard and other internal Transnet policies, procedures, guidelines and best practice.
Contractor	The Principal Contractor as engaged by Transnet for infrastructure construction operations, including all sub-contractors appointed by the main contractor of his own volition for the execution of parts of the construction operations; and any other contractor from time to time engaged by Transnet directly in connection with any part of the construction operations which is not a nominated sub-contractor to the Principal Contractor.
Contractor Environmental and Sustainability Specification Guidelines (CESSG)	A set of minimum environmental standards for all Transnet SOC Ltd-managed construction sites.
Corrective Action	It is generally a reactive process used to address problems after they have occurred. Corrective action may be triggered by a variety of events, e.g. Non-conformance to documented procedures and work instructions, non-conformances raised through internal audits, unacceptable monitoring and measurement results, internal & external SHEQ complaints, etc.
Emergency	Sudden unforeseen event needing immediate or prompt action.



Environment	Surroundings in which the Contractor operates, including air, water, land, natural resources, flora, fauna, humans and their interrelations.
Environmental Aspect	Element of an organization's activities or products or services that interacts or can interact with the environment
Environmental Authorisation (EA)	Environmental Authorisation is the authorisation granted by a competent authority of a listed activity or specified activity in terms of National Environmental Management Act 107 of 1998 (as amended).
Environmental Impact	Change to the environment whether adverse or beneficial, wholly or partially resulting from an organization's environmental aspects
Environmental Management Plan (EMP)	A plan generated by the Contractor describing the relevant roles and responsibilities and how potential environmental risks will be assessed and managed including the monitoring and recording thereof.
Environmental Management Programme (EMPr)	A programme that has been approved by the Competent Authority in terms of NEMA, 107 of 1998 stipulating information on any proposed management, mitigation, protection or remedial measures that will be undertaken to address the environmental impacts that have been identified
Environmental Risk	The product of the likelihood and severity of an unforeseen occurrence/incident/aspect and the impact it would have, if realised, on the environment



Incident/Occurrence	An undesired event occurring at work that results in physical harm to a person or death, or damage to the environment, plant and/or equipment, and/or loss of production.
Non-conformance	An action or situation that does not conform to Transnet's SHEQ standards, procedures or legislative requirement(s) and that can be, or lead to, an unacceptable SHEQ incident.
Non-compliance	Contravention to environmental legislative requirements.
Project Environmental Specification (PES)	Describes standards specific to a particular project. Variations and additions to the MESC are set out in this PES. These would include the EA issued to the project or elements generally drawn from the EA or permits for that project or from specific requirements set by the Transnet Operating Divisions. The PES may also require a more stringent standard to that described in the MESC if required by the EA or a particular industry code to which Transnet subscribes including any environmental constraints at a construction site.
Sub -Contractor	<p>A person or organisation who has a contract with the contractor to</p> <ul style="list-style-type: none">- Construct or install part of the contractors work.- Provide a service necessary to provide the works; or- Supply plant and materials which the person or organisation has wholly or partly designed specifically for the works.



4.2 ABBREVIATIONS

Acronym	Meaning in Full
CESSG	Contractor Environmental and Sustainability Specification Guidelines
CM	Construction Manager
CV	Curriculum Vitae
CEM	Construction Environmental Management
DFFE	Department of Forestry, Fisheries and the Environment
DWS	Department of Water and Sanitation
EA	Environmental Authorisation
ECO	Environmental Control Officer
EO	Environmental Officer
EMI	Environmental Management Inspectorate
NCR	Non-conformance Report
NEMA	National Environmental Management Act 107 of 1998 (as amended)
PER	Project Environmental Resource
PES	Project Environmental Specification
PLP	Project Life-cycle Process
PM	Project Manager



Acronym	Meaning in Full
SAHRA	South African Heritage Resources Agency
SOP	Standard Operating Procedure
SHEQ	Safety, Health, Environment and Quality
Transnet	Transnet SOC Ltd

5. ACCOUNTABILITY, RESPONSIBILITY AND AUTHORITY

5.1 Transnet Procurement Department

5.1.1 Ensures that this SOP (and relevant associated environmental specifications) is included in any construction-related request whether open market, quotation or confinement process.

5.1.2 The Procurement Department shall further ensure that the relevant environmental personnel are consulted during tender review, tender evaluation and contract award.

5. Transnet Project Manager (PM)

5.2.1 Takes overall accountability for the project including ensuring that this SOP is implemented by all relevant stakeholders.

5.2.2 The specific tasks during construction will include:

- Appointment of the Transnet Environmental Resource/s;
- Certifying site access to the Contractor;
- Giving instructions to the Contractor on recommendation from the Transnet Environmental Resource/s (e.g. defects, non-conformances etc.); and
- Certifying site closure to the Contractor.

5.3 Transnet Project Environmental Resource

5.3.1 The Transnet Project Environmental Resource (PER) will be responsible for ensuring that this SOP and associated specifications or requirements are complied with. The Transnet PER will report functionally to the relevant PM.

5.3.2 The specific tasks will include:

- Preparation of the PES;
- Tender evaluation, development of environmental criteria and adjudication thereof;
- Liaison with the relevant environmental Competent Authorities;



- Review and approve site layout plan including any subsequent revisions thereof;
- Environmental Induction of Contractor's staff;
- Generate an inspection checklist prior to construction commencement;
- Review and Sign off Method Statements prepared by Contractor;
- Prepare environmental monitoring protocols/checklists to be used during construction;
- Prepare monthly conformance audit reports, including sign-off on Monthly Inspection Reports;
- Conduct monthly observation & inspections of all work places based on the approved inspection checklist;
- Audit conformance to Method Statements;
- Monitor the Contractor's compliance with this SOP and any other environmental requirements relevant to the site;
- Develop an Audit Finding and Close out Register that documents all audit findings, close out actions and the time frame allowed for in order to close the finding/s;
- Ensure that all environmental monitoring programmes (sampling, measuring, recording etc. when specified) are carried out according to protocols and schedules;
- Measurement of completed work (e.g. areas top soiled, re-vegetated, stabilised etc.);
- Attendance at scheduled SHE meetings, as and when required, and project coordination meetings;
- Ensure that site documentation (permits, licenses, EA, EMP, SOP-CEM, method statements, audit reports, waste disposal slips etc.) related to environmental management is maintained on the relevant Document Control System;
- Inspect and report on environmental incidents and check corrective action;
- Keep a photographic record of all environmental incidents;



- Environmental incident management as required by Transnet policies and procedures;
- Implementation of environmental-related actions arising out of the minutes from scheduled meetings;
- Management of complaints register;
- Conduct any environmental incident investigations;
- Coordinate and/or facilitate any environmental monitoring programmes e.g. EMI Inspections, ECO Audits, Transnet Environmental Assurance Audits etc.
- Collate information received, including monitoring results into a monthly report that is supported with photographic records to the Transnet CM and Transnet PM showing progress against targets; and
- Report environmental performance of the project on a monthly basis through relevant governance channels.

5.3.3 The tasks stipulated above may be conducted by one or more Project Environmental Resource, depending on the scale, complexity and sensitivity of the environment. Discretion to be taken by the Environment Lead within the area of control of the project site.

5.4 Transnet Construction Manager (CM)

5.4.1 The Transnet Construction Manager (CM) has overall responsibility for environmental management on site and reports to the Transnet PM. The Transnet CM is supported by the Transnet PER.

5.4.2 The specific tasks during the construction stage will include:

- Reviewing the monthly reports compiled by the Transnet PER;
- Approving method statements prepared by the Contractor;
- Communicating directly with the Contractor on environmental issues observed on-site; and
- Escalating any relevant environmental matters to the Transnet PM.



5.6 Environmental Control Officer

5.6.1 The Environmental Control Officer is an independent person legally appointed to monitor compliance of construction related activities with the conditions of the Environmental Authorisation. The ECO fulfils an autonomous role and submits reports to the Competent Authority at timeframes specified in the Environmental Authorisation.

5.6.2 The Environmental Control Officer will conduct the following tasks:

- Monitors compliance to the conditions of the EA, Environmental Management Programme (EMPr) and can include permits and licences applicable to a project;
- Attends project meetings as and when required;
- Conducts audits at a frequency stipulated on the EA/EMPr; and
- Compiles audit reports and submits them to relevant authorities.

5.7 Contractor's Environmental Officer

5.7.1 The Contractor's Environmental Officer (EO) must ensure implementation of the requirements of this SOP on site.

5.7.2 The Contractor's EO will liaise with the Transnet PER on site. It will be the responsibility of the Contractor's EO to ensure that all work is conducted according to the approved Method Statements and that the Contractor team's roles and responsibilities as set out in this document are fulfilled.

5.7.3 The Contractor EO's tasks will include:

- Developing an appropriate environmental file for approval by the Transnet PER prior to site access, including but not necessarily limited to (the environmental file must always be available and up to date on the construction site):
 - All environmental documents provided by Transnet in the tender e.g. policies, SOPs, standards, environmental approvals;



- Contractors commitments to comply with this SOP and associated documents as signed during tender;
- The Contractor's EMP;
- His/her CV;
- An organogram indicating reporting lines of all Contractor's staff (with names included);
- Contact Information for: the overall responsible person acting on behalf of the Contractor to execute the construction works; Contractor's CM; Contractor's EO; all relevant emergency personnel;
- A list of the Contractor's plant and equipment indicating a description of the plant/equipment, its fuel capacity, any hazardous components (oils, greases etc.), individual service/maintenance cycles and noise levels;
- A list of hazardous substances to be used during construction indicating: official substance name from Material Safety Data Sheet (MSDS); quantity on site; storage method; transport method to site; period to be used on site (all substances listed must have an MSDS on site in the environmental file);
- Site Layout Plan indicating but not necessarily limited to, access roads, site offices, material laydown areas, stockpile areas and parking areas, waste and effluent storage and handling facilities, entire construction footprint, no-go-areas, sewage and sanitary facilities. The plan must be appropriately drawn on a computer and must be clearly visible and properly scaled;
- A site establishment method statement (for more details on what method statements should entail the Contractor must refer to the Minimum Requirements for Construction Environmental Management)
- Conducting an activity-based environmental risk assessment based on the Contractor's scope of work;
- Agreeing on an appropriate inspection schedule with the Transnet PER (either daily or weekly);



- Ensuring that all required Contractor staff attends the environmental induction to be given by the Transnet PER (any Contractor's staff, sub-contractors or visitors to site must subsequently be inducted by the Contractor's EO);
- Inspection of the work area(s) as per schedule or authorised through written instruction by Transnet PER;
- Preparing activity-based Method Statements that indicate how environmental risks will be managed on site OR ensuring that the necessary environmental information is included in the Contractor's method statements (all method statements must be maintained in the Contractor's Environmental File);
- Identify local, provincial and national environmental legislation that applies to the Contractor's activities;
- Conduct ongoing Environmental Awareness Training of the Contractor's site personnel;
- Reporting, investigating and recording of any environmental incidents caused by the Contractor or due to the Contractor's activities, including their sub-contractors and visitors;
- Close out of environmental incidents;
- Attendance at all SHE meetings and induction programmes, and toolbox talks where required
- Monitor Waste Management;
- Monitor Water Management;
- Monitor Energy Management;
- Ensure that environmental signage and barriers are correctly placed;
- Taking required corrective action within specified time frame and close out of non-conformances; and
- Maintain site documentation related to environmental management on site.

5.7.4 The Contractor's EO will be expected to submit reports to the Transnet PER on a daily/weekly basis.



5.8 The Contractor

- 5.8.1 The Contractor shall comply with the requirements of this SOP and abide by the Transnet PM's instructions regarding the implementation of this SOP.
- 5.8.2 The Contractor must confirm that he will conform to the requirements of this SOP and any other documents provided to him by Transnet during tender.
- 5.8.3 The Contractor must recommend a suitably qualified, competent person to fulfill the role of the Contractor's EO at tender and if accepted by Transnet this person must be appointed when the Contract is awarded for the duration of construction. Should this person be replaced for whatever reason, the Contractor shall ensure that a person of similar qualification and competency is appointed in his/her place before the previous incumbent vacates his/her position.
- 5.8.4 The Contractor must obtain any relevant environmental approvals required by his activities that have not been obtained by Transnet e.g. permits for the destruction of protected plant species; grave relocation permits etc.
- 5.8.5 The Contractor shall have overall accountability for environmental compliance on site and will be held liable for any non-compliance with environmental statutes or non-conformances with this SOP due to his negligence.

5.9 Reporting Lines

- 5.9.1 The organisational structure identifies and defines the responsibilities and authority of the various entities involved in the project. All instructions and official communications regarding environmental matters will follow the organisational structure shown in Figure 1.
- 5.9.2 All instructions that relate to the SOP will still be given to the Contractor via the Transnet PM. In an emergency situation, however, the Transnet PER may give an instruction directly to the Contractor. Environmental Management of the site will be an item on the agenda of the monthly site meetings, and the Transnet PER will attend these meetings on request by the contractor. If at any time the Transnet

PM is uncertain in any way with respect to an environmentally related issue or specification in the SOP, he will consult with the Transnet PER .

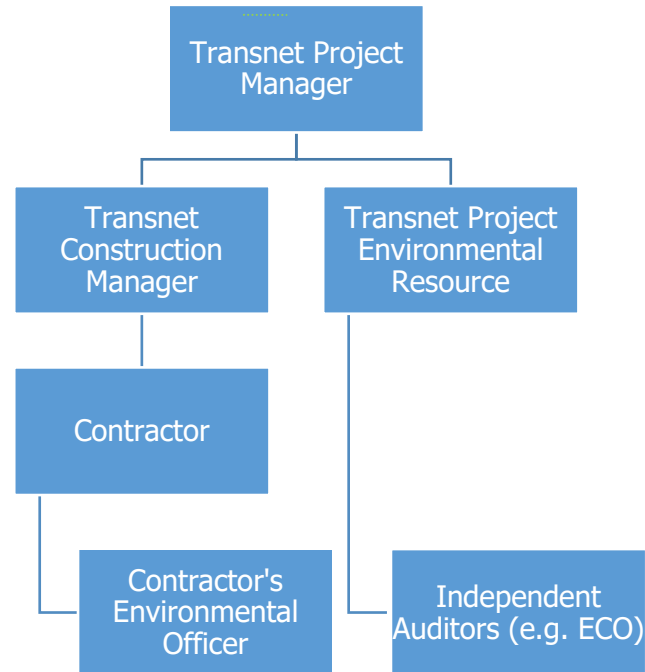


Figure 1: Typical Transnet Organogram for Construction Environmental Management²

6. STANDARD OPERATING PROCEDURE

6.1 Tender Stage (prior to Contract Award)

- The Transnet PM appoints or assign a Project Environmental Resource/s³.
- The Transnet PER requests the draft tender from the Transnet Procurement Department
- Transnet Procurement routes the draft tender to the Transnet PER

² Structure dependent on OD own structure and organizational operating model

³ Project complexity will determine the final environmental management structure on the project.

- The Transnet PER ensures the tender includes all relevant environmental documents and signs the routing slip.
- The Transnet Procurement Department issues the tender to prospective Contractor(s).
- The Contractor submits his bid which MUST include: a commitment to conform to this SOP signed by the duly delegated person; recommendation of a suitably qualified, competent person to fulfill the role of the Contractor's EO; Environmental Policy; and EMP
- After submission the Transnet Procurement Department will invite the Transnet PER to evaluate tender submissions (environmental section);
- The Transnet PER evaluates the prospective Contractor's environmental submission.
- The Contract is awarded to the successful bidder.

6.2 Construction Stage (prior to Site Access)

- The Contractor appoints the Contractor's Environmental Officer (EO) accepted by Transnet SOC Ltd.
- The Contractor provides his EO with all documents submitted during tender, including but not necessarily limited to:
 - All environmental documents provided by Transnet in the tender e.g. policies, SOPs, standards, environmental approvals etc;
 - commitment to conform to this SOP; and
 - The EMP.
- The Contractor's EO conducts an activity-based environmental risk assessment;
- The Contractor's EO develops an appropriate environmental file for approval by the Transnet PER, including but not necessarily limited to all the documents specified in Section 5.7 above (the environmental file must always be available and up to date on the construction site);
- The Contractor's EO submits the environmental file for acceptance to the Transnet PER;



- Once accepted, the Transnet PER recommends that site access be granted to the Transnet PM; and
- The Transnet PM issues the Contractor with a Site Access Certificate

6.3 Construction Stage (post Site Access)

- The Transnet PER inducts all Contractor's staff on the environmental requirements of the site;
- The Transnet PER has an inception meeting with the Contractor's EO on site where the following is agreed:
 - The contents of the contractor's environmental file (in addition to what was approved prior to granting site access). This will include but not necessarily be limited to: a list of interested and affected parties that may be impacted by construction e.g. surrounding landowners, nearby communities etc.; energy consumption information; water use information; environmental induction and awareness information; activity-based environmental method statements; complaints records; record of external communications; environmental incident reports; minutes of contractors environmental meetings.
 - The composition of the Project Environmental Specification (PES) and how it will be implemented. This will include but may not necessarily be limited to: Environmental Approvals (e.g. Environmental Authorisations, Water Use Licenses, Waste Management Licences, Atmospheric Emissions Licences etc.); Environmental Management Programmes/Plans approved by external parties/authorities; and any third party auditors/monitoring specialists (e.g. Environmental Control Officers; Independent Auditors; Transnet Environmental Assurance Specialists; Water Quality Monitoring experts etc.) that have a bearing on the contractor's scope of work.
 - The frequency of inspections to be conducted by the Contractor's EO (e.g. daily, weekly etc.)
 - The frequency of inspections to be conducted by the Transnet PER (e.g. daily, weekly and/or monthly). Notwithstanding that the frequency of

Transnet PER inspections will be agreed, the Contractor may never refuse the Transnet PER

- The format used and elements to be checked during Contractor's inspections
 - Reporting frequency and requirements
 - The process to be followed in handling Environmental Occurrences and – Non-conformances
- **Note:** All the aforementioned agreements will be formalized in the form of minutes which the Transnet - and Contractor's EO must sign and must subsequently be approved by the Transnet Project Environmental Resource.
 - The Transnet PER reviews the Contractor's activity-based environmental risk assessment and instructs the Contractor's EO to submit activity-based method statements for construction activities that may pose an environmental risk (for more details on what method statements should entail the Contractor must refer to the Minimum Environmental Requirements for Construction). Only once a method statement has been approved by the Transnet PER and Transnet CM and ECO (where relevant) may the Contractor execute the relevant activity.
 - The Contractor's EO submits the method statements to the Transnet PER for approval (these must also be approved by the Transnet CM);
 - The Transnet PER compiles a site audit checklist (covering all environmental compliance and conformance requirements) for approval by the Transnet Project Environmental Manager
 - Whilst the Contractor executes the work in terms of the requirements of the Contract, the Contractor's EO and Transnet PER execute their monitoring functions as per this SOP and other monitoring stakeholders/auditors as per the PES.
 - The Transnet PER shall submit monthly reports to the Transnet CM and PM indicating the following:
 - Date of the inspection(s);
 - Details and expertise of the Transnet PER;



- Scope and purpose for which the report was prepared;
- Description of the methodology used during the inspection and report compilation;
- Compliance and/or conformance status of all relevant/individual elements as per the inspection checklist culminating in an overall compliance/conformance percentage for the project;
- Assumptions;
- Description of consultation processes undertaken during the inspection(s) with a summary and associated records of such consultations;
- Environmental incidents and non-conformances;
- Photos of pertinent construction and environmental matters that occurred on site;
- Water abstracted/withdrawn during the month (in kiloliters) as well as an indication of the source;
- Water recycled and/or reused during the month (in kiloliters);
- Waste water discharged (in kiloliters);
- Waste (both general and hazardous) disposed (in tonnages) with an indication of waste type;
- Waste recycled (in tonnages);
- Alien invasive species eradicated (in hectares);
- Number of listed species safely relocated;
- Environmental Fines, Non-Compliances or Directives issues by authorities;
- Any NEMA Section 30 or NWA Section 19 incidents;
- Environmental Grievances;
- Rehabilitated Land (in hectares);
- Number of graves and/or heritage artifacts moved;
- Energy consumption for the project [Electricity(kWh); Gas (GJ); Oil(l); Diesel(l); Petrol(l); LPG(GJ)];
- Status of previous findings and/or observations; and
- Recommendations for improvement.

6.4 Post Construction

- The Contractor’s EO submits a rehabilitation and site closure method statement for approval by the Transnet PER and Transnet CM.
- Once approved, the Contractor implements the rehabilitation method statement accordingly.
- The Contractor’s EO submits a site close-out report for acceptance by the Transnet PER and CM.
- Post rehabilitation, the Transnet PER conducts a site closure inspection to ensure all requirements of the rehabilitation method statement have been met.
- Once rehabilitation has been accepted by the Transnet PER, the Contractor’s EO sends the Transnet PER a copy of the entire environmental file (original to be handed over to Transnet as per document handover requirements of the Contract).
- On receipt of the environmental file, the Transnet PER recommends that a site closure certificate can be issued to the Transnet PM.
- The Transnet PM issues the Contractor with a Site Closure Certificate.

7. RECORDS

7.1 The responsibility for maintaining all records required by this SOP shall rest with the Contractor’s EO; Transnet PER as specified below:

Record	Maintained By
1. Transnet PER Appointment Letter	Transnet PER
2. Signed Tender Routing Slip	Transnet PER
3. Contractor’s Confirmation to conform to this CEM SOP	Transnet PER; Contractor’s EO
4. Recommendation of Contractor’s EO	Transnet PER



Record	Maintained By
5. Contractor's Environmental Policy	Transnet PER; Contractor's EO
6. Contractor's Environmental Management Plan	Transnet PER; Contractor's EO
7. Tender Evaluation Records from Transnet PER	Transnet PER
8. Contract	Transnet PER
9. Contractor EO's Appointment Letter and CV	Transnet PER
10. Activity-Based Environmental Risk Assessment	Transnet PER; Contractor's EO
11. Contractor's Organogram	Transnet PER; Contractor's EO
12. Contractor's Contact Information	Transnet PER; Contractor's EO
13. List of Contractor's Plant and Equipment	Contractor's EO
14. List of Hazardous Substances used by Contractor	Contractor's EO
15. Material Safety Data Sheets	Contractor's EO
16. Site Layout Plan	Transnet PER; Contractor's EO
17. Site Establishment Method Statement	Transnet PER; Contractor's EO
18. Minutes of Transnet PER – Contractor's EO Inception Meeting	Transnet PER; Contractor's EO
19. Environmental Induction Attendance Register (including material used during induction)	Transnet PER; Contractor's EO
20. Activity-based Method Statements	Transnet PER; Contractor's EO



Record	Maintained By
21. Contractor's Inspection Reports	Transnet PER; Contractor's EO
22. Transnet PER Inspection Reports	Transnet PER
23. List of Local, Provincial and National Environmental legislation applicable to the site	Contractor's EO
24. Environmental Awareness Attendance Registers (including material used)	Contractor's EO
25. Environmental Incident Reports	Transnet PER; Contractor's EO
26. Minutes of SHE Meetings	Transnet PER; Contractor's EO
27. Waste Records	Transnet PER; Contractor's EO
28. Water Records	Transnet PER; Contractor's EO
29. Energy Records	Transnet PER; Contractor's EO
30. Non-Conformance Records	Transnet PER; Contractor's EO
31. Approval of Contractor's Environmental File	Transnet PER
32. Site Access Certificate	Transnet PER
33. Approved Transnet PER Checklist	Transnet PER
34. Transnet Monthly PER Reports	Transnet PER
35. Rehabilitation Method Statement	Transnet PER; Contractor's EO
36. Contractor's Site Close-Out Report	Transnet PER; Contractor's EO
37. Transnet PER Site Closure Report	Transnet PER
38. Contractor's Environmental File Handover Transmittal	Transnet PER; Contractor's EO
39. Site Closure Certificate	Transnet PER

8. ANNEXURES

8.1 List of Construction Environmental Management Templates, Forms and Guidelines

8.2 009-TCC-CLO-SUS-TMP-11386.22 - Construction Environmental Management File Index

8.3 009-TCC-CLO-SUS-TMP-11386.23 - *Construction Environmental Management Process Flow*

Annexure 8.1 List of Construction Environmental Management Templates, Forms and Guidelines

No	Item Description	Document No
1.	Construction Environmental Management File Index	009-TCC-CLO-SUS-TMP-11386.1
2.	Project Environmental Specification (PES)	009-TCC-CLO-SUS-TMP-11386.2
3.	Declaration of Understanding (Signed)	009-TCC-CLO-SUS-TMP-11386.3
4.	Contractor's Information	009-TCC-CLO-SUS-TMP-11386.4
5.	Appointment of Contractors EO and Declaration of Understanding (Including CV and Job Profile)	009-TCC-CLO-SUS-TMP-11386.5
6.	Schedule of Contractor's Construction Plant and Equipment	009-TCC-CLO-SUS-TMP-11386.6
7.	Hazardous Substances Register	009-TCC-CLO-SUS-TMP-11386.7
8.	Emergency Contacts Register	009-TCC-CLO-SUS-TMP-11386.8
9.	Energy Consumption Register	009-TCC-CLO-SUS-TMP-11386.9
10.	Water Usage Register	009-TCC-CLO-SUS-TMP-11386.10
11.	Project Start-Up Checklist	009-TCC-CLO-SUS-TMP-11386.11
12.	Site Access Certificate	009-TCC-CLO-SUS-TMP-11386.12
13.	Method Statement Register	009-TCC-CLO-SUS-TMP-11386.13
14.	Method Statements	009-TCC-CLO-SUS-TMP-11386.14
15.	Waste Disposal Register	009-TCC-CLO-SUS-TMP-11386.15
16.	Daily Inspection Checklist	009-TCC-CLO-SUS-TMP-11386.16
17.	Weekly Inspection Checklist	009-TCC-CLO-SUS-TMP-11386.17
18.	Monthly Inspection Checklist	009-TCC-CLO-SUS-TMP-11386.18



No	Item Description	Document No
19.	Public Complaints Register	009-TCC-CLO-SUS-TMP-11386.19
20.	Application for Exemption	009-TCC-CLO-SUS-TMP-11386.20
21.	Site Closure Certificate	009-TCC-CLO-SUS-TMP-11386.21
22.	Contractor's Environmental Management File Handover	009-TCC-CLO-SUS-TMP-11386.22
23.	Basic Environmental Rules for Visitors	009-TCC-CLO-SUS-GDL-11386.23
24.	Basic Environmental Rules for Contractors	009-TCC-CLO-SUS-GDL-11386.24
25.	Basic Site Procedure	009-TCC-CLO-SUS-GDL-11386.25
26.	Contractor Environmental and Sustainability Specification Guidelines (CESSG)	TRN-IMS-GRP-GDL-014.04

Annexure 8.2 Construction Environmental Management File Index

No	Item Description	Document No
1	Transnet Integrated management System (TIMS) Policy Statement	-
2.1	Standard Operating Procedure (SOP) - Construction Environmental Management (CEM)	009-TCC-CLO-SUS-11386
2.2	Environmental and Sustainability Specification Guidelines	TRN-IMS-GRP-GDL-014.04
3	Project Environmental Specification (PES)	009-TCC-CLO-SUS-TMP-11386.2
4	Declaration of Understanding (Signed)	009-TCC-CLO-SUS-TMP-11386.3
5.1	Contractor's Information	009-TCC-CLO-SUS-TMP-11386.4
5.2	Contractor's Environmental Policy	-
5.3	Contractor's Organogram	-
5.4	Contractor's Environmental Management Plan	-
5.5	Appointment of Contractors EO and Declaration of Understanding (Including CV and Job Profile)	009-TCC-CLO-SUS-TMP-11386.5
6	Schedule of Contractor's Construction Plant and Equipment	009-TCC-CLO-SUS-TMP-11386.6
7	Hazardous Substances Register	009-TCC-CLO-SUS-TMP-11386.7
8	Emergency Contacts Register	009-TCC-CLO-SUS-TMP-11386.8
9	Energy Consumption Register	009-TCC-CLO-SUS-TMP-11386.9
10	Water Usage Register	009-TCC-CLO-SUS-TMP-11386.10
11	Training Attendance Register	TIMS Procedure
12	Project Start-Up Checklist	009-TCC-CLO-SUS-TMP-11386.11
13	Site Access Certificate	009-TCC-CLO-SUS-TMP-11386.12
14	Method Statement Register	009-TCC-CLO-SUS-TMP-11386.13



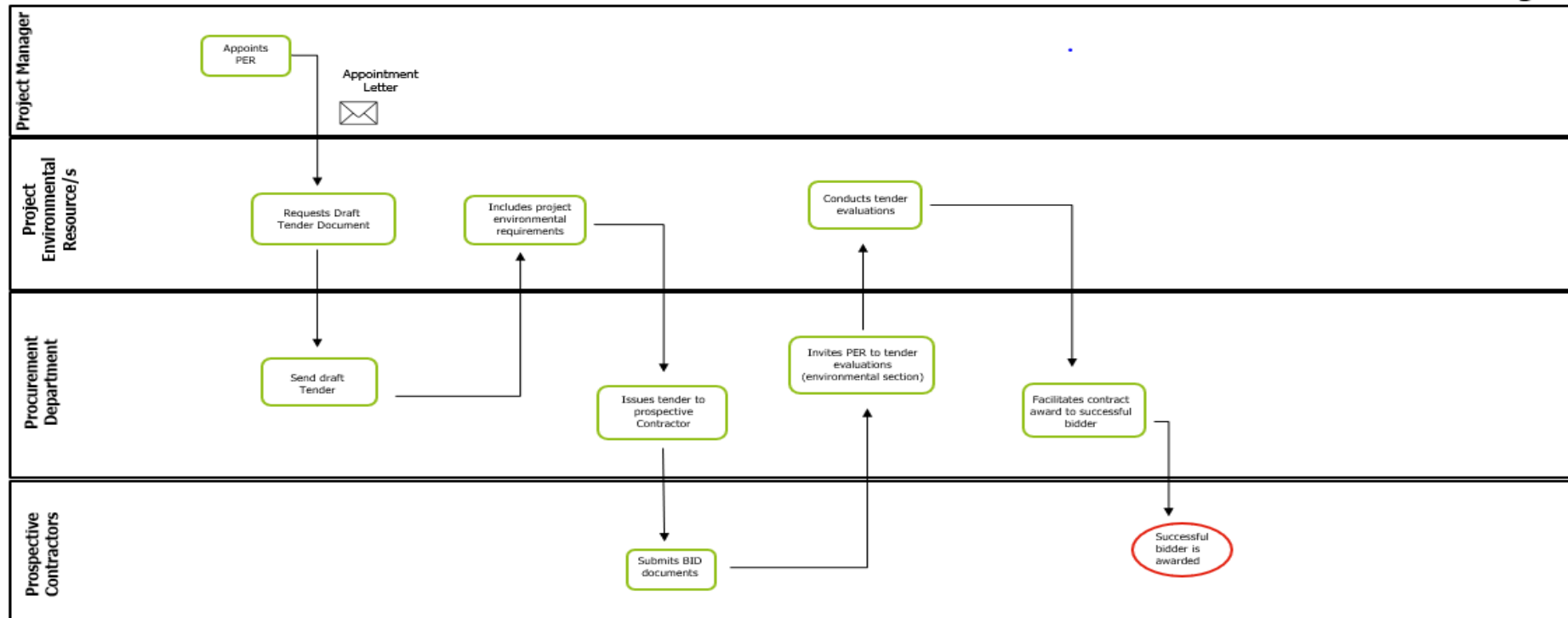
No	Item Description	Document No
15	Method Statements	009-TCC-CLO-SUS-TMP-11386.14
16	Waste Disposal Register	009-TCC-CLO-SUS-TMP-11386.15
17.1	Daily Inspection Checklist	009-TCC-CLO-SUS-TMP-11386.16
17.2	Weekly Inspection Checklist	009-TCC-CLO-SUS-TMP-11386.17
17.3	Monthly Inspection Checklist	009-TCC-CLO-SUS-TMP-11386.18
17.4	Environmental Inspection Findings Close-out Register	TIMS Procedure
18	Public Complaints Register	009-TCC-CLO-SUS-TMP-11386.19
19	Occurrence Register	TIMS Procedure
20	Transnet Occurrence Notification Report	TIMS Procedure
21.1	Environmental Occurrence Technical Form	TIMS Procedure
21.2	On-site Investigation Form – Incident Commander Report	TIMS Procedure
21.3	Investigation Form Report for Level 3 & 4 Occurrences	TIMS Procedure
21.4	Incident Commander Appointment Letter	TIMS Procedure
22	Non-Conformance Register	TIMS Procedure
23	Non-Conformance Report Form	TIMS Procedure
24	Non-Compliance Stop Certificate	TIMS Procedure
25	Application for Exemption	009-TCC-CLO-SUS-TMP-11386.20
26.1	Site Closure Inspection Form	TIMS Procedure
26.2	Site Closure Certificate	009-TCC-CLO-SUS-TMP-11386.21
26	Contractor's Environmental Management File Handover	009-TCC-CLO-SUS-TMP-11386.22



No	Item Description	Document No
27.1	Basic Environmental Rules for Visitors	009-TCC-CLO-SUS-GDL-11386.23
27.2	Basic Environmental Rules for Contractors	009-TCC-CLO-SUS-GDL-11386.24
27.3	Basic Site Procedure	009-TCC-CLO-SUS-GDL-11386.25

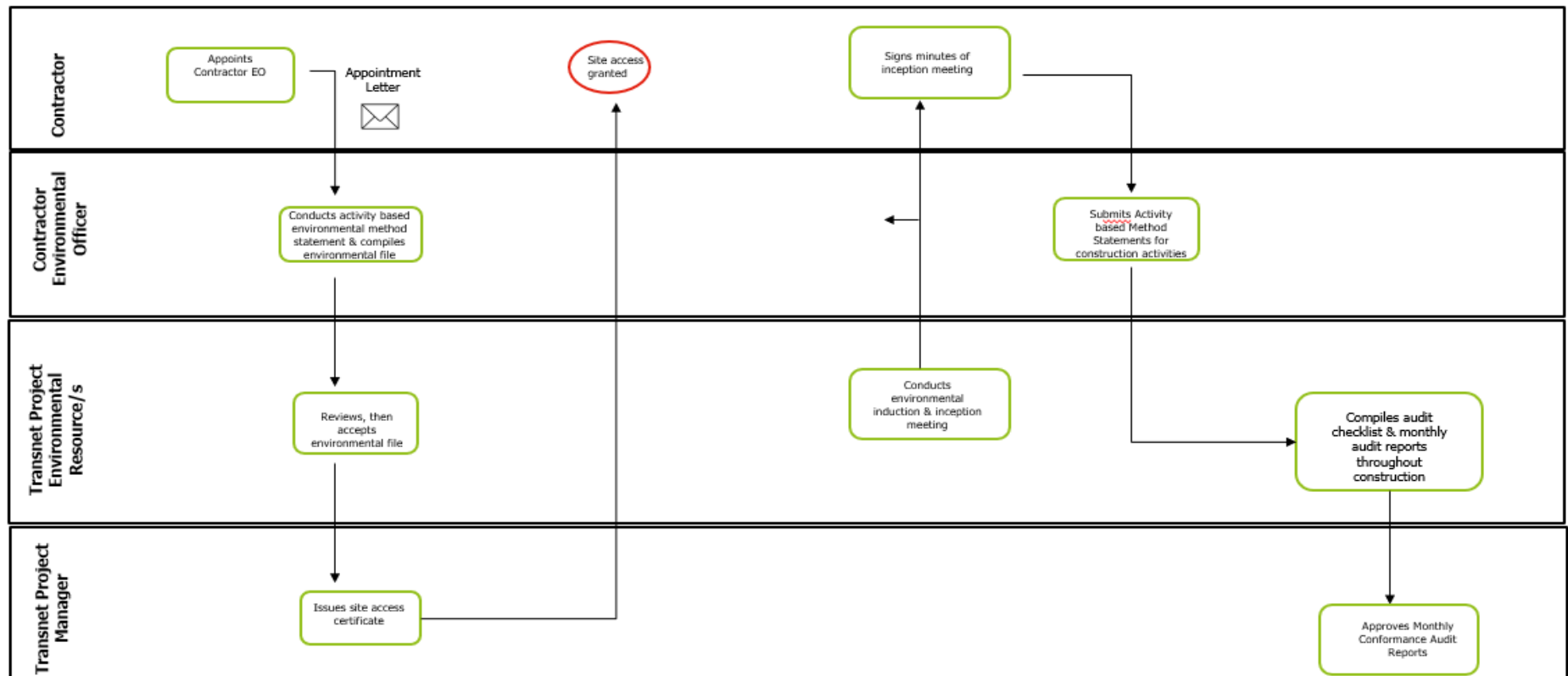
Annexure 8.3 Construction Environmental Management Process Flow

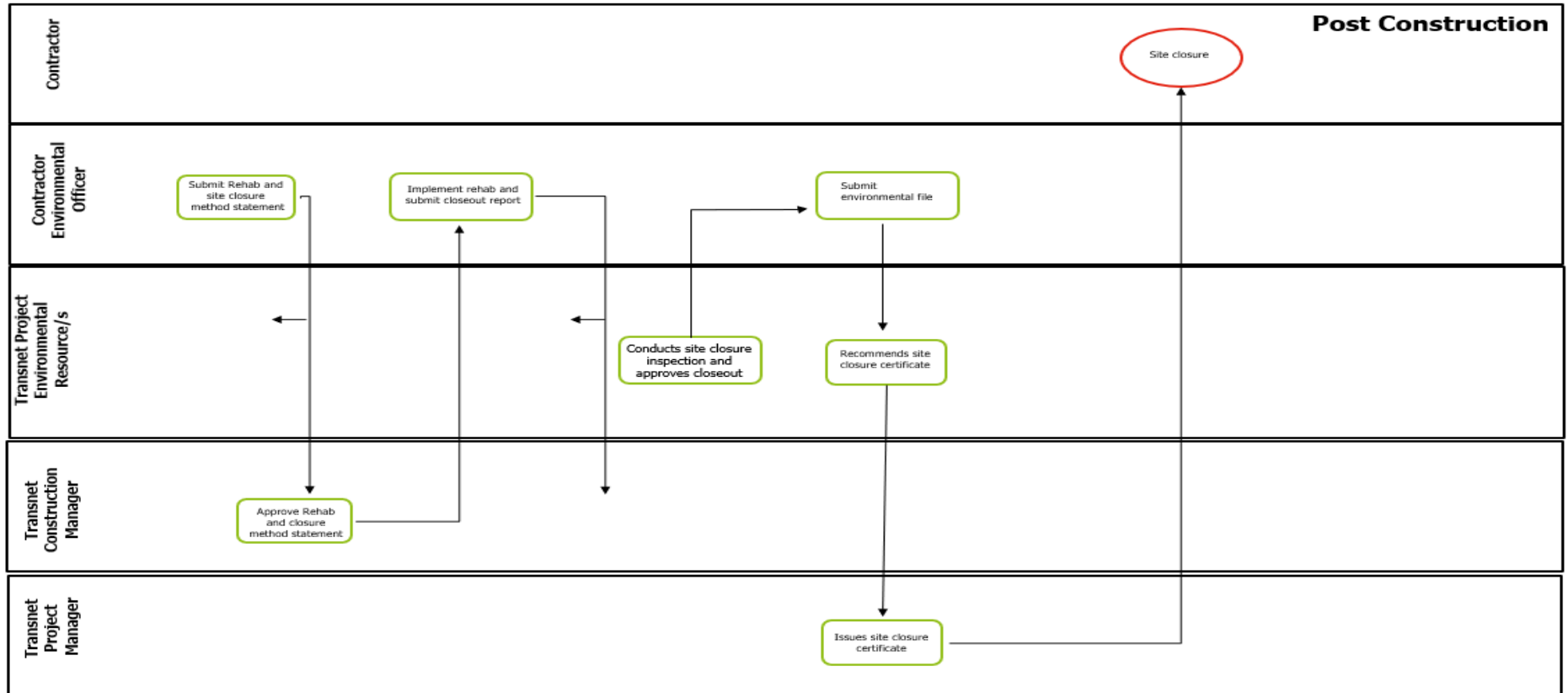
Tender Stage



Prior to Site Access

Post Site Access







CONTRACTOR ENVIRONMENTAL AND SUSTAINABILITY SPECIFICATION GUIDELINES

Document number	TRN-IMS-GRP-GDL-014.4
Version number	3.0
Classification	Unclassified
Effective date	01 October 2023
Review date	30 September 2028



SUMMARY VERSION CONTROL

VERSION NO.	NATURE OF AMENDMENT	PAGE NO.	DATE REVISED
3.0	<ul style="list-style-type: none"> • Addition of reference documents (section 3) • Inclusion of additional definitions • Removal of DEA and replacing it with DFFE • Removal of Transnet EO and replacing with Transnet Environmental Resource (PER) • Inclusion of additional abbreviations • Inclusion of minimum environmental requirements for construction (section 5) • Inclusion of details of site inspections/audits (table 1) • Inclusion of Records Management 	6-7 7-10 11 12 12-23 23 45	June 2023

Note: Only latest amendments and/or additions are reflected in italics in the body of the document.

DOCUMENTATION SIGN-OFF SHEET

I, the undersigned hereby approve this procedure.

ROLE	CAPACITY/ FUNCTION	SIGNATURE	DATE
Process Owner:	Senior Specialist: Environmental Risk and Compliance		01/10/2023
Accepts document for adequacy and practicability. Comments:			
Approval Committee:	GM: Corporate Sustainability		01/10/2023
Approves document for use. Comments:			

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1. PURPOSE

This document describes the minimum requirements for environmental management to which Contractors must comply. This document must be read in conjunction with the Transnet Construction Environmental Management Standard Operating Procedure (CEM SOP).

In this document, unless the context clearly indicates otherwise:

- Words importing any one gender shall include the other gender;
- The singular shall include the plural and vice versa; and
- Any reference in this document to legislation or subordinate legislation is to such legislation or subordinate legislation at the date of promulgation thereof and as amended and/or re-enacted from time to time.

2. APPLICABILITY

This standard applies to Contractors that work on site under the authority of Transnet SOC Ltd.

3. REFERENCE DOCUMENTS

Name	Applicable Section
Constitution of South Africa, Act 108 of 1996	Section 24
National Environmental Management Act, 107 of 1998	Section 2 National Environmental Management Principles
National Water Act, 36 of 1998	Section 164, Permissible Water Use
National Environmental Management: Waste Act, 58 of 2008	Part 1 15 (1) (i) and (2) Part 6 26 (10) (a) and (b) Schedule 3, Defined Wastes Category A: Hazardous Wastes Part 8: Contaminated Land
Environment Conservation Act, 73 of 1989	Section 20
Occupational Health and Safety Act, 85 of 1993	Asbestos Regulations, 2001

Name	Applicable Section
	Government Notice R155 in Government Gazette 23108 of February 2002 General Safety Regulations-Reg. 2 (2) PPE
GNR 326, 7 April 2017 as amended, EIA Regulations	Chapter 15, Appendix 4
Transnet Environmental Risk Management strategy and Framework	2015:42
Environmental Management Systems ISO 14001: 2015	Clause 5, 6, 7, 8, 9 and 10

4. DEFINITIONS AND ABBREVIATIONS

4.1 Definitions

Compliance	Meeting of all the organization’s regulatory requirements
Conformance	The action or fact of conforming to this standard and other internal Transnet policies, procedures, guidelines and best practice.
Construction Environmental Management Standard Operating Procedure	Is a document which is used to define how environmental management will be practiced on any construction site under the management of Transnet to ensure that the environment is considered, negative impacts avoided or minimized, and positive impacts are enhanced.
Contractor	The Principal Contractor as engaged by Transnet for infrastructure construction operations, including all sub-contractors appointed by the main contractor of his own volition for the execution of parts of the construction operations; and any other contractor from time to time engaged by Transnet directly in connection with any part of the construction operations which is not a nominated sub-contractor to the Principal Contractor.

Contractor Environmental and Sustainability Specification Guidelines	A set of minimum environmental standards for all Transnet SOC Ltd-managed construction sites.
Environmental Aspect	Element of an organization’s activities or products or services that interacts or can interact with the environment.
Environmental Impact	Change to the environment whether adverse or beneficial, wholly or partially resulting from an organization’s environmental aspects.
Environmental Risk	The product of the likelihood and severity of an unforeseen occurrence/incident/aspect and the impact it would have, if realised, on the environment.
Fauna	A group of animals specific to a certain region or time period.
Flora	A group of plants specific to a certain region or time period.
General waste	Waste that does not pose an immediate hazard or threat to health or to the environment; and includes:- <ul style="list-style-type: none"> (a) domestic waste; (b) building and demolition waste; (c) business waste; (d) inert waste;
Indigenous vegetation	Plants that naturally occur in an area.
Liquid waste	Waste that appear in liquid form such as used oil, grease and/or contaminated water or waste water.

Method statement	A document that describes how the Contractor will apply environmental management measures associated with a particular activity during construction.
Monitoring	Determining the status of a system, a process or an activity
Natural Vegetation	All existing species, indigenous or otherwise, of trees, shrubs, groundcover, grasses and all other plants found growing on the site.
Responsible Authority	A Responsible Authority, according to the National Water Act 36 of 1998, relates to specific power or authority in respect of water uses that is assigned by the Minister to a Catchment Management Agency or to a Regional Office.
Rehabilitation	Refers to measures that must be put in place to restore the site to its pre-construction or enhanced state, subsequent to construction taking place.
Scope of Work	The construction work for which the Contractor has been appointed in terms of the Contract with Transnet.
Sensitive area	Any area that is denoted as sensitive by this Specification due to its particular attributes, which could include the presence of rare or endangered vegetation, the presence of heritage resources (e.g. archaeological artefact or graves), the presence of a unique natural feature, the presence of a watercourse or water body, the presence of sensitive social receptors etc. As a minimum, habitats that fall under this definition include: mountain catchments, Ramsar wetland sites, coastal shores, estuaries and endangered ecosystems.
Solid waste	All solid waste, including construction debris, chemical waste, excess cement/ concrete, wrapping materials, timber, tins and cans, drums, wire, nails, food and domestic waste (e.g. plastic packets and wrappers).

Spoil	Excavated material which is unsuitable for re-use as material in the Works or any other use; or is material which is surplus to the requirements of the Works.
Sub -Contractor	is a person or organisation who has a contract with the contractor to: Construct or install part of the contractor's work. Provide a service necessary to provide the works; or Supply plant and materials which the person or organisation has wholly or partly designed specifically for the works.
Temporary Storage	A once-off storage of waste for a period not exceeding 90 days.
Topsoil	Means a varying depth (up to 300 mm) of the soil profile irrespective of the fertility appearance, structure, agricultural potential, fertility and composition of the soil.
Waste	Any substance, material or object, that is unwanted, rejected, abandoned, discarded or disposed of, or that is intended or required to be discarded or disposed of, by the holder of that substance, material or object, whether or not such substance, material or object can be re-used, recycled or recovered and includes all wastes. Waste or a portion of waste ceases to be a waste only once the waste is, or has been re-used, recycled or recovered.
Wastewater	means water containing waste, or water that has been in contact with waste material
Watercourse	Refers to - a river or spring; a natural channel in which water flows regularly or intermittently;

a wetland, lake or dam into which, or from which, water flows;
and

any collection of water gazetted by the National Water Act, 36 of 1998 as a watercourse, and a reference to a watercourse includes, where relevant, its bed and banks.

Wetland

Land which is transitional between terrestrial and aquatic systems where the water table is usually at or near the surface, or the land is periodically covered with shallow water, and which land in normal circumstances supports or would support vegetation typically adapted to life in saturated soil.

4.2 Abbreviations

Acronym	Meaning In Full
CEM SOP	Construction Environmental Management Standard Operating Procedure
CM	Construction Manager
CV	Curriculum Vitae
DEFF	Department of Environment, Forestry and Fisheries
EA	Environmental Authorisation
ECO	Environmental Control Officer
EIA	Environmental Impact Assessment
CESSG	Contractor Environmental and Sustainability Specification Guidelines
EO	Environmental Officer

Acronym	Meaning In Full
EMP	Environmental Management Plan
EMPr	Environmental Management Programme
EGF	Environmental Governance Framework
NEMA	National Environmental Management Act 107 of 1998
NEM:BA	National Environmental Management: Biodiversity Act 10 of 2004
NWA	National Water Act 36 of 1998
PER	Project Environmental Resource
PES	Project Environmental Specification
PM	Project Manager
SAHRA	South African Heritage Resource Agency
SDS	Safety Data Sheet
SHEQ	Safety, Health, Environment and Quality
TRANSNET	Transnet SOC Ltd

5. MINIMUM ENVIRONMENTAL REQUIREMENTS FOR CONSTRUCTION

5.1 Tender Documents

Any construction-related tender issued to the market must include:

- Transnet Integrated Management System Policy Statement;
- The Transnet Construction Environmental Management Standard Operating Procedure (CEM SOP);
- The Contractor Environmental & Sustainability Specification Guideline; and
- The Project Environmental Specification (PES).

Any construction-related tender must be recommended for issue by the Transnet Project Environmental Resource/s before it is released to the market.

5.2 Project Environmental Specification (PES)

Must incorporate all relevant recommendations of the Environmental Impact Assessment (EIA) and other environmental studies for the project and the relevant conditions of the EA and/or other applicable environmental permit(s) and licence(s), and the Transnet Operating Division's Environmental Management requirements (where applicable) into an environmental performance specification for implementation during the construction phase of the project.

The PES need not be a separate document; however it can be in a format of an appendix/addendum making reference to environmental authorisation(s), permit(s) or licence(s) applicable to the project. In cases where the project does not trigger any of the NEMA listed activities or any permit(s)/licence(s); the PES may be compiled to prescribe additional environmental management measures over and above the measures stipulated in the MERC.

5.3 Contractor's Environmental Policy

The Contractor's Environmental Policy must be signed and dated by Top Management.

The content of the Contractor's Environmental Policy must:

- be appropriate to the purpose and context of the Contractor's organization, including the nature, scale and environmental impacts of its activities, products and services;
- provide a framework for setting environmental objectives;
- include a commitment to the protection of the environment, including prevention of pollution and other specific commitment(s) relevant to the context of the Contractor's organization;
- include a commitment to fulfil compliance obligations; and
- include a commitment to continual improvement of the Contractor's environmental management system to enhance environmental performance

5.4 Contractor's Environmental Management Plan (EMP)

The Contractor's EMP must include:

- the name of the person who compiled the EMP;
- the expertise of the person who compiled the EMP, including a CV;
- a description of the Contractor's scope of work;
- a detailed description of the environmental aspects related to the Contractor's scope of work;
- a map at an appropriate scale which depicts all construction activities including associated structures, and infrastructure and environmental sensitivities affected by the construction footprint , as well as no go-areas and associated buffers;
 - The map must include the following:
 - an accurate indication of the project site position as well as the positions of the alternative sites, if any;
 - road names or numbers of all the major roads as well as the roads that provide access to the site(s)
 - a north arrow;
 - a legend;
 - the prevailing wind direction;
 - site sensitivities, including but not limited to vegetation, wetlands, watercourses, heritage sites, critical biodiversity area/s, World Heritage Site, etc. and it must be overlaid by the study area; and

- GPS co-ordinates (Indicate the position of the proposed activity with the latitude and longitude at the centre point for each alternative site. The co-ordinates should be in degrees and decimal minutes. The minutes should be to at least three decimal places. The projection that must be used in all cases is the WGS-84 spheroid in a national or local projection).
- a description of the impacts and risks that need to be avoided, managed and mitigated during the execution of the Contractor's scope of work including (as relevant);
 - planning and design;
 - pre-construction activities;
 - construction activities;
 - rehabilitation; and
 - operation of Transnet assets.
- a description and identification of impact management outcomes required for the identified aspects;
- a description of proposed impact management actions, identifying the manner in which the impact management objectives and outcomes contemplated above will be achieved, and must, where applicable, include actions to:
 - avoid, modify, remedy, control or stop any action, activity or process which causes pollution or environmental degradation;
 - comply with any prescribed environmental management standards or practices; and
 - comply with any applicable local, provincial and national legislation.
- the method of monitoring the implementation of the impact management actions contemplated above;
- the frequency of monitoring the implementation of the impact management actions contemplated above;
- an indication of the persons who will be responsible for the implementation of the impact management actions;
- the timeframe within which the impact management actions contemplated above must be implemented;
- the mechanism for monitoring compliance with the impact management actions contemplated above;

- a program for reporting on compliance, taking into account the requirements of this document;
- an environmental awareness plan describing the manner in which:
 - the Contractor intends to inform his employees of any environmental risk which may result from his scope of work; and
 - risks must be dealt with in order to avoid pollution or the degradation of the environment.
- any specific information that may be required by Transnet.

5.5 Contractor's Environmental Officer (EO)

The Contractor's EO should have relevant environmental qualifications and experience required for the project. The level of qualifications and experience must be in line with the complexity of the Contractor's scope of work coupled with the sensitivity of the site. The level of competency will be determined by Transnet during tender.

5.6 Management of Sub-Contractors

The Contractor must ensure that all his sub-contractors comply with this document in so far as it relates to their specific scope of work or services.

5.7 Pre-Site Access Environmental Governance

The Contractor must appoint the EO recommended in his tender proposal. Should the EO no longer be available, the Contractor must submit a CV of an alternative EO with similar or better qualifications and experience for approval by the Transnet PM and PER. The same principle will apply if the Contractor's EO is replaced for whatever reason at any stage. No construction may take place without a duly appointed Contractor's EO.

The Contractor must provide his EO with all environmental documents provided by Transnet during tender and submitted as a part of the Contractor's proposal.

The Contractor must obtain the contact details of the responsible Transnet PER and Transnet PER and provide these details to his EO.

The Contractor's EO must develop an appropriate environmental file for approval by the Transnet PER, including but not necessarily limited to (the environmental file must always be available and up to date on the construction site):

- Documents from the tender as described above.
- His CV.
- An organogram indicating reporting lines of all Contractor's staff (with names included).
- Contact Information for: the overall responsible person acting on behalf of the Contractor to execute the construction works; Contractor's Construction Manager (CM); Contractor's EO; and all relevant emergency personnel.
- A list of the Contractor's plant and equipment indicating a description of the plant/equipment, its fuel capacity, any hazardous components (oils, greases etc.), individual service/maintenance cycles and noise levels.
- A list of hazardous substances to be used during construction indicating: official substance name from Material Safety Data Sheets (MSDS)/ Safety Data Sheet (SDS); quantity on site; storage method; transport method to site; and period to be used on site. All substances listed must have MSDS/ SDS on site in the environmental file.

The MSDS/ SDS should contain the following minimum requirements:

- Section 1: Product and company name
- Section 2: Hazard identification
- Section 3: Composition/information on ingredients
- Section 4: First aid measures
- Section 5: Fire fighting measures
- Section 6: Accidental release measure
- Section 7: Handling storage
- Section 8: Exposure controls/personal protection
- Section 9: Physical and chemical properties
- Section 10: Stability and reactivity
- Section 11: Toxicological Information
- Section 12: Ecological Information
- Section 13: Disposal Consideration

- Section 14: Transportation
 - Section 15: Regulatory Information
 - Section 16: Other Information
- Photographic pre-construction report that details the site before any activities commence.
 - Site Layout Plan indicating but not necessarily limited to,: access roads, site offices, material laydown areas, stockpile areas and parking areas, waste and effluent storage and handling facilities, entire construction footprint, no-go-areas, sewage and sanitary facilities. The plan must be appropriately drawn on a computer and must be clearly visible and properly scaled.
 - A site establishment method statement (minimum requirements for method statements are described below in this document).
 - Environmental Induction Material to be used to educate site staff and visitors (minimum requirements for environmental induction are described below in this document).
 - An activity-based environmental risk assessment.

The Contractor's EO must submit the environmental file for acceptance to the Transnet PER.

The Contractor must obtain a Site Access Certificate from the Transnet PM before accessing the site.

5.8 Safety Data Sheets

Each hazardous substance used on site must have a valid SDS. The SDS must comply with the requirements of the Occupational Health and Safety Act, 85 of 1993.

5.9 Environmental Induction

The Contractor will ensure that all management, foremen and the general workforce, as well as all sub-contractors, suppliers and visitors to site have attended the Transnet Environmental Induction Programme prior to commencing any work on site. Where new personnel commence work on site during the construction period, the Contractor will ensure that these personnel also undergo the Transnet Environmental Induction Programme and are made aware of the environmental specifications on site.

The Contractor must ensure that all of his personnel understand the requirements of the CEM SOP; MERC; EA, EMPr, relevant permits and licences and PES as relevant to their scope of work.

5.10 Environmental Method Statements

- Environmental Method Statements as identified by the Transnet PER based on the Contractor's activity-based environmental risk assessment will be written submissions by the Contractor to the Transnet CM and PER describing:
- The proposed activity, setting out the plant, equipment, materials, labour and method the Contractor proposes using to carry out an activity;
- The environmental management of site conditions – waste management, housekeeping, site establishment etc;
- Transportation of the equipment to and from site;
- How the equipment/ material will be moved while on site;
- How and where material will be stored;
- The containment (or action to be taken if containment is not possible) of leaks or spills of any liquid or material that may occur;
- Timing and location of activities;
- Description of potential positive and negative environmental impacts and how they will be managed;
- Conformance/ non-conformance with this document and any other statutory and best practice standards;
- Monitoring and reporting requirements;
- Records Management; and
- Any other information deemed necessary by the Transnet CM and Transnet PER as well as ECO where applicable.

The Environmental Method Statements will enable the potential positive and negative environmental impacts associated with the proposed construction activity to be identified and mitigation measures put in place. All method statements must be signed by the Contractor, Transnet CM and PER, with the addition of the ECO on authorized projects, thereby indicating that the works will be carried out according to the methodology described therein.

Activities may only commence once the Environmental Method Statements have been approved by the Transnet CM, Transnet PER and ECO (where relevant). In some instances, local authorities may also need to approve the method statements. This will be highlighted in the Project Environmental Specification, where applicable.

All changes to the original Environmental Method Statements must be approved by the Transnet PER and Transnet CM prior to implementation.

To enable timely approvals, the environmental method statements will be submitted to the Transnet CM and Transnet PER for review two (2) weeks prior to the intended date of commencement of the activity, or as directed by the Transnet Project Manager/CM.

Emergency construction activity Environmental Method Statements may also be required. The activities requiring Environmental Method Statements cannot commence if they have not been approved by the CM and PER or ECO.

NOTE: No advice, approval of method statements or any other form of communication from Transnet will be construed as an acceptance by Transnet of any obligation that indemnifies the Contractor from achieving any required level of performance. Further, there is no acceptance of liability by Transnet which may result from the Contractor failing to comply with the specifications, i.e. the Contractor remains responsible for achieving the required performance levels.

5.11 Environmental Occurrences (Incidents)

The Transnet PER shall provide the Contractor with the procedure to follow in managing environmental occurrences during pre-site access governance.

The Contractor shall follow the procedure provided to him by the Transnet PER and maintain required records thereof.

In the event of an environmental occurrence, the Contractor must, as soon as is reasonably practicable:

- classify an environmental occurrence in line with the Transnet Environmental Management Occurrence process flow;

- take all reasonable measures to contain and minimise the effects of the occurrence, including its effects on the environment and any risks posed by the occurrence to the health, safety and property of persons;
- undertake cleanup procedures;
- remedy the effects of the occurrence; and
- assess the immediate and long-term effects of the occurrence on the environment and public health

5.12 Environmental Non-Conformances (Defects)

Environmental Non-Conformances shall be handled as per the terms and conditions of the Contract.

The Transnet PER shall provide the Contractor with the procedure to follow in managing environmental non-conformances during pre-site access governance.

The Contractor shall follow the procedure provided to him by the Transnet PER and maintain required records thereof.

The Transnet Project Manager shall ensure that all Non-conformances are appropriately closed out within the timeframe specified in the Non-Conformance Report.

Any environmental non-conformance will be dealt with similarly to a Defect as defined in the Contract. A defect is due to non-compliance with the Works Information and it is the responsibility of the Contractor to correct the defect in order to ensure that the work takes place in accordance with the Works Information. Similarly, non-conformance/non-compliance with any other permit or licence will be regarded as a non-conformance with the Works Information. The Contractor is responsible for rectifying any defect (non-conformance) as defined above promptly.

The Contractor's EO shall be responsible to search for and identify non-conformances with the environmental specifications at inspection intervals agreed to with the Transnet PER. The Transnet PER shall also undertake such inspections on a monthly basis. If such monthly inspections indicate that any part of the Contractor's work is non-conformant with the environmental requirements, the Transnet PER shall advise the Transnet PM to issue a Defects Notification to the Contractor accordingly. The Contractor shall correct the non-

conformance (defect) within the timeframes specified in the report and notification and submit proof of such correction to the Transnet PER.

The Transnet PER shall not recommend that a Site Closure Certificate be issued to the Contractor if any non-conformances have not been properly closed out. In such an event, the Transnet Project Manager may also make use of any reasonable contractual means to rectify the non-conformance(s) as allowed by the Contract (retention moneys etc.).

5.13 Community Grievances (Public Complaints)

The Transnet PER shall provide the Contractor with the procedure to follow in managing community grievances during pre-site access governance.

The Contractor shall follow the procedure provided to him by the Transnet PER and maintain required records thereof.

5.14 Environmental Inspections and Audits

Environmental inspections and audits may be conducted using five basic techniques:

- Interviews with Contractor's staff including Sub-contractors and suppliers;
- Document review;
- Observations;
- Monitoring; and
- Measurement and verification.

Table 1 sets out the areas and aspects of the construction site that will be inspected or audited, the frequency of such inspections/audits, the inspector/auditor and the inspected party/auditee. It should be noted that the list is not exhaustive and that each site will have specific issues that will need to be inspected/audited.

Table 1: Details on Environmental Inspections/Audits (where Transnet is the Inspected Party/Auditee, respective Contractors must give full cooperation).

Place	Inspector/Auditor	Inspected Party/Auditee	Inspection/audit frequency
Construction Site	Contractor's Environmental Officer	Contractor	Daily/Weekly Inspection
Project (including all construction sites).	Transnet Project Environmental Resource/Project Environmental Manager	Contractor	Monthly Inspection
Project (including all construction sites)	Transnet Environmental Specialist: Assurance	Transnet Project Environmental Resource	As stipulated on the annual audit plan
Project (as defined in Environmental Authorisation)	Environmental Control Officer	Transnet (represented by Transnet Environmental Resource)	As stipulated in the Environmental Authorisation
Project (as defined in Water Use Authorisation)	Independent Auditor	Transnet (represented by Transnet Environmental Resource)	As stipulated in the Water Use Authorisation

The Contractor's EO will be required to conduct inspections of all work areas for which the Contractor is responsible, at intervals agreed to with the Transnet PER. Monitoring shall

be conducted as per the Contractor's approved EMP and all required records shall be maintained by the Contractor.

The Transnet PER will be required to conduct inspections of all work areas for which the Contractor is responsible on a monthly basis or at intervals agreed to with the Transnet Project Environmental Manager. Monitoring shall be conducted as per the Project Environmental Specification. The Inspection Checklist to be used shall be approved by the Transnet PER prior to each inspection.

5.15 Contractor's Environmental Performance

The Transnet PER will explain how the Contractor's performance will be scored during pre-site access governance to the Contractor's EO. The standard/minimum requirement for all environmental inspections will be 90%.

5.16 Site Planning and Establishment

The Contractor shall establish his construction camps, offices, workshops, eating areas and any other facilities on the site in a manner that does not adversely affect the environment. These facilities must not be sited in close proximity to sensitive areas; the buffer to be determined by the ecological requirements of the fauna/flora found on-site.

The site offices should not be sited in close proximity to steep areas. It is recommended that the offices, and in particular the ablution facilities, aggregate stockpiles, spoil areas and hazardous material stockpiles be located as far away as possible from any watercourse.

5.16.1 Site Layout Plan

The Site Layout Plan must as a minimum include but not limited to:

- Detailed layout of the construction works areas including access roads, site offices, material laydown areas, temporary stockpile areas and parking areas;
- Detailed locality and layout of all waste storage and handling facilities for litter, kitchen refuse and workshop-derived effluent;
- Proposed areas for the stockpiling of topsoil and excavated spoil material;
- Demarcation of the construction footprint including areas not to be disturbed by the development;

- Location of sewage and sanitary facilities at the site offices and staff accommodation at all localities where there will be a concentration of labour.

Any changes to the location of the facilities and site activities as per the approved site layout plan shall be re-submitted to the Transnet CM and Transnet PER for approval prior to implementation.

The Contractor may be required to submit a separate layout plan dealing only with his site camp. If so this will be specified in the PES.

5.16.2 Identification and Establishment of Suitable Access Routes/Roads

Existing access routes to the construction/works areas must be used as far as possible. The building of access roads must be restricted to prevent unnecessary disturbance of the surrounding environment. Access tracks must be maintained in a good condition at all times during construction to minimize erosion and dust generation.

5.16.3 Demarcation of Site Limits

Prior to the commencement of construction, the site must be clearly demarcated by means of visible barriers. Vegetation within the demarcated zone may be cleared only upon obtaining approval from the Transnet PER. No activities are allowed outside of the approved footprint on the Site Layout Plan.

5.16.4 Eating Areas

The Contractor is responsible for providing adequate eating facilities within the works area to ensure that workers do not leave the site to eat during working hours. Refuse bags/bins must be provided at all established eating areas and when full it should be disposed of appropriately.

5.16.5 Liquid Waste Management

Liquid waste water from site shall be stored on-site in a properly designed and constructed system, situated so as not to adversely affect water courses. Only domestic type wastewater, i.e. toilet, shower, basin, kitchen water shall be allowed to enter the designated system.

5.17 Sewage and Sanitation

The Contractor is responsible for providing adequate sanitary facilities including toilets, toilet paper, wash basins etc. to all workers on site and for enforcing the proper use of these facilities.

Toilet facilities shall be serviced regularly and the waste material generated from these facilities shall be disposed of at a registered waste water treatment works/macerator and relevant permits for transportation of waste and proof of servicing and disposal shall be maintained.

Toilets and latrines shall be easily accessible and shall be positioned within walking distance from wherever employees are employed on site, and away from sensitive areas. Use of open areas (i.e. the veld) is not allowed. For projects of high mobility a mobile toilet facility shall be made available by the Contractor.

Outside toilets shall be provided with locks and doors and shall be secured to prevent them from blowing over. Toilets must not be placed in areas susceptible to flooding and high winds. The Contractor shall arrange for regular emptying of toilets and shall be entirely responsible for enforcing their use and for maintaining such facilities in a clean, orderly and hygienic condition to the satisfaction of the Transnet CM.

5.18 Waste Management

Waste shall be grouped into "**general**" or "**hazardous**", depending on its characteristics. The classification shall determine handling methods and the ultimate disposal of material.

General waste which is likely to be generated on site during construction include but not limited to the following:

- Trash (waste paper, plastics, cardboard, etc.) and food waste from offices, warehouses and construction personnel;
- Uncontaminated construction debris such as used wood and scrap metal; and
- Uncontaminated soil and non-hazardous rubble from excavation or demolition.

The Contractor shall classify all waste expected to be generated during the construction period. Examples of typical construction waste which could be expected on the site and how they should be classified are indicated in the following table:

TABLE 2: EXAMPLE OF CONSTRUCTION WASTE CLASSIFICATION

Waste	Classification	
	Hazardous	General
Aerosol containers	X	
Batteries, light bulbs, circuit boards, etc.	X	X
Clean soil		X
Construction debris contaminated by oil or organic compounds	X	
Domestic waste		X
Empty drums (depends on prior use)	X	X
Empty paint and coating containers		X
Explosive waste	X	
PCB waste	X	
Rubble (not contaminated by oil or organic compounds)		X
Waste Cable		X
Waste plastic		X
Waste paint and/or solvent	X	
Waste oil	X	
Waste concrete		X
Waste cement powder	x	
Waste empty cement bags (must be thoroughly decanted)		x
Waste containing fibrous asbestos	X	
Waste timber		X
Sewerage sludge	X	
Scrap metal		X

Waste	Classification	
	Hazardous	General
Chemically-derived sanitary waste	X	

Waste will be managed in accordance with the Waste Management Hierarchy depicted in Figure 1 below:

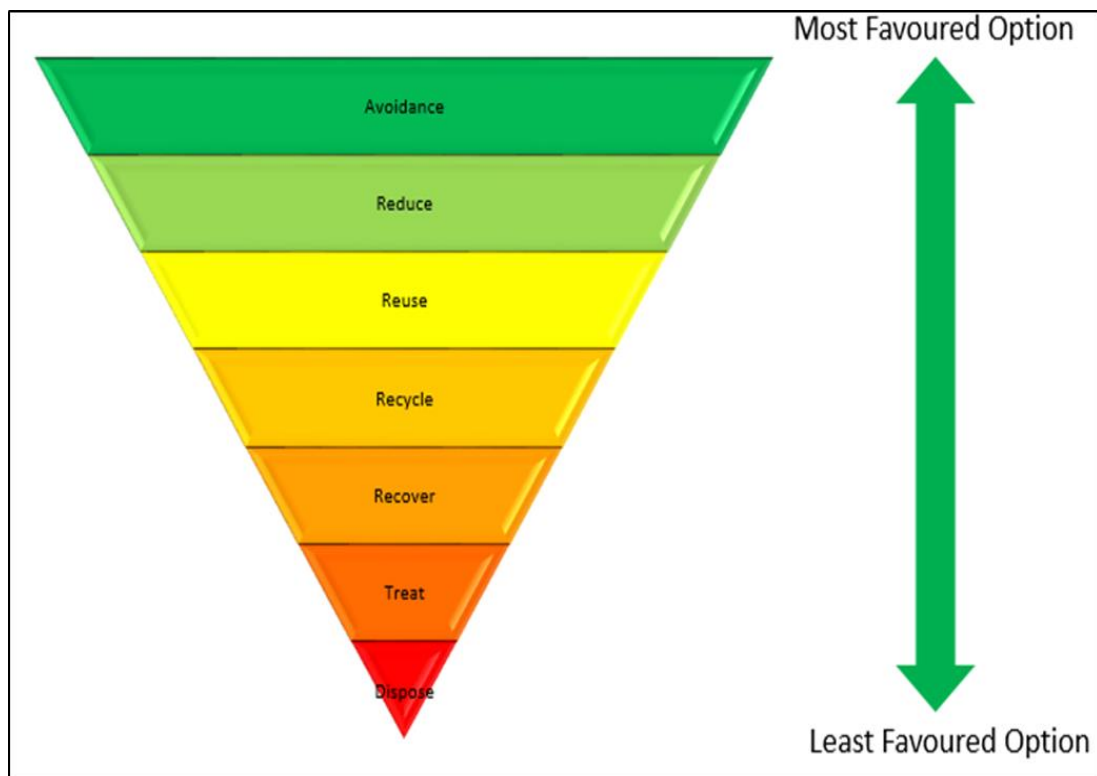


FIGURE 1: THE WASTE MANAGEMENT HIERARCHY

(Transnet Environmental Risk Management strategy and Framework, 2015:42)

- 1. Avoidance/Prevention:** using goods in a manner that minimises their waste components
- 2. Reduction/Minimisation:** reduction of the quantity and toxicity of waste generated during construction
- 3. Re-use:** removing an article from a waste stream for use in a similar or different purpose without changing its form or properties

- 4. Recycling:** separating articles from a waste stream and processing them as products or raw materials
- 5. Recovery:** reclaiming particular components or materials, or using the waste as a fuel
- 6. Treatment:** processing of waste by changing its form or properties in order to reduce toxicity and quantity
- 7. Disposal:** burial, deposit, discharge, abandoning or release of waste

The Contractor is responsible for the removal of all waste generated from site. The Contractor shall ensure that all waste is removed to appropriate licensed waste management facilities. (For the identification of an appropriate facility, the following source may be utilized: <http://sawic.environment.gov.za/>).

The Contractor shall manage **GENERAL WASTE** that is anticipated to be generated by operations as follows:

- Notify waste hauler when container is full so that it can be removed and replaced with an empty container/skip;
- No littering is allowed on site. In the event where staff mobility is high, refuse bags will be made available by the Contractor;
- Provide documented evidence of proper disposal of waste (Waste Disposal Certificate)

The Contractor shall recycle **GENERAL WASTE** (as far as practically possible) that is anticipated to be generated by its operations as follows:

- Obtain and label recycling containers for the following (whichever relevant) and locate them at secure designated locations on site:
 - Office Waste;
 - Aluminium;
 - Steel;
 - Glass;
 - Ferrous Metals;

- Non Ferrous Metals; and
- Waste Timber
- Establish recycled material collection schedule;
- Arrange for full bins to be hauled away;
- Spent batteries, circuit boards, and bulbs, while non-hazardous, require separate storage, special collection and handling; and
- No burning, burying or dumping of waste of any kind will be permitted.

The Contractor shall manage **HAZARDOUS WASTE** anticipated to be generated by his operations as follows:

- Obtain and provide an acceptable container with correct and visible classification label;
- Place hazardous waste material in allocated container;
- Inspect the container on a regular basis as per the Contractor's EMP;
- Track the accumulation time for the waste, haul the full container to the registered hazardous disposal site;
- Notify the waste hauler when container is full so that it can be removed and replaced with an empty container/skip; and
- Provide documented evidence of proper waste disposal of the waste (Waste Disposal Certificate).

The Contractor shall maintain the following waste records for submission to the Transnet PER on request:

- Date of waste management activity;
- Activity Type (reuse, recycle, recover, treat, dispose);
- Description (e.g. contaminated soil, medical waste, tyres, plastic, domestic waste etc.)
- Classification (General/Hazardous);
- Estimated Quantity in kilograms
- Disposal Site Name and Reference Number (where relevant);
- Method of Transport; and
- Signed Collection or Disposal Records

5.19 Workshops, equipment maintenance and storage

All vehicles and equipment must be kept in good working order to maximise efficiency and minimise pollution. Maintenance, including washing and refueling of plant on site must be done at designated locations approved on the Site Layout Plan. The Contractor must ensure that no contamination of soil or vegetation occurs around workshops and plant maintenance facilities.

All machinery servicing areas must be bunded. Stationary plant that leak harmful substances shall not be permitted on site. Washing of equipment should be restricted to urgent maintenance requirements only. Adequate wastewater collection facilities must be provided and the wastewater should be disposed of appropriately in accordance with its waste classification.

5.20 Vehicle and Equipment Refueling

5.20.1 Stationary/Designated Refuelling

No vehicles or machines shall be serviced or refueled on site except at designated servicing or refueling locations included on the approved Site Layout Plan.

The Contractor shall provide details of his refueling activities in his EMP or Refueling Method Statement. Facility design shall comply with the regulations of the National Water Act, (Act 36 of 1998), the Hazardous Substances Act, (Act 15 of 1973), the Environmental Conservation Act, (Act 73 of 1989), National Environmental Management Act, (Act 107 of 1998), and the Occupational Health and Safety Act, (Act 85 of 1993), mainly the Construction - and Hazardous Chemical Substances Regulations.

5.20.2 Mobile Refuelling

In certain circumstances, the refueling of vehicles or equipment in a designated area is not a viable/practicable option and refueling has to be done from a tank, truck, bowser or container moved around on site. In such circumstances, the Contractor may request approval from the Transnet CM to conduct mobile refueling subject to the following control measures:

- Secondary containment equipment shall be in place. This equipment shall be sized to contain the most likely volume of fuel that could be spilt during transfer.

- Absorbent pads or drip trays are to be placed around the fuel inlet prior to dispensing.
- Mobile refueling units are to be operated by a designated competent person.
- The transfer of fuel must be stopped prior to overflowing. Fuel tanks or refueling equipment on vehicles may only be filled to 90% carrying capacity.
- Mobile fuelling equipment must be stored in areas where they are not susceptible to collisions.
- Mobile refueling operations shall not take place within 30 meters of any watercourses or 7.5 meter from other structures, property lines, public ways or combustible storage.

All mobile refueling tanks are to be properly labelled and fire extinguishers with valid service dates shall be located near the fuel storage areas. These extinguishers must be of a suitable type and size.

5.21 Spill Response

The Contractor shall have adequate spill response materials/equipment on site which must be aligned with the volumes of hazardous substances used on site and the risk of pollution to sensitive environmental features.

The Contractor shall have an approved Spill Response Plan, either in his EMP or in the form of a method statement approved by the Transnet CM and Transnet PER.

The Contractor shall instruct construction personnel on the following spill prevention and containment responsibilities:

- All plants to be inspected daily to ensure that they are in good condition;
- Immediately repair all leaks of hydrocarbons or chemicals;
- Take all reasonable measures to prevent spills or leaks;
- Do not allow sumps receiving oil or oily water to overflow;
- Prevent storm water runoff from contamination by leaking or spilled drums of oil or chemicals; and
- Do not discharge oil or contaminants into storm water or sewer systems.

If a spill occurs on land, the Contractor must:

- Immediately stop or reduce the spill;

- Contain the spill;
- Recover the spilled product;
- Remediate the site;
- Implement actions necessary to prevent the spill from contaminating groundwater or off-site surface water; and
- Manage the contaminated material in accordance with Waste Management requirements in this document.

Any spill to water has the potential to disperse quickly, therefore, the spill must be contained immediately using appropriate containment equipment.

If a spill to water occurs, the Contractor must:

- Take immediate action to stop or reduce the spill and contain it;
- Notify the appropriate on-site authorities;
- Implement actions necessary to prevent the spread of the contamination by deploying appropriate absorbent material;
- Recover the spilled product; and
- Manage the contaminated material in accordance with Waste Management requirements in this document. Water samples to be taken downstream from where the spill took place to trace the extent of pollution.

All spills must be recorded as occurrences and managed in accordance with the requirements for Occurrences in this document.

5.22 Spray Painting and Sandblasting

Spray painting and sandblasting must be kept to a minimum. All painting must, as far as practicable, be done before equipment and material is brought on site. Touch-up painting is to be done by hand painting or as per the approved EMP or Method Statement.

The relevant Contractor will inform his EO when and where spray painting or sandblasting will be carried out prior to commencement of work. The Contractor's EO will monitor these activities to ensure that adequate measures are taken to prevent contamination.

Sand may only be acquired from approved commercial sources and in instances where sand is collected from the natural surrounds, such collection must be approved by the Transnet PER.

If the area is in confined or high (elevated) areas, a protection plan must be issued for approval by the Transnet PER.

5.23 Dust Management

The usage of water for dust management will be minimized as far as practically possible. Discretion must be applied in this regard especially relating to drought conditions. Only water from approved sources may be used. Dust control measures must be approved by the Transnet PER prior to commencement of the Works.

The following minimum dust management practices must be implemented on site:

- Vehicles must be operated within speed limits, where no speed limit has been specified, the limit shall be 40km/h;
- Haulage distances must be minimized as far as reasonable practicable;
- Where water suppression is insufficient or impractical, environmentally friendly soil stabilizers must be used;
- Stockpiles and open areas that may cause dust must be stabilized and vegetated where required;
- Dust suppression measures must be implemented on inactive construction areas. (An inactive construction site is one on which construction will not occur for a month or more);
- Disturbance of natural vegetation must be minimized to reduce potential erosion, runoff, and air-borne dust;
- Material in transit must be loaded and contained within the load bin of the vehicle in such a way as to prevent any spillage or creation of dust clouds. If necessary, the load bin of the vehicle shall be covered with a tarpaulin;

5.24 Storm Water and Dewatering Management

Apart from runoff from overburden emplacements and stock piles, storm water can also be contaminated from batch plants, workshops, vehicle wash-down pads, etc., and contaminants during construction may include hydrocarbons from fuels and lubricants, sewerage from employee ablutions and excess fertilizer from rehabilitated areas, etc.

Discharges to controlled waters such as the sea, rivers, and groundwater or to sewerage systems are controlled under South African Water Legislation. The following specific measures are required:

- Temporary drainage must be established and maintained on site during the construction period until permanent drainage is in place. Secondary drainage that prevents erosion must be provided, where necessary.
- Contractors must employ good housekeeping in their areas to prevent contamination of drainage water.
- Stagnant water shall be cleared at a frequency approved by the Transnet PER.
- Any surface water flows off-site must be approved by the Transnet PER. Where necessary, silt traps shall be constructed to ensure retention of silt on site and cut-off ditches shall be constructed to ensure no runoff from the site except at points where silt traps are provided. The Contractor shall be responsible for checking and maintaining all silt traps for the duration of the project.
- The removal from groundwater is defined as a water-use under the National Water Act 36 of 1998. Therefore, it must be ensured that the project has been authorised by the Responsible Authority to remove and discharge groundwater prior to dewatering taking place. If applicable, the Contractor shall be responsible for collection, management, and containment within the site boundaries of all dewatering from all general site preparation activities.
- On-site drainage shall be accomplished in accordance with a plan approved by a suitably qualified civil engineer.

5.25 Erosion Control

Erosion control measures will be designed, implemented, and properly maintained in accordance with best management practices which will include, but not limited to the following:

- Activities must be scheduled to minimise the extent of disturbance of an area at any one time;
- Re-vegetation must be implemented as early as feasible;
- Construction traffic must be properly managed and controlled;
- Areas must be graded to the extent feasible at drainage ditches;
- Loose soil will be compacted as soon as possible after excavation, grading, or filling;
- Silt fences, geo-textiles, temporary rip-rap, soil stabilisation with gravel, diversionary berms or swales, small sedimentation basins must be used;
- The transport of sediment must be minimised;
- An erosion and sedimentation control plan must be developed, approved by the Transnet PER and communicated to staff; and
- The Contractor shall be responsible for checking and maintaining all erosion and sedimentation controls.

5.26 Noise Management

- The following specific measures are required:
- Keep all equipment in good working order;
- Operate equipment within its specification and capacity and don't overload machines;
- Apply regular maintenance, particularly with regards to lubrication;
- Operate equipment with appropriate noise abatement accessories, such as sound hoods;
- Relevant stakeholders shall be notified of any excessive noise-generating activities that could affect them;
- Ensure that the potential noise source will conform to the South African Bureau of Standards recommended code of practice, SANS 10103:2004 or the latest at the time, so that it will not produce excessive or undesirable noise when released;

- All the Contractor's equipment shall be fitted with effective exhaust silencers and shall comply with the South African Bureau of Standards recommended code of practice, SANS 10103:2004 or the latest at the time, for construction plant noise generation
- Contractor's vehicles shall comply with the Road Traffic Act, (Act 29 of 1989) when any such vehicle is operated on a public road.
- If on-site noise control is not effective, protect the victims of noise by ensuring that all noise-related occupational health provisions are met. (Occupational Health and Safety Act, (Act 85 of 1993).

5.27 Protection of Heritage Resources

5.27.1 Archaeological Sites

If an artefact on site is uncovered, work in the immediate vicinity shall be stopped immediately. The Contractor shall take reasonable precautions to prevent any person from removing or damaging any such article and shall immediately upon discovery thereof inform the Transnet CM and Transnet PER of such a discovery. The South African Heritage Resources Agency (SAHRA) or relevant Authority is to be contacted and will appoint an Archaeologist to investigate the find. Work may only resume once clearance is given in writing by the Archaeologist.

5.27.2 Graves

If a grave is uncovered on site, or discovered before the commencement of work, all work in the immediate vicinity of the grave shall be stopped and the Transnet CM and PER informed of the discovery. The South African Heritage Resources Agency (SAHRA) or relevant Authority should be contacted and in the case of graves, arrangements made for an undertaker to carry out exhumation and reburial. The undertaker will, together with the SAHRA, be responsible for attempts to contact family of the deceased and for the site where the exhumed remains can be re-interred.

5.28 Fire Prevention

Fires shall only be allowed in facilities or equipment specially constructed for this purpose.

A firebreak shall be cleared and maintained around the perimeter of the camp and office sites where and when necessary. In cases where construction is taking place in a Critical Biodiversity Area as listed under NEM:BA; it must be ensured that the requirement of a firebreak is screened against the NEMA Listing Notice 3 to confirm legislative requirements.

All conditions incorporated in the requirements of the Occupational Health and Safety Act shall be implemented.

5.29 Water Protection and Management

No water shall be abstracted from any water course (stream, river, or dam) without the expressed permission of the Transnet CM and Transnet PER. Such permission shall only be granted once it can be shown that the water is safe for use, that there is sufficient water in the resource to meet the demand, and once permission has been obtained from the Department of Water and Sanitation in accordance with the requirements of the National Water Act (Act 36 of 1998).

Water for human consumption shall be available at the site offices and at other convenient locations on site. The generally acceptable standard is that a supply of drinking water shall be available within 200m of any point on the construction site.

Method Statement(s) must be prepared by the Contractor for the various water uses. The Contractor shall keep a record of the quantities of water used on-site during construction (including use by sub-contractors), irrespective of the purpose of use.

5.30 Protection of Fauna and the collection of firewood

On no account shall any hunting or fishing activity of any kind be allowed. This includes the setting of traps, or the killing of any animal caught in construction works.

On no account shall any animal, reptile or bird of any sort be killed. This specifically includes snakes or other creatures considered potentially dangerous discovered on site. If such an animal is discovered on site, an appropriately skilled person should be summoned to remove the creature from the site. Consideration should be given to selection and nomination of such a person prior to site establishment. If no-one is available, training should be provided to at least two site staff members.

The Contractor shall provide adequate facilities for all his staff so that they are not encouraged to supplement their comforts on site by accessing what can be taken from the natural surroundings. The Contractor shall ensure that energy sources are available at all times for construction and supervision personnel for heating and cooking purposes.

5.31 Environmental Awareness Training

An Environmental Awareness Program is considered a necessary part of the Construction Environmental Management Plan for the Project. Training of the appropriate construction personnel will help ensure that all environmental regulations and requirements are followed which must be defined in the relevant Method Statement to be prepared by the Contractor.

Objectives of environmental awareness training are:

- Environmental Management – protecting the environment from the effects of construction by making personnel aware of sensitive environmental resources.
- Regulatory compliance – complying with requirements contained in project – specific permit conditions, also complying with requirements in regional and local regulations.
- Problem recognition and communication – training personnel to recognise potential environmental problems, i.e. spills, and communicate the problem to the Contractor's EO for a solution.
- Liability control - non-compliance with regulatory requirements can lead to personal and corporate liability.

All individuals on the Project construction site will need to have a minimum awareness of environmental requirements and responsibilities. However, not all need to have the same degree of awareness. The required degree of knowledge is greatest for personnel in the Safety, Health, and Environmental Sections and the least for the manual personnel.

The Contractor shall present environmental awareness programmes on a weekly/bi-monthly basis (depending on project requirements) and keep record of all the environmental related training of the personnel.

5.32 Handling and Batching of Concrete and Cement

Concrete batching shall only be conducted in demarcated areas which have been approved by the Transnet CM and Transnet PER.

Such areas shall be fitted with a containment facility for the collection of cement-laden water. This facility shall be bunded and have an impermeable surface protection so as to prevent soil and groundwater contamination. Drainage of the collection facility will be separated from any infrastructure that contains clean surface runoff.

The batching facility will not be placed in areas prone to floods or the generation of stagnant water. Access to the facility will be controlled so as to minimise potential environmental impacts. Hand mixing of cement and concrete shall be done on mortarboards and/or within the bunded area with impermeable surface or concrete slab. Bulk and bagged cement and concrete additives will be stored in an appropriate facility at least 10m away from any watercourses, gullies and drains.

Waste water collected in the containment facility shall be left to evaporate. The Contractor shall monitor water levels to prevent overflows from the facility. It is acknowledged that all waste water will evaporate; it must be ensured that the remaining water can be pumped into sealed drums for temporary storage and must be disposed of as liquid hazardous waste at an authorised hazardous waste management facility.

All concrete washing equipment, such as shovels, mixer drums, concrete chutes, etc. shall be done within the approved washout facility. Water used for washing shall be restricted as far as practically possible.

Ready-mix concrete trucks are not allowed to wash out anywhere other than in an area designated and approved by the Transnet CM and PER for this purpose.

The Contractor shall periodically clean out hardened concrete from the wash-out facility or concrete mixer, which can either be reused or disposed of as per accepted waste management procedures.

Empty cement and bags, if temporarily stored on site, must be collected and stored in weatherproof containers. Used cement bags may not be used for any other purpose and

must be disposed of on a regular basis in accordance with the Contractor's solid waste management system.

Sand and aggregates containing cement will be kept damp to prevent the generation of dust.

Concrete and cement or any solid waste materials containing concrete and cement will be disposed of at a relevant registered disposal facility and SDCs kept on the file. Where disposal facilities for general waste are utilised, written consent from the relevant municipality must be obtained by the Contractor and filed in the Green file.

5.33 Stockpiling, Soil Management and Protection of Flora

The Contractor shall measure the extent of all areas cleared for construction purposes and keep this figure updated. Sensitive areas shall be cordoned off and avoided in this regard.

Stockpiling may only take place in designated areas indicated on the approved site layout plan. Any area to be used for stockpiling or material laydown shall be stripped of all topsoil.

Clearance of vegetation shall be restricted to that which is required to facilitate the execution of the works. Vegetation clearance shall occur in a planned manner, and cleared areas shall be stabilised as soon as possible when and where necessary. The detail of vegetation clearing shall be subject to the Transnet CM's approval and shall occur in consultation with the Transnet PER.

Stockpiles must be positioned in areas sheltered from the wind and rain to prevent erosion and dispersion of loose materials. Stockpiled soil shall be protected by adequate erosion-control measures. Soil stockpiles shall be located away from drainage lines, watercourses and areas of temporary inundation. Stockpiles containing topsoil shall not exceed 2m in height unless otherwise permitted by Transnet.

Topsoil shall be stockpiled separately from other materials and prevented from movement. Excavated subsoil, where not contaminated, must be used for backfilling, if possible, and topsoil for landscaping and rehabilitation of disturbed areas. Where topsoil

has become mixed with subsoil or is not up to the original standard, fertiliser or new topsoil shall be provided by the Contractor.

No vegetation located outside the construction site shall be destroyed or damaged. As far as is reasonably practicable, existing roads must be used for access to the site. Before site clearance takes place, vegetation surveys must be conducted and protected species identified.

No protected plant species shall be removed without written consent from the relevant authorities. The development of new embankments or fill areas must be undertaken in consultation with the Transnet PER.

No dumping of solid waste or refuse shall be allowed within or adjacent to areas of natural vegetation.

The Contractor shall identify and eradicate all declared alien and invasive plant species occurring on site.

5.34 Traffic Management

Vehicles usage is permitted only on access roads. Vehicles should only be parked within designated parking areas as demarcated on the site layout plan.

Turning of vehicles should only take place within a clearly demarcated "turn area" located within the approved construction footprint.

The Contractor must co-ordinate the loading and offloading of material during the construction phase so as to ensure that vehicular movement is in one direction only at any one time and that side-tracks are not created on the site.

5.35 Transportation of Materials

The Contractor is responsible for ensuring that all suppliers and delivery drivers are aware of procedures and restrictions (e.g. no-go areas) in terms of the SOP CM and this Specification. Material must be appropriately secured to ensure safe passage between destinations during transportation. Loads must have appropriate cover, where ADTs are not utilised, to prevent spillage from the vehicles. The Contractor will be held responsible for any clean-up resulting from the failure to properly secure transported materials.

5.36 Borrow Pits and Quarries

The Contractor shall ensure that suppliers of rock and sand raw materials are in possession of the required permit/license and keep record of the quantity of material supplied.

The Contractor will not make direct use of any borrow pits and quarries unless the borrow pit has a valid permit, he has obtained written approval from the Transnet CM and Method Statement has been submitted and approved. The Method Statement will provide the detailed description of the location of the borrow pits and/or quarries and the procedures that will be followed to adhere to any pertinent national or local legislation (e.g. mineral extraction, rehabilitation, safety and noise levels).

5.37 Social and Labour Issues

The criteria for and selection of labourers, sub-contractors and suppliers for the project shall demonstrate preference for the local community and shall be aligned with the criteria set by Transnet SOC Ltd in appointing the Contractor. The Contractor shall keep records of the identity of all staff.

Under no circumstances shall the Contractors engage in formal discussions with landowners without prior consent by the Transnet CM.

No activity on private property shall be allowed without written consent by the relevant landowner and Transnet CM/Transnet PER.

Any damage to private property caused by the Contractor during the construction period, shall be repaired to the satisfaction of the Transnet CM, the Transnet PER and the landowner.

The Contractor shall keep record of any complaint raised during the construction period relating to the Contractor's activities.

No job-seekers shall be allowed on site and signs reflecting such shall be displayed on the notice boards.

5.38 Energy Management

The Contractor shall measure and keep updated records of the following:

- Electricity consumption (to be measured in Kilowatt Hours)
- Fuel consumption (to be measured in liters)

5.39 Handling, Storage and Management of Hazardous Substances

All hazardous materials/substances shall be stored in a secured, designated area that is fenced, bunded and has restricted entry.

All storage shall take place using suitable containers to the approval of the Transnet CM and PER.

All hazardous liquids shall be located in a secure, demarcated area and an adequate bund wall (110% of the total volume stored) shall be provided. The floor and wall of the bund area shall be impervious to prevent infiltration of any spilled/leaked liquids into the soil.

No spillages or accumulated stormwater within this bunded area will be allowed to be flushed from the bund into the surrounding area.

Hazard signs indicating the nature and volume of the stored materials shall be displayed on the storage facility or containment structure.

Weigh bills of hazardous substances shall be sourced from suppliers and kept on site for inspection by the Transnet PER.

The Contractor must provide a method statement detailing the hazardous substances that are to be used during construction, as well as the storage, handling and disposal procedures for each substance. Emergency procedures in the event of misuse or spillage that might negatively affect the environment must be specified.

Information on each hazardous substance will be available to all persons on site in the form of MSDS/SDS. Training and education about the proper use, handling, and disposal of the material will be provided to all workers handling the material.

The Contractor's EO must be informed of all activities that involve the use of hazardous substances to facilitate prompt response in the event of a spill or release.

5.40 Housekeeping

The Contractor must ensure proper housekeeping of the site for the duration of the project. If practical the contractor shall amongst construction personnel, assign one to be responsible for good housekeeping

Materials shall be stored in a neat and tidy manner in designated areas as per the approved site layout plan.

5.41 Rehabilitation

Contractors shall rehabilitate the entire site upon completion of work. Where applicable, rehabilitation must be in line with the measures outlined in the Project Environmental Specification. A rehabilitation plan will be submitted to the Transnet CM and PER for approval at least six weeks before project completion. The following, but not limited are critical issues to be included in the rehabilitation plan:

- Details of soil preparation procedures including proposed fertilisers or other chemicals being considered for use;
- A list of the plant species that will be used in the rehabilitation process. Note that these should all be indigenous species, and preferably species that are endemic to the area. The assistance of an appropriately qualified Botanist/Horticulturist should be sought in developing this list;
- Procedures for watering the planted areas (frequency of watering, methodology proposed etc.);
- An indication of the monitoring procedures that will be put in place to ensure the successful establishment of the plants (duration and frequency of monitoring, proposed criteria for declaring rehabilitation as being successful); and
- Procedures for the prevention of the establishment and spread of alien invasive species.

5.42 Documentation and Records Management

The Contractor's EO will complete and maintain copies of all documents and records and ensure that these documents and records are kept up to date.

The Contractor's EO will submit these documents to the Transnet PER on a frequency as agreed to with the Transnet PER, except where documents have remained unchanged in which case written notification to this effect must be provided to the Transnet PER. The Contractor's EO must ensure that electronic copies of these documents are saved on the Transnet system.

Once the construction activities have been completed and the Transnet PER has conducted a site closure inspection and notified the Contractor that site closure will be granted, all documents described above must be handed over to Transnet after which a Site Closure Certificate will be issued by the Transnet Project Manager.

NOTE: All documents/records are to be retained, within the Transnet Document Control System, for a period of 10 years. In the event of environmental documentation/record being lost before receiving a Site Closure Certificate, the Contractor will be penalised according to the specifications laid down in the Contract.

6. RECORDS

Refer to CEM SOP.

7. ANNEXURES

None.

CONTRACTOR ENVIRONMENTAL AND SUSTAINABILITY SPECIFICATION GUIDELINES

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SUMMARY VERSION CONTROL

VERSION NO.	NATURE OF AMENDMENT	PAGE NO.	DATE REVISED
3.0	<ul style="list-style-type: none"> Addition of reference documents (section 3) Inclusion of additional definitions Removal of DEA and replacing it with DFFE Removal of Transnet EO and replacing with Transnet Environmental Resource (PER) Inclusion of additional abbreviations Inclusion of minimum environmental requirements for construction (section 5) Inclusion of details of site inspections/audits (table 1) Inclusion of Records Management 	<p>6-7</p> <p>7-10</p> <p>11</p> <p>12</p> <p>12-23</p> <p>23</p> <p>45</p>	June 2023

Note: Only latest amendments and/or additions are reflected in italics in the body of the document.

DOCUMENTATION SIGN-OFF SHEET

I, the undersigned hereby approve this procedure.

ROLE	CAPACITY/ FUNCTION	SIGNATURE	DATE
Process Owner:	Senior Specialist: Environmental Risk and Compliance		01/10/2023
Accepts document for adequacy and practicability. Comments:			
Approval Committee:	GM: Corporate Sustainability		01/10/2023
Approves document for use. Comments:			

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1. PURPOSE

This document describes the minimum requirements for environmental management to which Contractors must comply. This document must be read in conjunction with the Transnet Construction Environmental Management Standard Operating Procedure (CEM SOP).

In this document, unless the context clearly indicates otherwise:

- Words importing any one gender shall include the other gender;
- The singular shall include the plural and vice versa; and
- Any reference in this document to legislation or subordinate legislation is to such legislation or subordinate legislation at the date of promulgation thereof and as amended and/or re-enacted from time to time.

2. APPLICABILITY

This standard applies to Contractors that work on site under the authority of Transnet SOC Ltd.

3. REFERENCE DOCUMENTS

Name	Applicable Section
Constitution of South Africa, Act 108 of 1996	Section 24
National Environmental Management Act, 107 of 1998	Section 2 National Environmental Management Principles
National Water Act, 36 of 1998	Section 164, Permissible Water Use
National Environmental Management: Waste Act, 58 of 2008	Part 1 15 (1) (i) and (2) Part 6 26 (10) (a) and (b) Schedule 3, Defined Wastes Category A: Hazardous Wastes Part 8: Contaminated Land
Environment Conservation Act, 73 of 1989	Section 20
Occupational Health and Safety Act, 85 of 1993	Asbestos Regulations, 2001

Name	Applicable Section
	Government Notice R155 in Government Gazette 23108 of February 2002 General Safety Regulations-Reg. 2 (2) PPE
GNR 326, 7 April 2017 as amended, EIA Regulations	Chapter 15, Appendix 4
Transnet Environmental Risk Management strategy and Framework	2015:42
Environmental Management Systems ISO 14001: 2015	Clause 5, 6, 7, 8, 9 and 10

4. DEFINITIONS AND ABBREVIATIONS

4.1 Definitions

Compliance	Meeting of all the organization’s regulatory requirements
Conformance	The action or fact of conforming to this standard and other internal Transnet policies, procedures, guidelines and best practice.
Construction Environmental Management Standard Operating Procedure	Is a document which is used to define how environmental management will be practiced on any construction site under the management of Transnet to ensure that the environment is considered, negative impacts avoided or minimized, and positive impacts are enhanced.
Contractor	The Principal Contractor as engaged by Transnet for infrastructure construction operations, including all sub-contractors appointed by the main contractor of his own volition for the execution of parts of the construction operations; and any other contractor from time to time engaged by Transnet directly in connection with any part of the construction operations which is not a nominated sub-contractor to the Principal Contractor.

Contractor Environmental and Sustainability Specification Guidelines	A set of minimum environmental standards for all Transnet SOC Ltd-managed construction sites.
Environmental Aspect	Element of an organization’s activities or products or services that interacts or can interact with the environment.
Environmental Impact	Change to the environment whether adverse or beneficial, wholly or partially resulting from an organization’s environmental aspects.
Environmental Risk	The product of the likelihood and severity of an unforeseen occurrence/incident/aspect and the impact it would have, if realised, on the environment.
Fauna	A group of animals specific to a certain region or time period.
Flora	A group of plants specific to a certain region or time period.
General waste	Waste that does not pose an immediate hazard or threat to health or to the environment; and includes:- <ul style="list-style-type: none"> (a) domestic waste; (b) building and demolition waste; (c) business waste; (d) inert waste;
Indigenous vegetation	Plants that naturally occur in an area.
Liquid waste	Waste that appear in liquid form such as used oil, grease and/or contaminated water or waste water.

Method statement	A document that describes how the Contractor will apply environmental management measures associated with a particular activity during construction.
Monitoring	Determining the status of a system, a process or an activity
Natural Vegetation	All existing species, indigenous or otherwise, of trees, shrubs, groundcover, grasses and all other plants found growing on the site.
Responsible Authority	A Responsible Authority, according to the National Water Act 36 of 1998, relates to specific power or authority in respect of water uses that is assigned by the Minister to a Catchment Management Agency or to a Regional Office.
Rehabilitation	Refers to measures that must be put in place to restore the site to its pre-construction or enhanced state, subsequent to construction taking place.
Scope of Work	The construction work for which the Contractor has been appointed in terms of the Contract with Transnet.
Sensitive area	Any area that is denoted as sensitive by this Specification due to its particular attributes, which could include the presence of rare or endangered vegetation, the presence of heritage resources (e.g. archaeological artefact or graves), the presence of a unique natural feature, the presence of a watercourse or water body, the presence of sensitive social receptors etc. As a minimum, habitats that fall under this definition include: mountain catchments, Ramsar wetland sites, coastal shores, estuaries and endangered ecosystems.
Solid waste	All solid waste, including construction debris, chemical waste, excess cement/ concrete, wrapping materials, timber, tins and cans, drums, wire, nails, food and domestic waste (e.g. plastic packets and wrappers).

Spoil	Excavated material which is unsuitable for re-use as material in the Works or any other use; or is material which is surplus to the requirements of the Works.
Sub -Contractor	is a person or organisation who has a contract with the contractor to: Construct or install part of the contractor's work. Provide a service necessary to provide the works; or Supply plant and materials which the person or organisation has wholly or partly designed specifically for the works.
Temporary Storage	A once-off storage of waste for a period not exceeding 90 days.
Topsoil	Means a varying depth (up to 300 mm) of the soil profile irrespective of the fertility appearance, structure, agricultural potential, fertility and composition of the soil.
Waste	Any substance, material or object, that is unwanted, rejected, abandoned, discarded or disposed of, or that is intended or required to be discarded or disposed of, by the holder of that substance, material or object, whether or not such substance, material or object can be re-used, recycled or recovered and includes all wastes. Waste or a portion of waste ceases to be a waste only once the waste is, or has been re-used, recycled or recovered.
Wastewater	means water containing waste, or water that has been in contact with waste material
Watercourse	Refers to - a river or spring; a natural channel in which water flows regularly or intermittently;

a wetland, lake or dam into which, or from which, water flows;
and

any collection of water gazetted by the National Water Act, 36 of 1998 as a watercourse, and a reference to a watercourse includes, where relevant, its bed and banks.

Wetland

Land which is transitional between terrestrial and aquatic systems where the water table is usually at or near the surface, or the land is periodically covered with shallow water, and which land in normal circumstances supports or would support vegetation typically adapted to life in saturated soil.

4.2 Abbreviations

Acronym	Meaning In Full
CEM SOP	Construction Environmental Management Standard Operating Procedure
CM	Construction Manager
CV	Curriculum Vitae
DEFF	Department of Environment, Forestry and Fisheries
EA	Environmental Authorisation
ECO	Environmental Control Officer
EIA	Environmental Impact Assessment
CESSG	Contractor Environmental and Sustainability Specification Guidelines
EO	Environmental Officer

Acronym	Meaning In Full
EMP	Environmental Management Plan
EMPr	Environmental Management Programme
EGF	Environmental Governance Framework
NEMA	National Environmental Management Act 107 of 1998
NEM:BA	National Environmental Management: Biodiversity Act 10 of 2004
NWA	National Water Act 36 of 1998
PER	Project Environmental Resource
PES	Project Environmental Specification
PM	Project Manager
SAHRA	South African Heritage Resource Agency
SDS	Safety Data Sheet
SHEQ	Safety, Health, Environment and Quality
TRANSNET	Transnet SOC Ltd

5. MINIMUM ENVIRONMENTAL REQUIREMENTS FOR CONSTRUCTION

5.1 Tender Documents

Any construction-related tender issued to the market must include:

- Transnet Integrated Management System Policy Statement;
- The Transnet Construction Environmental Management Standard Operating Procedure (CEM SOP);
- The Contractor Environmental & Sustainability Specification Guideline; and
- The Project Environmental Specification (PES).

Any construction-related tender must be recommended for issue by the Transnet Project Environmental Resource/s before it is released to the market.

5.2 Project Environmental Specification (PES)

Must incorporate all relevant recommendations of the Environmental Impact Assessment (EIA) and other environmental studies for the project and the relevant conditions of the EA and/or other applicable environmental permit(s) and licence(s), and the Transnet Operating Division's Environmental Management requirements (where applicable) into an environmental performance specification for implementation during the construction phase of the project.

The PES need not be a separate document; however it can be in a format of an appendix/addendum making reference to environmental authorisation(s), permit(s) or licence(s) applicable to the project. In cases where the project does not trigger any of the NEMA listed activities or any permit(s)/licence(s); the PES may be compiled to prescribe additional environmental management measures over and above the measures stipulated in the MERC.

5.3 Contractor's Environmental Policy

The Contractor's Environmental Policy must be signed and dated by Top Management.

The content of the Contractor's Environmental Policy must:

- be appropriate to the purpose and context of the Contractor's organization, including the nature, scale and environmental impacts of its activities, products and services;
- provide a framework for setting environmental objectives;
- include a commitment to the protection of the environment, including prevention of pollution and other specific commitment(s) relevant to the context of the Contractor's organization;
- include a commitment to fulfil compliance obligations; and
- include a commitment to continual improvement of the Contractor's environmental management system to enhance environmental performance

5.4 Contractor's Environmental Management Plan (EMP)

The Contractor's EMP must include:

- the name of the person who compiled the EMP;
- the expertise of the person who compiled the EMP, including a CV;
- a description of the Contractor's scope of work;
- a detailed description of the environmental aspects related to the Contractor's scope of work;
- a map at an appropriate scale which depicts all construction activities including associated structures, and infrastructure and environmental sensitivities affected by the construction footprint , as well as no go-areas and associated buffers;
 - The map must include the following:
 - an accurate indication of the project site position as well as the positions of the alternative sites, if any;
 - road names or numbers of all the major roads as well as the roads that provide access to the site(s)
 - a north arrow;
 - a legend;
 - the prevailing wind direction;
 - site sensitivities, including but not limited to vegetation, wetlands, watercourses, heritage sites, critical biodiversity area/s, World Heritage Site, etc. and it must be overlaid by the study area; and

- GPS co-ordinates (Indicate the position of the proposed activity with the latitude and longitude at the centre point for each alternative site. The co-ordinates should be in degrees and decimal minutes. The minutes should be to at least three decimal places. The projection that must be used in all cases is the WGS-84 spheroid in a national or local projection).
- a description of the impacts and risks that need to be avoided, managed and mitigated during the execution of the Contractor's scope of work including (as relevant);
 - planning and design;
 - pre-construction activities;
 - construction activities;
 - rehabilitation; and
 - operation of Transnet assets.
- a description and identification of impact management outcomes required for the identified aspects;
- a description of proposed impact management actions, identifying the manner in which the impact management objectives and outcomes contemplated above will be achieved, and must, where applicable, include actions to:
 - avoid, modify, remedy, control or stop any action, activity or process which causes pollution or environmental degradation;
 - comply with any prescribed environmental management standards or practices; and
 - comply with any applicable local, provincial and national legislation.
- the method of monitoring the implementation of the impact management actions contemplated above;
- the frequency of monitoring the implementation of the impact management actions contemplated above;
- an indication of the persons who will be responsible for the implementation of the impact management actions;
- the timeframe within which the impact management actions contemplated above must be implemented;
- the mechanism for monitoring compliance with the impact management actions contemplated above;

- a program for reporting on compliance, taking into account the requirements of this document;
- an environmental awareness plan describing the manner in which:
 - the Contractor intends to inform his employees of any environmental risk which may result from his scope of work; and
 - risks must be dealt with in order to avoid pollution or the degradation of the environment.
- any specific information that may be required by Transnet.

5.5 Contractor's Environmental Officer (EO)

The Contractor's EO should have relevant environmental qualifications and experience required for the project. The level of qualifications and experience must be in line with the complexity of the Contractor's scope of work coupled with the sensitivity of the site. The level of competency will be determined by Transnet during tender.

5.6 Management of Sub-Contractors

The Contractor must ensure that all his sub-contractors comply with this document in so far as it relates to their specific scope of work or services.

5.7 Pre-Site Access Environmental Governance

The Contractor must appoint the EO recommended in his tender proposal. Should the EO no longer be available, the Contractor must submit a CV of an alternative EO with similar or better qualifications and experience for approval by the Transnet PM and PER. The same principle will apply if the Contractor's EO is replaced for whatever reason at any stage. No construction may take place without a duly appointed Contractor's EO.

The Contractor must provide his EO with all environmental documents provided by Transnet during tender and submitted as a part of the Contractor's proposal.

The Contractor must obtain the contact details of the responsible Transnet PER and Transnet PER and provide these details to his EO.

The Contractor's EO must develop an appropriate environmental file for approval by the Transnet PER, including but not necessarily limited to (the environmental file must always be available and up to date on the construction site):

- Documents from the tender as described above.
- His CV.
- An organogram indicating reporting lines of all Contractor's staff (with names included).
- Contact Information for: the overall responsible person acting on behalf of the Contractor to execute the construction works; Contractor's Construction Manager (CM); Contractor's EO; and all relevant emergency personnel.
- A list of the Contractor's plant and equipment indicating a description of the plant/equipment, its fuel capacity, any hazardous components (oils, greases etc.), individual service/maintenance cycles and noise levels.
- A list of hazardous substances to be used during construction indicating: official substance name from Material Safety Data Sheets (MSDS)/ Safety Data Sheet (SDS); quantity on site; storage method; transport method to site; and period to be used on site. All substances listed must have MSDS/ SDS on site in the environmental file.

The MSDS/ SDS should contain the following minimum requirements:

- Section 1: Product and company name
- Section 2: Hazard identification
- Section 3: Composition/information on ingredients
- Section 4: First aid measures
- Section 5: Fire fighting measures
- Section 6: Accidental release measure
- Section 7: Handling storage
- Section 8: Exposure controls/personal protection
- Section 9: Physical and chemical properties
- Section 10: Stability and reactivity
- Section 11: Toxicological Information
- Section 12: Ecological Information
- Section 13: Disposal Consideration

- Section 14: Transportation
- Section 15: Regulatory Information
- Section 16: Other Information
- Photographic pre-construction report that details the site before any activities commence.
- Site Layout Plan indicating but not necessarily limited to,: access roads, site offices, material laydown areas, stockpile areas and parking areas, waste and effluent storage and handling facilities, entire construction footprint, no-go-areas, sewage and sanitary facilities. The plan must be appropriately drawn on a computer and must be clearly visible and properly scaled.
- A site establishment method statement (minimum requirements for method statements are described below in this document).
- Environmental Induction Material to be used to educate site staff and visitors (minimum requirements for environmental induction are described below in this document).
- An activity-based environmental risk assessment.

The Contractor's EO must submit the environmental file for acceptance to the Transnet PER.

The Contractor must obtain a Site Access Certificate from the Transnet PM before accessing the site.

5.8 Safety Data Sheets

Each hazardous substance used on site must have a valid SDS. The SDS must comply with the requirements of the Occupational Health and Safety Act, 85 of 1993.

5.9 Environmental Induction

The Contractor will ensure that all management, foremen and the general workforce, as well as all sub-contractors, suppliers and visitors to site have attended the Transnet Environmental Induction Programme prior to commencing any work on site. Where new personnel commence work on site during the construction period, the Contractor will ensure that these personnel also undergo the Transnet Environmental Induction Programme and are made aware of the environmental specifications on site.

The Contractor must ensure that all of his personnel understand the requirements of the CEM SOP; MERC; EA, EMPr, relevant permits and licences and PES as relevant to their scope of work.

5.10 Environmental Method Statements

- Environmental Method Statements as identified by the Transnet PER based on the Contractor's activity-based environmental risk assessment will be written submissions by the Contractor to the Transnet CM and PER describing:
- The proposed activity, setting out the plant, equipment, materials, labour and method the Contractor proposes using to carry out an activity;
- The environmental management of site conditions – waste management, housekeeping, site establishment etc;
- Transportation of the equipment to and from site;
- How the equipment/ material will be moved while on site;
- How and where material will be stored;
- The containment (or action to be taken if containment is not possible) of leaks or spills of any liquid or material that may occur;
- Timing and location of activities;
- Description of potential positive and negative environmental impacts and how they will be managed;
- Conformance/ non-conformance with this document and any other statutory and best practice standards;
- Monitoring and reporting requirements;
- Records Management; and
- Any other information deemed necessary by the Transnet CM and Transnet PER as well as ECO where applicable.

The Environmental Method Statements will enable the potential positive and negative environmental impacts associated with the proposed construction activity to be identified and mitigation measures put in place. All method statements must be signed by the Contractor, Transnet CM and PER, with the addition of the ECO on authorized projects, thereby indicating that the works will be carried out according to the methodology described therein.

Activities may only commence once the Environmental Method Statements have been approved by the Transnet CM, Transnet PER and ECO (where relevant). In some instances, local authorities may also need to approve the method statements. This will be highlighted in the Project Environmental Specification, where applicable.

All changes to the original Environmental Method Statements must be approved by the Transnet PER and Transnet CM prior to implementation.

To enable timely approvals, the environmental method statements will be submitted to the Transnet CM and Transnet PER for review two (2) weeks prior to the intended date of commencement of the activity, or as directed by the Transnet Project Manager/CM.

Emergency construction activity Environmental Method Statements may also be required. The activities requiring Environmental Method Statements cannot commence if they have not been approved by the CM and PER or ECO.

NOTE: No advice, approval of method statements or any other form of communication from Transnet will be construed as an acceptance by Transnet of any obligation that indemnifies the Contractor from achieving any required level of performance. Further, there is no acceptance of liability by Transnet which may result from the Contractor failing to comply with the specifications, i.e. the Contractor remains responsible for achieving the required performance levels.

5.11 Environmental Occurrences (Incidents)

The Transnet PER shall provide the Contractor with the procedure to follow in managing environmental occurrences during pre-site access governance.

The Contractor shall follow the procedure provided to him by the Transnet PER and maintain required records thereof.

In the event of an environmental occurrence, the Contractor must, as soon as is reasonably practicable:

- classify an environmental occurrence in line with the Transnet Environmental Management Occurrence process flow;

- take all reasonable measures to contain and minimise the effects of the occurrence, including its effects on the environment and any risks posed by the occurrence to the health, safety and property of persons;
- undertake cleanup procedures;
- remedy the effects of the occurrence; and
- assess the immediate and long-term effects of the occurrence on the environment and public health

5.12 Environmental Non-Conformances (Defects)

Environmental Non-Conformances shall be handled as per the terms and conditions of the Contract.

The Transnet PER shall provide the Contractor with the procedure to follow in managing environmental non-conformances during pre-site access governance.

The Contractor shall follow the procedure provided to him by the Transnet PER and maintain required records thereof.

The Transnet Project Manager shall ensure that all Non-conformances are appropriately closed out within the timeframe specified in the Non-Conformance Report.

Any environmental non-conformance will be dealt with similarly to a Defect as defined in the Contract. A defect is due to non-compliance with the Works Information and it is the responsibility of the Contractor to correct the defect in order to ensure that the work takes place in accordance with the Works Information. Similarly, non-conformance/non-compliance with any other permit or licence will be regarded as a non-conformance with the Works Information. The Contractor is responsible for rectifying any defect (non-conformance) as defined above promptly.

The Contractor's EO shall be responsible to search for and identify non-conformances with the environmental specifications at inspection intervals agreed to with the Transnet PER. The Transnet PER shall also undertake such inspections on a monthly basis. If such monthly inspections indicate that any part of the Contractor's work is non-conformant with the environmental requirements, the Transnet PER shall advise the Transnet PM to issue a Defects Notification to the Contractor accordingly. The Contractor shall correct the non-

conformance (defect) within the timeframes specified in the report and notification and submit proof of such correction to the Transnet PER.

The Transnet PER shall not recommend that a Site Closure Certificate be issued to the Contractor if any non-conformances have not been properly closed out. In such an event, the Transnet Project Manager may also make use of any reasonable contractual means to rectify the non-conformance(s) as allowed by the Contract (retention moneys etc.).

5.13 Community Grievances (Public Complaints)

The Transnet PER shall provide the Contractor with the procedure to follow in managing community grievances during pre-site access governance.

The Contractor shall follow the procedure provided to him by the Transnet PER and maintain required records thereof.

5.14 Environmental Inspections and Audits

Environmental inspections and audits may be conducted using five basic techniques:

- Interviews with Contractor's staff including Sub-contractors and suppliers;
- Document review;
- Observations;
- Monitoring; and
- Measurement and verification.

Table 1 sets out the areas and aspects of the construction site that will be inspected or audited, the frequency of such inspections/audits, the inspector/auditor and the inspected party/auditee. It should be noted that the list is not exhaustive and that each site will have specific issues that will need to be inspected/audited.

Table 1: Details on Environmental Inspections/Audits (where Transnet is the Inspected Party/Auditee, respective Contractors must give full cooperation).

Place	Inspector/Auditor	Inspected Party/Auditee	Inspection/audit frequency
Construction Site	Contractor's Environmental Officer	Contractor	Daily/Weekly Inspection
Project (including all construction sites).	Transnet Project Environmental Resource/Project Environmental Manager	Contractor	Monthly Inspection
Project (including all construction sites)	Transnet Environmental Specialist: Assurance	Transnet Project Environmental Resource	As stipulated on the annual audit plan
Project (as defined in Environmental Authorisation)	Environmental Control Officer	Transnet (represented by Transnet Environmental Resource)	As stipulated in the Environmental Authorisation
Project (as defined in Water Use Authorisation)	Independent Auditor	Transnet (represented by Transnet Environmental Resource)	As stipulated in the Water Use Authorisation

The Contractor's EO will be required to conduct inspections of all work areas for which the Contractor is responsible, at intervals agreed to with the Transnet PER. Monitoring shall

be conducted as per the Contractor's approved EMP and all required records shall be maintained by the Contractor.

The Transnet PER will be required to conduct inspections of all work areas for which the Contractor is responsible on a monthly basis or at intervals agreed to with the Transnet Project Environmental Manager. Monitoring shall be conducted as per the Project Environmental Specification. The Inspection Checklist to be used shall be approved by the Transnet PER prior to each inspection.

5.15 Contractor's Environmental Performance

The Transnet PER will explain how the Contractor's performance will be scored during pre-site access governance to the Contractor's EO. The standard/minimum requirement for all environmental inspections will be 90%.

5.16 Site Planning and Establishment

The Contractor shall establish his construction camps, offices, workshops, eating areas and any other facilities on the site in a manner that does not adversely affect the environment. These facilities must not be sited in close proximity to sensitive areas; the buffer to be determined by the ecological requirements of the fauna/flora found on-site.

The site offices should not be sited in close proximity to steep areas. It is recommended that the offices, and in particular the ablution facilities, aggregate stockpiles, spoil areas and hazardous material stockpiles be located as far away as possible from any watercourse.

5.16.1 Site Layout Plan

The Site Layout Plan must as a minimum include but not limited to:

- Detailed layout of the construction works areas including access roads, site offices, material laydown areas, temporary stockpile areas and parking areas;
- Detailed locality and layout of all waste storage and handling facilities for litter, kitchen refuse and workshop-derived effluent;
- Proposed areas for the stockpiling of topsoil and excavated spoil material;
- Demarcation of the construction footprint including areas not to be disturbed by the development;

- Location of sewage and sanitary facilities at the site offices and staff accommodation at all localities where there will be a concentration of labour.

Any changes to the location of the facilities and site activities as per the approved site layout plan shall be re-submitted to the Transnet CM and Transnet PER for approval prior to implementation.

The Contractor may be required to submit a separate layout plan dealing only with his site camp. If so this will be specified in the PES.

5.16.2 Identification and Establishment of Suitable Access Routes/Roads

Existing access routes to the construction/works areas must be used as far as possible. The building of access roads must be restricted to prevent unnecessary disturbance of the surrounding environment. Access tracks must be maintained in a good condition at all times during construction to minimize erosion and dust generation.

5.16.3 Demarcation of Site Limits

Prior to the commencement of construction, the site must be clearly demarcated by means of visible barriers. Vegetation within the demarcated zone may be cleared only upon obtaining approval from the Transnet PER. No activities are allowed outside of the approved footprint on the Site Layout Plan.

5.16.4 Eating Areas

The Contractor is responsible for providing adequate eating facilities within the works area to ensure that workers do not leave the site to eat during working hours. Refuse bags/bins must be provided at all established eating areas and when full it should be disposed of appropriately.

5.16.5 Liquid Waste Management

Liquid waste water from site shall be stored on-site in a properly designed and constructed system, situated so as not to adversely affect water courses. Only domestic type wastewater, i.e. toilet, shower, basin, kitchen water shall be allowed to enter the designated system.

5.17 Sewage and Sanitation

The Contractor is responsible for providing adequate sanitary facilities including toilets, toilet paper, wash basins etc. to all workers on site and for enforcing the proper use of these facilities.

Toilet facilities shall be serviced regularly and the waste material generated from these facilities shall be disposed of at a registered waste water treatment works/macerator and relevant permits for transportation of waste and proof of servicing and disposal shall be maintained.

Toilets and latrines shall be easily accessible and shall be positioned within walking distance from wherever employees are employed on site, and away from sensitive areas. Use of open areas (i.e. the veld) is not allowed. For projects of high mobility a mobile toilet facility shall be made available by the Contractor.

Outside toilets shall be provided with locks and doors and shall be secured to prevent them from blowing over. Toilets must not be placed in areas susceptible to flooding and high winds. The Contractor shall arrange for regular emptying of toilets and shall be entirely responsible for enforcing their use and for maintaining such facilities in a clean, orderly and hygienic condition to the satisfaction of the Transnet CM.

5.18 Waste Management

Waste shall be grouped into "**general**" or "**hazardous**", depending on its characteristics. The classification shall determine handling methods and the ultimate disposal of material.

General waste which is likely to be generated on site during construction include but not limited to the following:

- Trash (waste paper, plastics, cardboard, etc.) and food waste from offices, warehouses and construction personnel;
- Uncontaminated construction debris such as used wood and scrap metal; and
- Uncontaminated soil and non-hazardous rubble from excavation or demolition.

The Contractor shall classify all waste expected to be generated during the construction period. Examples of typical construction waste which could be expected on the site and how they should be classified are indicated in the following table:

TABLE 2: EXAMPLE OF CONSTRUCTION WASTE CLASSIFICATION

Waste	Classification	
	Hazardous	General
Aerosol containers	X	
Batteries, light bulbs, circuit boards, etc.	X	X
Clean soil		X
Construction debris contaminated by oil or organic compounds	X	
Domestic waste		X
Empty drums (depends on prior use)	X	X
Empty paint and coating containers		X
Explosive waste	X	
PCB waste	X	
Rubble (not contaminated by oil or organic compounds)		X
Waste Cable		X
Waste plastic		X
Waste paint and/or solvent	X	
Waste oil	X	
Waste concrete		X
Waste cement powder	x	
Waste empty cement bags (must be thoroughly decanted)		x
Waste containing fibrous asbestos	X	
Waste timber		X
Sewerage sludge	X	
Scrap metal		X

Waste	Classification	
	Hazardous	General
Chemically-derived sanitary waste	X	

Waste will be managed in accordance with the Waste Management Hierarchy depicted in Figure 1 below:

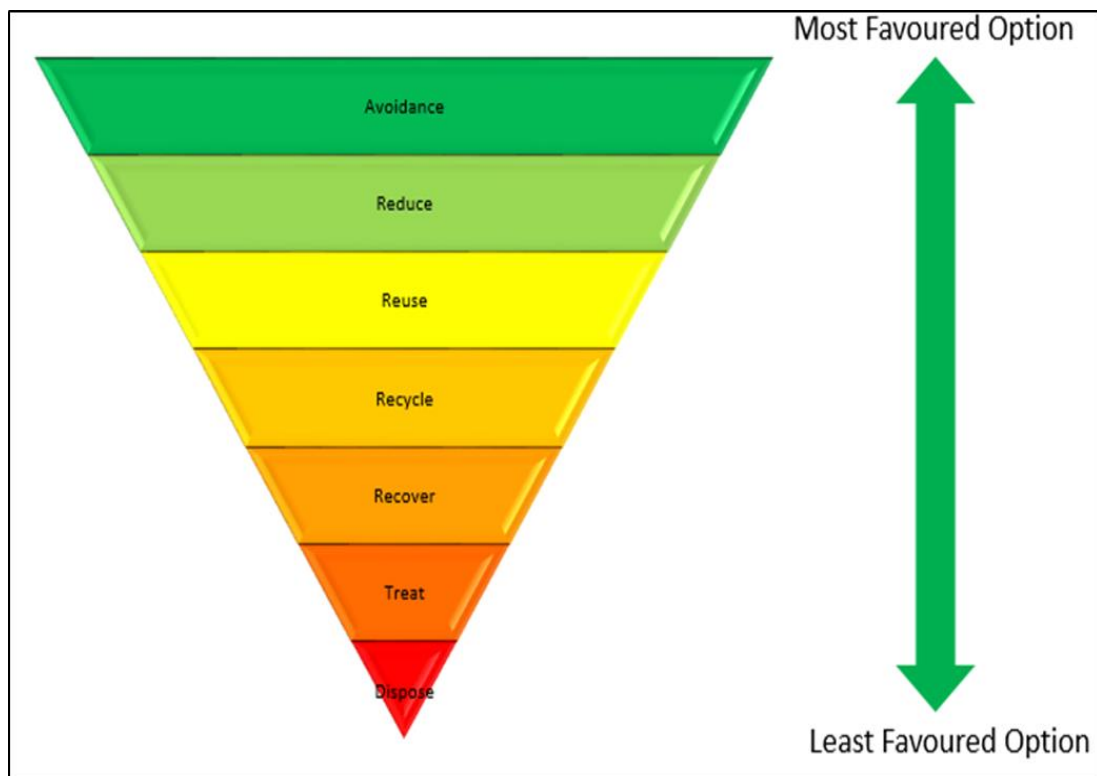


FIGURE 1: THE WASTE MANAGEMENT HIERARCHY

(Transnet Environmental Risk Management strategy and Framework, 2015:42)

- 1. Avoidance/Prevention:** using goods in a manner that minimises their waste components
- 2. Reduction/Minimisation:** reduction of the quantity and toxicity of waste generated during construction
- 3. Re-use:** removing an article from a waste stream for use in a similar or different purpose without changing its form or properties

- 4. Recycling:** separating articles from a waste stream and processing them as products or raw materials
- 5. Recovery:** reclaiming particular components or materials, or using the waste as a fuel
- 6. Treatment:** processing of waste by changing its form or properties in order to reduce toxicity and quantity
- 7. Disposal:** burial, deposit, discharge, abandoning or release of waste

The Contractor is responsible for the removal of all waste generated from site. The Contractor shall ensure that all waste is removed to appropriate licensed waste management facilities. (For the identification of an appropriate facility, the following source may be utilized: <http://sawic.environment.gov.za/>).

The Contractor shall manage **GENERAL WASTE** that is anticipated to be generated by operations as follows:

- Notify waste hauler when container is full so that it can be removed and replaced with an empty container/skip;
- No littering is allowed on site. In the event where staff mobility is high, refuse bags will be made available by the Contractor;
- Provide documented evidence of proper disposal of waste (Waste Disposal Certificate)

The Contractor shall recycle **GENERAL WASTE** (as far as practically possible) that is anticipated to be generated by its operations as follows:

- Obtain and label recycling containers for the following (whichever relevant) and locate them at secure designated locations on site:
 - Office Waste;
 - Aluminium;
 - Steel;
 - Glass;
 - Ferrous Metals;

- Non Ferrous Metals; and
- Waste Timber
- Establish recycled material collection schedule;
- Arrange for full bins to be hauled away;
- Spent batteries, circuit boards, and bulbs, while non-hazardous, require separate storage, special collection and handling; and
- No burning, burying or dumping of waste of any kind will be permitted.

The Contractor shall manage **HAZARDOUS WASTE** anticipated to be generated by his operations as follows:

- Obtain and provide an acceptable container with correct and visible classification label;
- Place hazardous waste material in allocated container;
- Inspect the container on a regular basis as per the Contractor's EMP;
- Track the accumulation time for the waste, haul the full container to the registered hazardous disposal site;
- Notify the waste hauler when container is full so that it can be removed and replaced with an empty container/skip; and
- Provide documented evidence of proper waste disposal of the waste (Waste Disposal Certificate).

The Contractor shall maintain the following waste records for submission to the Transnet PER on request:

- Date of waste management activity;
- Activity Type (reuse, recycle, recover, treat, dispose);
- Description (e.g. contaminated soil, medical waste, tyres, plastic, domestic waste etc.)
- Classification (General/Hazardous);
- Estimated Quantity in kilograms
- Disposal Site Name and Reference Number (where relevant);
- Method of Transport; and
- Signed Collection or Disposal Records

5.19 Workshops, equipment maintenance and storage

All vehicles and equipment must be kept in good working order to maximise efficiency and minimise pollution. Maintenance, including washing and refueling of plant on site must be done at designated locations approved on the Site Layout Plan. The Contractor must ensure that no contamination of soil or vegetation occurs around workshops and plant maintenance facilities.

All machinery servicing areas must be bunded. Stationary plant that leak harmful substances shall not be permitted on site. Washing of equipment should be restricted to urgent maintenance requirements only. Adequate wastewater collection facilities must be provided and the wastewater should be disposed of appropriately in accordance with its waste classification.

5.20 Vehicle and Equipment Refueling

5.20.1 Stationary/Designated Refuelling

No vehicles or machines shall be serviced or refueled on site except at designated servicing or refueling locations included on the approved Site Layout Plan.

The Contractor shall provide details of his refueling activities in his EMP or Refueling Method Statement. Facility design shall comply with the regulations of the National Water Act, (Act 36 of 1998), the Hazardous Substances Act, (Act 15 of 1973), the Environmental Conservation Act, (Act 73 of 1989), National Environmental Management Act, (Act 107 of 1998), and the Occupational Health and Safety Act, (Act 85 of 1993), mainly the Construction - and Hazardous Chemical Substances Regulations.

5.20.2 Mobile Refuelling

In certain circumstances, the refueling of vehicles or equipment in a designated area is not a viable/practicable option and refueling has to be done from a tank, truck, bowser or container moved around on site. In such circumstances, the Contractor may request approval from the Transnet CM to conduct mobile refueling subject to the following control measures:

- Secondary containment equipment shall be in place. This equipment shall be sized to contain the most likely volume of fuel that could be spilt during transfer.

- Absorbent pads or drip trays are to be placed around the fuel inlet prior to dispensing.
- Mobile refueling units are to be operated by a designated competent person.
- The transfer of fuel must be stopped prior to overflowing. Fuel tanks or refueling equipment on vehicles may only be filled to 90% carrying capacity.
- Mobile fuelling equipment must be stored in areas where they are not susceptible to collisions.
- Mobile refueling operations shall not take place within 30 meters of any watercourses or 7.5 meter from other structures, property lines, public ways or combustible storage.

All mobile refueling tanks are to be properly labelled and fire extinguishers with valid service dates shall be located near the fuel storage areas. These extinguishers must be of a suitable type and size.

5.21 Spill Response

The Contractor shall have adequate spill response materials/equipment on site which must be aligned with the volumes of hazardous substances used on site and the risk of pollution to sensitive environmental features.

The Contractor shall have an approved Spill Response Plan, either in his EMP or in the form of a method statement approved by the Transnet CM and Transnet PER.

The Contractor shall instruct construction personnel on the following spill prevention and containment responsibilities:

- All plants to be inspected daily to ensure that they are in good condition;
- Immediately repair all leaks of hydrocarbons or chemicals;
- Take all reasonable measures to prevent spills or leaks;
- Do not allow sumps receiving oil or oily water to overflow;
- Prevent storm water runoff from contamination by leaking or spilled drums of oil or chemicals; and
- Do not discharge oil or contaminants into storm water or sewer systems.

If a spill occurs on land, the Contractor must:

- Immediately stop or reduce the spill;

- Contain the spill;
- Recover the spilled product;
- Remediate the site;
- Implement actions necessary to prevent the spill from contaminating groundwater or off-site surface water; and
- Manage the contaminated material in accordance with Waste Management requirements in this document.

Any spill to water has the potential to disperse quickly, therefore, the spill must be contained immediately using appropriate containment equipment.

If a spill to water occurs, the Contractor must:

- Take immediate action to stop or reduce the spill and contain it;
- Notify the appropriate on-site authorities;
- Implement actions necessary to prevent the spread of the contamination by deploying appropriate absorbent material;
- Recover the spilled product; and
- Manage the contaminated material in accordance with Waste Management requirements in this document. Water samples to be taken downstream from where the spill took place to trace the extent of pollution.

All spills must be recorded as occurrences and managed in accordance with the requirements for Occurrences in this document.

5.22 Spray Painting and Sandblasting

Spray painting and sandblasting must be kept to a minimum. All painting must, as far as practicable, be done before equipment and material is brought on site. Touch-up painting is to be done by hand painting or as per the approved EMP or Method Statement.

The relevant Contractor will inform his EO when and where spray painting or sandblasting will be carried out prior to commencement of work. The Contractor's EO will monitor these activities to ensure that adequate measures are taken to prevent contamination.

Sand may only be acquired from approved commercial sources and in instances where sand is collected from the natural surrounds, such collection must be approved by the Transnet PER.

If the area is in confined or high (elevated) areas, a protection plan must be issued for approval by the Transnet PER.

5.23 Dust Management

The usage of water for dust management will be minimized as far as practically possible. Discretion must be applied in this regard especially relating to drought conditions. Only water from approved sources may be used. Dust control measures must be approved by the Transnet PER prior to commencement of the Works.

The following minimum dust management practices must be implemented on site:

- Vehicles must be operated within speed limits, where no speed limit has been specified, the limit shall be 40km/h;
- Haulage distances must be minimized as far as reasonable practicable;
- Where water suppression is insufficient or impractical, environmentally friendly soil stabilizers must be used;
- Stockpiles and open areas that may cause dust must be stabilized and vegetated where required;
- Dust suppression measures must be implemented on inactive construction areas. (An inactive construction site is one on which construction will not occur for a month or more);
- Disturbance of natural vegetation must be minimized to reduce potential erosion, runoff, and air-borne dust;
- Material in transit must be loaded and contained within the load bin of the vehicle in such a way as to prevent any spillage or creation of dust clouds. If necessary, the load bin of the vehicle shall be covered with a tarpaulin;

5.24 Storm Water and Dewatering Management

Apart from runoff from overburden emplacements and stock piles, storm water can also be contaminated from batch plants, workshops, vehicle wash-down pads, etc., and contaminants during construction may include hydrocarbons from fuels and lubricants, sewerage from employee ablutions and excess fertilizer from rehabilitated areas, etc.

Discharges to controlled waters such as the sea, rivers, and groundwater or to sewerage systems are controlled under South African Water Legislation. The following specific measures are required:

- Temporary drainage must be established and maintained on site during the construction period until permanent drainage is in place. Secondary drainage that prevents erosion must be provided, where necessary.
- Contractors must employ good housekeeping in their areas to prevent contamination of drainage water.
- Stagnant water shall be cleared at a frequency approved by the Transnet PER.
- Any surface water flows off-site must be approved by the Transnet PER. Where necessary, silt traps shall be constructed to ensure retention of silt on site and cut-off ditches shall be constructed to ensure no runoff from the site except at points where silt traps are provided. The Contractor shall be responsible for checking and maintaining all silt traps for the duration of the project.
- The removal from groundwater is defined as a water-use under the National Water Act 36 of 1998. Therefore, it must be ensured that the project has been authorised by the Responsible Authority to remove and discharge groundwater prior to dewatering taking place. If applicable, the Contractor shall be responsible for collection, management, and containment within the site boundaries of all dewatering from all general site preparation activities.
- On-site drainage shall be accomplished in accordance with a plan approved by a suitably qualified civil engineer.

5.25 Erosion Control

Erosion control measures will be designed, implemented, and properly maintained in accordance with best management practices which will include, but not limited to the following:

- Activities must be scheduled to minimise the extent of disturbance of an area at any one time;
- Re-vegetation must be implemented as early as feasible;
- Construction traffic must be properly managed and controlled;
- Areas must be graded to the extent feasible at drainage ditches;
- Loose soil will be compacted as soon as possible after excavation, grading, or filling;
- Silt fences, geo-textiles, temporary rip-rap, soil stabilisation with gravel, diversionary berms or swales, small sedimentation basins must be used;
- The transport of sediment must be minimised;
- An erosion and sedimentation control plan must be developed, approved by the Transnet PER and communicated to staff; and
- The Contractor shall be responsible for checking and maintaining all erosion and sedimentation controls.

5.26 Noise Management

- The following specific measures are required:
- Keep all equipment in good working order;
- Operate equipment within its specification and capacity and don't overload machines;
- Apply regular maintenance, particularly with regards to lubrication;
- Operate equipment with appropriate noise abatement accessories, such as sound hoods;
- Relevant stakeholders shall be notified of any excessive noise-generating activities that could affect them;
- Ensure that the potential noise source will conform to the South African Bureau of Standards recommended code of practice, SANS 10103:2004 or the latest at the time, so that it will not produce excessive or undesirable noise when released;

- All the Contractor's equipment shall be fitted with effective exhaust silencers and shall comply with the South African Bureau of Standards recommended code of practice, SANS 10103:2004 or the latest at the time, for construction plant noise generation
- Contractor's vehicles shall comply with the Road Traffic Act, (Act 29 of 1989) when any such vehicle is operated on a public road.
- If on-site noise control is not effective, protect the victims of noise by ensuring that all noise-related occupational health provisions are met. (Occupational Health and Safety Act, (Act 85 of 1993).

5.27 Protection of Heritage Resources

5.27.1 Archaeological Sites

If an artefact on site is uncovered, work in the immediate vicinity shall be stopped immediately. The Contractor shall take reasonable precautions to prevent any person from removing or damaging any such article and shall immediately upon discovery thereof inform the Transnet CM and Transnet PER of such a discovery. The South African Heritage Resources Agency (SAHRA) or relevant Authority is to be contacted and will appoint an Archaeologist to investigate the find. Work may only resume once clearance is given in writing by the Archaeologist.

5.27.2 Graves

If a grave is uncovered on site, or discovered before the commencement of work, all work in the immediate vicinity of the grave shall be stopped and the Transnet CM and PER informed of the discovery. The South African Heritage Resources Agency (SAHRA) or relevant Authority should be contacted and in the case of graves, arrangements made for an undertaker to carry out exhumation and reburial. The undertaker will, together with the SAHRA, be responsible for attempts to contact family of the deceased and for the site where the exhumed remains can be re-interred.

5.28 Fire Prevention

Fires shall only be allowed in facilities or equipment specially constructed for this purpose.

A firebreak shall be cleared and maintained around the perimeter of the camp and office sites where and when necessary. In cases where construction is taking place in a Critical Biodiversity Area as listed under NEM:BA; it must be ensured that the requirement of a firebreak is screened against the NEMA Listing Notice 3 to confirm legislative requirements.

All conditions incorporated in the requirements of the Occupational Health and Safety Act shall be implemented.

5.29 Water Protection and Management

No water shall be abstracted from any water course (stream, river, or dam) without the expressed permission of the Transnet CM and Transnet PER. Such permission shall only be granted once it can be shown that the water is safe for use, that there is sufficient water in the resource to meet the demand, and once permission has been obtained from the Department of Water and Sanitation in accordance with the requirements of the National Water Act (Act 36 of 1998).

Water for human consumption shall be available at the site offices and at other convenient locations on site. The generally acceptable standard is that a supply of drinking water shall be available within 200m of any point on the construction site.

Method Statement(s) must be prepared by the Contractor for the various water uses. The Contractor shall keep a record of the quantities of water used on-site during construction (including use by sub-contractors), irrespective of the purpose of use.

5.30 Protection of Fauna and the collection of firewood

On no account shall any hunting or fishing activity of any kind be allowed. This includes the setting of traps, or the killing of any animal caught in construction works.

On no account shall any animal, reptile or bird of any sort be killed. This specifically includes snakes or other creatures considered potentially dangerous discovered on site. If such an animal is discovered on site, an appropriately skilled person should be summoned to remove the creature from the site. Consideration should be given to selection and nomination of such a person prior to site establishment. If no-one is available, training should be provided to at least two site staff members.

The Contractor shall provide adequate facilities for all his staff so that they are not encouraged to supplement their comforts on site by accessing what can be taken from the natural surroundings. The Contractor shall ensure that energy sources are available at all times for construction and supervision personnel for heating and cooking purposes.

5.31 Environmental Awareness Training

An Environmental Awareness Program is considered a necessary part of the Construction Environmental Management Plan for the Project. Training of the appropriate construction personnel will help ensure that all environmental regulations and requirements are followed which must be defined in the relevant Method Statement to be prepared by the Contractor.

Objectives of environmental awareness training are:

- Environmental Management – protecting the environment from the effects of construction by making personnel aware of sensitive environmental resources.
- Regulatory compliance – complying with requirements contained in project – specific permit conditions, also complying with requirements in regional and local regulations.
- Problem recognition and communication – training personnel to recognise potential environmental problems, i.e. spills, and communicate the problem to the Contractor's EO for a solution.
- Liability control - non-compliance with regulatory requirements can lead to personal and corporate liability.

All individuals on the Project construction site will need to have a minimum awareness of environmental requirements and responsibilities. However, not all need to have the same degree of awareness. The required degree of knowledge is greatest for personnel in the Safety, Health, and Environmental Sections and the least for the manual personnel.

The Contractor shall present environmental awareness programmes on a weekly/bi-monthly basis (depending on project requirements) and keep record of all the environmental related training of the personnel.

5.32 Handling and Batching of Concrete and Cement

Concrete batching shall only be conducted in demarcated areas which have been approved by the Transnet CM and Transnet PER.

Such areas shall be fitted with a containment facility for the collection of cement-laden water. This facility shall be bunded and have an impermeable surface protection so as to prevent soil and groundwater contamination. Drainage of the collection facility will be separated from any infrastructure that contains clean surface runoff.

The batching facility will not be placed in areas prone to floods or the generation of stagnant water. Access to the facility will be controlled so as to minimise potential environmental impacts. Hand mixing of cement and concrete shall be done on mortarboards and/or within the bunded area with impermeable surface or concrete slab. Bulk and bagged cement and concrete additives will be stored in an appropriate facility at least 10m away from any watercourses, gullies and drains.

Waste water collected in the containment facility shall be left to evaporate. The Contractor shall monitor water levels to prevent overflows from the facility. It is acknowledged that all waste water will evaporate; it must be ensured that the remaining water can be pumped into sealed drums for temporary storage and must be disposed of as liquid hazardous waste at an authorised hazardous waste management facility.

All concrete washing equipment, such as shovels, mixer drums, concrete chutes, etc. shall be done within the approved washout facility. Water used for washing shall be restricted as far as practically possible.

Ready-mix concrete trucks are not allowed to wash out anywhere other than in an area designated and approved by the Transnet CM and PER for this purpose.

The Contractor shall periodically clean out hardened concrete from the wash-out facility or concrete mixer, which can either be reused or disposed of as per accepted waste management procedures.

Empty cement and bags, if temporarily stored on site, must be collected and stored in weatherproof containers. Used cement bags may not be used for any other purpose and

must be disposed of on a regular basis in accordance with the Contractor's solid waste management system.

Sand and aggregates containing cement will be kept damp to prevent the generation of dust.

Concrete and cement or any solid waste materials containing concrete and cement will be disposed of at a relevant registered disposal facility and SDCs kept on the file. Where disposal facilities for general waste are utilised, written consent from the relevant municipality must be obtained by the Contractor and filed in the Green file.

5.33 Stockpiling, Soil Management and Protection of Flora

The Contractor shall measure the extent of all areas cleared for construction purposes and keep this figure updated. Sensitive areas shall be cordoned off and avoided in this regard.

Stockpiling may only take place in designated areas indicated on the approved site layout plan. Any area to be used for stockpiling or material laydown shall be stripped of all topsoil.

Clearance of vegetation shall be restricted to that which is required to facilitate the execution of the works. Vegetation clearance shall occur in a planned manner, and cleared areas shall be stabilised as soon as possible when and where necessary. The detail of vegetation clearing shall be subject to the Transnet CM's approval and shall occur in consultation with the Transnet PER.

Stockpiles must be positioned in areas sheltered from the wind and rain to prevent erosion and dispersion of loose materials. Stockpiled soil shall be protected by adequate erosion-control measures. Soil stockpiles shall be located away from drainage lines, watercourses and areas of temporary inundation. Stockpiles containing topsoil shall not exceed 2m in height unless otherwise permitted by Transnet.

Topsoil shall be stockpiled separately from other materials and prevented from movement. Excavated subsoil, where not contaminated, must be used for backfilling, if possible, and topsoil for landscaping and rehabilitation of disturbed areas. Where topsoil

has become mixed with subsoil or is not up to the original standard, fertiliser or new topsoil shall be provided by the Contractor.

No vegetation located outside the construction site shall be destroyed or damaged. As far as is reasonably practicable, existing roads must be used for access to the site. Before site clearance takes place, vegetation surveys must be conducted and protected species identified.

No protected plant species shall be removed without written consent from the relevant authorities. The development of new embankments or fill areas must be undertaken in consultation with the Transnet PER.

No dumping of solid waste or refuse shall be allowed within or adjacent to areas of natural vegetation.

The Contractor shall identify and eradicate all declared alien and invasive plant species occurring on site.

5.34 Traffic Management

Vehicles usage is permitted only on access roads. Vehicles should only be parked within designated parking areas as demarcated on the site layout plan.

Turning of vehicles should only take place within a clearly demarcated "turn area" located within the approved construction footprint.

The Contractor must co-ordinate the loading and offloading of material during the construction phase so as to ensure that vehicular movement is in one direction only at any one time and that side-tracks are not created on the site.

5.35 Transportation of Materials

The Contractor is responsible for ensuring that all suppliers and delivery drivers are aware of procedures and restrictions (e.g. no-go areas) in terms of the SOP CM and this Specification. Material must be appropriately secured to ensure safe passage between destinations during transportation. Loads must have appropriate cover, where ADTs are not utilised, to prevent spillage from the vehicles. The Contractor will be held responsible for any clean-up resulting from the failure to properly secure transported materials.

5.36 Borrow Pits and Quarries

The Contractor shall ensure that suppliers of rock and sand raw materials are in possession of the required permit/license and keep record of the quantity of material supplied.

The Contractor will not make direct use of any borrow pits and quarries unless the borrow pit has a valid permit, he has obtained written approval from the Transnet CM and Method Statement has been submitted and approved. The Method Statement will provide the detailed description of the location of the borrow pits and/or quarries and the procedures that will be followed to adhere to any pertinent national or local legislation (e.g. mineral extraction, rehabilitation, safety and noise levels).

5.37 Social and Labour Issues

The criteria for and selection of labourers, sub-contractors and suppliers for the project shall demonstrate preference for the local community and shall be aligned with the criteria set by Transnet SOC Ltd in appointing the Contractor. The Contractor shall keep records of the identity of all staff.

Under no circumstances shall the Contractors engage in formal discussions with landowners without prior consent by the Transnet CM.

No activity on private property shall be allowed without written consent by the relevant landowner and Transnet CM/Transnet PER.

Any damage to private property caused by the Contractor during the construction period, shall be repaired to the satisfaction of the Transnet CM, the Transnet PER and the landowner.

The Contractor shall keep record of any complaint raised during the construction period relating to the Contractor's activities.

No job-seekers shall be allowed on site and signs reflecting such shall be displayed on the notice boards.

5.38 Energy Management

The Contractor shall measure and keep updated records of the following:

- Electricity consumption (to be measured in Kilowatt Hours)
- Fuel consumption (to be measured in liters)

5.39 Handling, Storage and Management of Hazardous Substances

All hazardous materials/substances shall be stored in a secured, designated area that is fenced, banded and has restricted entry.

All storage shall take place using suitable containers to the approval of the Transnet CM and PER.

All hazardous liquids shall be located in a secure, demarcated area and an adequate bund wall (110% of the total volume stored) shall be provided. The floor and wall of the bund area shall be impervious to prevent infiltration of any spilled/leaked liquids into the soil.

No spillages or accumulated stormwater within this banded area will be allowed to be flushed from the bund into the surrounding area.

Hazard signs indicating the nature and volume of the stored materials shall be displayed on the storage facility or containment structure.

Weigh bills of hazardous substances shall be sourced from suppliers and kept on site for inspection by the Transnet PER.

The Contractor must provide a method statement detailing the hazardous substances that are to be used during construction, as well as the storage, handling and disposal procedures for each substance. Emergency procedures in the event of misuse or spillage that might negatively affect the environment must be specified.

Information on each hazardous substance will be available to all persons on site in the form of MSDS/SDS. Training and education about the proper use, handling, and disposal of the material will be provided to all workers handling the material.

The Contractor's EO must be informed of all activities that involve the use of hazardous substances to facilitate prompt response in the event of a spill or release.

5.40 Housekeeping

The Contractor must ensure proper housekeeping of the site for the duration of the project. If practical the contractor shall amongst construction personnel, assign one to be responsible for good housekeeping

Materials shall be stored in a neat and tidy manner in designated areas as per the approved site layout plan.

5.41 Rehabilitation

Contractors shall rehabilitate the entire site upon completion of work. Where applicable, rehabilitation must be in line with the measures outlined in the Project Environmental Specification. A rehabilitation plan will be submitted to the Transnet CM and PER for approval at least six weeks before project completion. The following, but not limited are critical issues to be included in the rehabilitation plan:

- Details of soil preparation procedures including proposed fertilisers or other chemicals being considered for use;
- A list of the plant species that will be used in the rehabilitation process. Note that these should all be indigenous species, and preferably species that are endemic to the area. The assistance of an appropriately qualified Botanist/Horticulturist should be sought in developing this list;
- Procedures for watering the planted areas (frequency of watering, methodology proposed etc.);
- An indication of the monitoring procedures that will be put in place to ensure the successful establishment of the plants (duration and frequency of monitoring, proposed criteria for declaring rehabilitation as being successful); and
- Procedures for the prevention of the establishment and spread of alien invasive species.

5.42 Documentation and Records Management

The Contractor's EO will complete and maintain copies of all documents and records and ensure that these documents and records are kept up to date.

The Contractor's EO will submit these documents to the Transnet PER on a frequency as agreed to with the Transnet PER, except where documents have remained unchanged in which case written notification to this effect must be provided to the Transnet PER. The Contractor's EO must ensure that electronic copies of these documents are saved on the Transnet system.

Once the construction activities have been completed and the Transnet PER has conducted a site closure inspection and notified the Contractor that site closure will be granted, all documents described above must be handed over to Transnet after which a Site Closure Certificate will be issued by the Transnet Project Manager.

NOTE: All documents/records are to be retained, within the Transnet Document Control System, for a period of 10 years. In the event of environmental documentation/record being lost before receiving a Site Closure Certificate, the Contractor will be penalised according to the specifications laid down in the Contract.

6. RECORDS

Refer to CEM SOP.

7. ANNEXURES


None.

ANNEXURE B

GENERIC HEALTH AND SAFETY SPECIFICATION AND POLICIES

Health and Safety Specification: Civils Framework Contracts

SIGNATORIES:

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1. Project Description

Transnet National Ports Authority (TNPA) is an Operating Division of Transnet SOC Ltd, mainly responsible for the management of the eight (8) commercial Sea Ports in South Africa. The Property and Facilities management sections under Commercial department own and operate extensive portfolio of assets as follows:

- a. Offices,
- b. Warehouses,
- c. Vacant land,
- d. Water site,
- e. Residential,
- f. Lighthouses and;
- g. Terminal Infrastructure (Roads, walkways, pathways and Buildings)
- h. Internal roads

TNPA is struggling to maintain these assets into a world class standard to keep up with nation's economic demands.

This framework contract deals with roads infrastructure which is part of the TNPA assets mentioned above.

Transnet National Ports Authority's (TNPA's) objective is to put in place a number of framework contracts for a range of commonly encountered works in the surfaced roads infrastructure, which can be readily accessed by Transnet in order to meet Transnet's mandate.

The framework contract will be valid for over a three-year term with contractors for the construction, maintenance, repair and/or rehabilitation of TNPA's surfaced roads infrastructure on an as and when instructed basis.

2. Scope and Purpose

This health and safety specification outlines the working behavior's and safe work practices that must be implemented and complied with by all Transnet National Ports Authority (TNPA) employees, Contractors, Consultants, Visitors and Suppliers, that will be undertaking activities associated with the Framework Contracts for Civil Works within the Central Region. The specification has been developed in accordance with the requirements of the Construction Regulation of 2014, Regulation 5(1)(b) as well as any other applicable legislation.

Appointed contractors must identify all requirements applicable to their scope of works and address these accordingly in their Contractor's Site Specific Health and Safety Management Plan. It is the Contractor's responsibility to ensure that all sub-contractors comply fully with all legal requirements as well as the requirements of this Specification.

This Health and Safety Specification will be reviewed and updated periodically as and when necessary to address and / or include:

- Changes in legislation;
- Client requirements;
- Leading practices; and
- Lessons learnt from incidents.

The scope of work for this Civils Framework.

The services over the term in various parts of the Central Region may include:

- a) Surfaced roads infrastructure – Capital infrastructure improvements:
 - the design and construction of new roads infrastructure and related works;
 - rehabilitation and upgrades of paved or surfaced roads infrastructure and related works.
- b) Paved and surfaced infrastructure – maintenance, alterations and repairs:
 - the repairs, removal, replacement and/or alterations of paved and surfaced infrastructure and related works;

The contractor may be required to subcontract the design services to a suitably experienced consultants or to a consultant contracted by TNPA in terms of a framework contract. There could be instances where Contractors in the Framework contract could be expected to perform activities or services of a Management contractor i.e. produce both the designs and perform the construction services.

3. Definitions

Acceptable Risk

A risk that has been reduced to a level that can be tolerated having regard for the applicable legal requirements and the Health and Safety Policy adopted for the project.

ALARP (As Low As Reasonably Practicable)

The concept of weighing a risk against the sacrifice needed to implement the measures necessary to avoid the risk. With respect to health and safety, it is assumed that the measures should be implemented unless it can be shown that the sacrifice is grossly disproportionate to the benefit.

Applicant (Permit to Work)

A person requesting permission to perform work for which a Permit to Work is required. Applicants must be authorised (in writing) to receive (or accept) Permits to Work and must be competent to do so by virtue of their training, experience and knowledge of the area or plant in which the work is to be performed.

Authorised Person (Permit to Work)

A person (typically a Project employee or an employee of the client) who has been authorised (in writing) by the nominated project management representative to issue Permits to Work within the scope of his designation. A person may only be appointed to issue Permits to Work if he has undergone training and has been assessed and found competent in systems, plant and equipment operation within the scope of his designation.

Barricade

A temporary structure that is erected as a physical barrier to prevent persons from inadvertently coming into contact with an identified hazard.

Battering

Sloping the sides of an excavation to a predetermined angle (usually less than the natural angle of repose) to ensure stability.

Benching

The creation of a series of steps in the sides of an excavation to prevent collapse.

Consequence

The outcome of an event expressed qualitatively or quantitatively.

Contractor

An employer performing construction work, or providing related or supporting services, on a project site.

Competent Person

A person who has in respect of the work or task to be performed the required knowledge, training, experience and as per OHS Act, 1993 (Act 85 of 1993) and Construction Regulations 2014.

Construction Supervisor

A competent person responsible for supervising construction activities on a construction site

Clearance Certificate

A signed declaration by an Isolation Officer that a specified hazardous energy source associated with a particular system, plant or item of equipment has been isolated in accordance with an approved Isolation and Lockout Procedure.

Discipline Lock (many locks with a restricted number of identical keys)

Attached at a Lockout Station or at a Local Isolation Point in order to lock out a system, plant or equipment. A Discipline Lock (e.g. A Low Voltage Electricity Discipline Lock) is owned by an Isolation Officer who has been authorised in writing to isolate and lockout a particular hazard (e.g. Low voltage electricity).

Equipment Lock (many locks with one unique key)

Attached directly to pieces of equipment in order to lock them out. Equipment Locks may only be used by Isolation Officers who have been authorised in writing to perform isolation and lockout procedures. The key must have a solid key ring that fits over an Isolation Bar.

Excavation

Any man-made cut, cavity, pit, trench, or depression in the earth's surface formed by removing rock, sand, soil or other material using tools, machinery, and / or explosives. Tunnels, caissons and cofferdams are specifically excluded and are not addressed in this standard.

First-Aid Injury (FA)

A first-aid injury is any one time treatment and any follow up visit for observation of minor scratches, cuts, burns, splinters and the like which do not normally require medical care. Such treatment is considered to be first aid even if administered or supervised by a medical practitioner. First aid includes any hands on treatment given by a first aider. (E.g. Band-Aid, washing, cleansing, pain, relief). The following procedures are generally considered first aid treatment:

- Application of Antiseptics.
- Application of Butterfly adhesive dressing or sterile strips for cuts and lacerations.
- Administration of tetanus shot(s) or booster(s). However, these shots are often given in conjunction with more serious injuries, consequently injuries requiring these shots may be recordable for other reasons.
- Application of bandages during any visit to medical personnel.
- Application of ointments to abrasions to prevent drying or cracking.

- Inhalation of toxic or corrosive gas, limited to the removal of the employee to fresh air or the one time administration of oxygen for several minutes.
- Negative X-Ray diagnosis.
- Removal of foreign bodies not embedded in the eye if only irrigation is required.
- Removal of foreign bodies from a wound if procedure is uncomplicated, for example by tweezers or other simple technique.
- Treatment for first degree burns.
- Use of non-prescription medications and administration of single dose of prescription medication on first visit for any minor injury or discomfort.

Hazard

A source of potential harm in terms of human injury or ill health, or a combination of these.

Hierarchy of Controls

A sequence of control measures, arranged in order of decreasing effectiveness, used to eliminate or minimise exposure to workplace health and safety hazards:

- Elimination – Completely removing a hazard or risk scenario from the workplace.
- Substitution – Replacing an activity, process or substance with a less hazardous alternative.
- Isolation (Engineering) Controls – Isolating a hazard from persons through the provision of mechanical aids, barriers, machine guarding, interlocks, extraction, ventilation or insulation.
- Administrative Controls – Establishing appropriate policies, procedures and work practices to reduce the exposure of persons to a hazard. This may include the provision of specific training and supervision.
- Personal Protective Equipment – Providing suitable and properly maintained PPE to cover and protect persons from a hazard (i.e. Prevent contact with the hazard).

Isolation and Lockout Procedure

A plant or equipment-specific procedure that describes the method, and sequence to be followed, for rendering equipment, plant and systems safe to work on.

Isolation Bar

A device used at a Lockout Station to which anyone is able to attach a Personal Lock making it impossible for an Isolation Officer to remove the key to the Equipment Locks, thus preventing the de-isolation of a system, plant or equipment while it is still being worked on. A Discipline Lock must always be the first lock attached to an Isolation Bar and last to be removed.

Isolation Officer

A person (typically a Project employee or an employee of the client) who has been authorised (in writing) by the nominated project management representative to perform isolation and lockout procedures. A person may only be appointed as an Isolation Officer if he has undergone training and has been assessed and found competent in the isolation and lockout of systems, plant and equipment within the scope of his designation.

Incident

An event (or a continuous or repetitive series of events) that results or has the potential to result in a negative impact on people (employees, contractors and visitors), the environment, operational integrity, assets, community, process, product, legal liability and / or reputation.

Likelihood

A description of probability or frequency, in relation to the chance that an event will occur.

Lost Time Injury (LTI)

Any occurrence that resulted in a permanent disability or time lost from work of one day/shift or more.

If an employee is injured and cannot return to work in the next shift (will ordinarily miss one whole shift), and the department brings the employee in to only receive treatment by the Supervisor/Return to Work Coordinator in that shift, this is still considered an LTI.

Lost Time Injury Frequency Rate (LTIFR) - Number of LTI's multiplied by 1 million or 200,000 and divided by labour hours worked.

Light Vehicle

A vehicle that:

- Can be licensed and registered for use on a public road;
- Has four or more wheels, and seats a maximum of 12 adults (including the driver);
- Requires the driver to hold only a standard civil driving licence; and
- Does not exceed 4.5 tonnes gross vehicle mass (GVM), which is the maximum loaded mass of the motor vehicle as specified by:
 - ◆ The vehicle's manufacturer; or
 - ◆ An approved and accredited automotive engineer, if the vehicle has been modified to the extent that the manufacturer's specification is no longer appropriate.

Examples of light vehicles include passenger cars, four-wheel drive vehicles, sports utility vehicles (SUV's), pick-ups, minibuses, and light trucks.

Any vehicle falling outside of this definition must be considered mobile equipment.

Medical Treatment Injury (MTI)

A work injury requiring treatment by a Medical Practitioner and which is beyond the scope of normal first aid including initial treatment given for more serious injuries. The procedure is to be of an invasive nature (e.g. Stitches, removal of foreign body).

The following procedures are generally considered medical treatment:

- Application of sutures (stitches).
- Cutting away dead skin (surgical debridement).
- Loss of consciousness due to an injury or exposure in the work environment.
- Positive X-Ray diagnosis (fractures, broken bones etc.).
- Removal of foreign bodies embedded in the eye.
- Removal of foreign bodies from the wound by a physician due to the depth of embedment, size or shape of object or the location wound.
- Reaction to a preventative shot administered because of an occupational injury.
- Sprains and strains - series (more than one) of hot and cold soaks, use of whirlpools, diathermy treatment or other professional treatment.

- Treatment of infection.
- Treatment for second or third degree burns
- Use of prescription medications (except a single dose administered on first visit for minor injury or discomfort.)

Mobile Equipment

A vehicle (wheeled or tracked) that generally requires:

- The driver to hold a specific state or civil license; or
- The operator to hold a nationally recognized certificate of competency.

Examples of mobile equipment include, but are not limited to, dump trucks, water trucks, graders, dozers, loaders, excavators, forklifts, tractors, back-actors, bobcats, mobile cranes, tele-handlers, drill rigs, buses and road-going trucks.

Near-Miss

An incident that has occurred that did not result in any injuries, illnesses, environmental or property damage but had the potential to cause an injury, illness, environmental or property damage.

Personal Lock

A single lock with one unique key controlled by the owner. Used for personal protection.

Regulation

In the context of this guideline, 'Regulation(s)' refers to the Construction Regulations, 2014 required by Section 43 of the Occupational Health and Safety Act 85 of 1993, published under Government Notice R 84 in Government Gazette 37305 of February 2014.

Risk

A combination of the likelihood of an occurrence of a hazardous event or exposure and the severity of injury or ill health that can be caused by the event or exposure.

Risk Assessment

A process of evaluating the risk arising from a hazard, taking into account the adequacy of any existing control measures, and deciding on whether or not the risk is acceptable.

Risk Management

The systematic application of management policies, processes and procedures to identifying hazards, analysing and evaluating the associated risks, determining whether the risks are acceptable, and controlling and monitoring the risks on an ongoing basis.

4. Abbreviations

DSTI - Daily Safety Task Instruction

CR – Construction Regulations

HIRA - Hazard Identification and Risk Assessment

IMS - Integrated Management System

MS - Management System

OHS Act - Occupational Health and Safety Act

SOC - Safety Observation and Conversation

VFL - Visible Felt Leadership

OHS - Occupational Health and Safety

SACPCMP - The South African Council for Project and Construction Management Professions, here in refer to as the registrar of Health and Safety Professionals

5. Contractor Health and Safety Management Plan

The contractor must prepare, implement and maintain a project-specific Health and Safety Management Plan. The plan must be aligned with the requirements set out in this specification as well as all relevant/applicable legislation. It must cover all activities that will be undertaken as part of the Project from mobilisation and set-up to rehabilitation and decommissioning.

The plan must demonstrate the contractor's commitment to health and safety and must, as a minimum, include the following:

- A copy of the contractor's **Health and Safety Policy**; in terms of the OHS Act section 7
- Procedures concerning **Hazard Identification and Risk Assessment**, including both Baseline and Task-Based Risk Assessments;
- Arrangements concerning the identification of applicable **Legal and Other Requirements**, measures to ensure compliance with these requirements, and measures to ensure that this information is accessible to relevant personnel;
- Details concerning **Health and Safety Objectives** – a process must be in place for setting objectives (and developing associated action plans) to drive continual improvement;
- Details concerning **Resources, Accountabilities and Responsibilities** – this includes the assignment of specific health and safety responsibilities to individuals in accordance with legal or project requirements, including the appointment of a Project Manager, Health and Safety Officers, Supervisors, Health and Safety Representatives, and First Aiders;
- Details concerning **Competence, Training and Awareness** – a system must be in place to ensure that each employee is suitably trained and competent, and procedures must be in place for identifying training needs and providing the necessary training;
- **Communication, Participation and Consultation** arrangements concerning health and safety, including Safety Observations and Coaching, Toolbox Talks, Daily Safe Task Instructions, project health and safety meetings, and notice boards;
- **Documentation and Document Control** – project-specific documentation required for the effective management of health and safety on the project must be developed and maintained, and processes must be in place for the control of these documents;
- Processes and procedures for maintaining **Operational Control**, including rules and requirements (typically contained in Safe Work Procedures) for effectively managing health and safety risks, particularly critical risks associated with working at heights, confined spaces, mobile equipment and light vehicles, lifting operations, hazardous chemical substances, etc.;
- **Emergency Preparedness and Response** procedures;
- **Management of Change** – a process must be in place to ensure that health and safety risks are considered before changes are implemented;

- **Sub-contractor Alignment** procedures – a process must be in place for the assessment of sub-contractors and suppliers with regard to health and safety requirements and performance (before any contract or purchase order is awarded);
- **Measuring and Monitoring** plans, including a plan for the measuring and monitoring of employee exposure to hazardous substances or agents (e.g. Noise, dust, etc.) In order to determine the effectiveness of control measures;
- **Incident Reporting and Investigation** procedures describing the protocols to be followed with regard to incident reporting, recording, investigation and analysis;
- **Non-conformance and Action Management** procedures concerning the management of corrective actions;
- **Performance Assessment and Auditing** procedures concerning health and safety performance reporting, monthly internal audits to assess compliance with the project health and safety requirements, and daily site health and safety inspections; and
- Details concerning the **Management Review** process followed to assess the effectiveness of health and safety management efforts.

Prior to mobilisation, the Health and Safety Management Plan must be forwarded electronically, and as a hard copy, to the nominated TRANSNET project management representative for review. The plan will be audited for completeness and, if found to be adequate, will be accepted (typically “with comments”). Work may not commence until the plan has been accepted.

Once the plan has been accepted, the contractor must action and resolve any issues within 30 days from the start of work.

If the issues requiring corrective action are not resolved within this 30 day period, the contractor will be required to stop any work related to the outstanding actions until they have been resolved.

Any proposed amendments or revisions to the contractor’s Health and Safety Management Plan must be submitted to the nominated project management representative for acceptance.

Should it be identified that the contractor has overlooked a high risk activity, and as a result has omitted the activity and associated control measures from the Health and Safety Management Plan, the plan will not be approved.

6. Policy

The contractor must develop, display and communicate a Health and Safety Policy that clearly states the contractor’s values and objectives for the effective management of health and safety as required by OHS Act of 1993, 7(3). These values and objectives must be endorsed by the contractor’s management representatives and must be consistent with those adopted for the project.

The policy must be signed and dated, and must be reviewed annually.

The policy must commit to:

- Compliance with all applicable legal requirements in the TRANSNET regulatory universe;
- The effective management of health and safety risks;

- The establishment of measurable objectives for improving performance, and the provision of the necessary resources to meet these objectives;
- The prevention of incidents; and
- Achieving continual improvement with regard to health and safety performance.

All employees of the contractor as well as the employees of any sub-contractors that may be appointed by the contractor must be made aware of the policy. This must be done through Health and Safety Induction Training and Toolbox Talks (refer to Sections 10 and 11).

A copy of the policy must be displayed in each meeting room and on each notice board.

7. Hazard Identification and Risk Assessment

Detailed hazard identification and risk assessment processes must be followed for all work to be performed as well as for all associated equipment and facilities as required by the Construction Regulation of 2014, Regulation 9(1) – (7).

The Client will provide a baseline risk assessment informing the contractor on the hazards and risks on site. The Contractor must ensure that effective procedures and risk assessment systems are in place to control hazards and to mitigate risks to levels that are as low as is reasonably practicable.

The risk assessment processes must be applied to:

- The full life cycle of the project;
- Routine and non-routine activities;
- Planned or unplanned changes;
- All employees, sub-contractors, suppliers and visitors; and
- All infrastructure, equipment and materials.

The risk assessment processes and methodologies must be appropriate for the nature and scale of the risks, and must be implemented by competent persons.

The process of analysing and managing risk must include the following:

- Establishing the context of the risk assessment;
- Identifying hazards and determining possible risk scenarios (unwanted events);
- Evaluating risks and assigning ratings (classification);
- Recording the risk analysis in a risk register;
- Managing risks according to their classification (prioritising for action);
- Identifying and implementing control measures (through the application of the Hierarchy of Controls) to ensure that risks are managed to levels that are as low as is reasonably practicable (ALARP);
- Developing action plans for reducing risk levels (where possible);
- Verifying the completion of actions;
- Re-evaluating the risks and classifications as appropriate; and
- Reviewing and updating the risk register.

7.1 Baseline Risk Assessments

Prior to site establishment, TRANSNET (the Client) will conduct a Baseline Risk Assessment identifying foreseeable hazards and risk scenarios associated with the contractor's scope of work on the project site(s) as required by Construction Regulations of 2014, regulation 5(1)(a). Details concerning proposed control measures must be included. The risk assessment process must be facilitated by a competent person who has been appointed in writing and must involve the participation of the contractor's site management representatives, supervisory personnel and technical experts. An attendance register must be completed and retained for reference purpose. The Baseline Risk Assessment must be reviewed and approved by the Project Health and Safety Manager and Project Construction Manager.

A Risk Register comprised of all significant risks (i.e. Risks rated as major or catastrophic) identified for the project will be compiled using the information contained in the project Baseline Risk Assessment as well as the contractor's Baseline Risk Assessment. Key control measures for managing each of these risks will be specified in the register.

For the significant risks in particular, action plans will be developed for reducing the risk levels (where possible).

The project Risk Register will be reviewed and, if necessary, updated:

- On a quarterly basis during construction;
- When changes are made to a design and / or the construction scope, schedule, methods, etc. That result in a change to the risk profile; and
- Following an incident.

The contractor must ensure that the hazards, risk scenarios and control measures identified in the contractor's Baseline and Task-Based Risk Assessments are taken into consideration when developing, implementing and maintaining the various elements of the contractor's health and safety management system for the project (e.g. Competence, training and awareness requirements).

All persons potentially affected must be made aware of the hazards, risk scenarios and control measures identified in the contractor's risk assessments. This must be done through training, Toolbox Talks, and Daily Safe Task Instructions.

7.2 Task-Based Risk Assessments

The contractor must carry out detailed project-specific Task-Based Risk Assessments which must be reviewed and approved by the Client's Project Health and Safety Manager/Agent and Project Construction Manager prior to the commencement of any work.

The risk assessment process must be facilitated by a competent person who has been appointed in writing in terms Construction Regulations 9, clause (1). The contractor's site management representatives, supervisory personnel, technical experts (as required) and workforce personnel directly involved with the task being examined must participate in the risk assessment process. An attendance register must be completed and retained.

Please Note: Under no circumstances may a Contractor Health and Safety Officer perform a risk assessment in isolation. The active participation of all persons referred to above is mandatory.

A Task-Based Risk Assessment must at least:

- Be accompanied by a Work Method Statement (describing in sufficient detail how the specific job or task is to be performed in a logical and sequential manner);
- Provide a breakdown of the job or task into specific steps;
- Identify the hazards and potential risk scenarios associated with each step;
- Include consideration of possible exposure to noise, heat, dust, fumes, vapours, gases, chemicals, radiation, vibration, ergonomic stressors, or any other occupational health hazard or stressor;
- Describe the control measures that will be implemented to ensure that the risks are managed to levels that are as low as is reasonably practicable; and
- Assign an initial risk rating (without taking any control measures into consideration) and a residual risk rating (taking the identified control measures into consideration) to each risk scenario.

A Task-Based Risk Assessment must be reviewed and, if necessary, updated:

- On an annual basis (as a minimum);
- When changes are made to the associated Work Method Statement; and
- Following an incident.

7.3 Pre-Task Hazard Assessments

A pre-task hazard assessment must be completed whenever a change is identified while carrying out an activity. Any deviation from what was discussed during the Daily Safe Task Instruction (prior to the activity commencing), or anything that was not discussed, constitutes a change.

Before carrying out the particular task that involves the identified change, a few minutes must be spent identifying the hazards and risks associated with that task as well as suitable control measures.

8. Legal and Other Requirements

The Contractor must comply with the requirements of all applicable health and safety legislation as well as TRANSNET project-specific standards and procedures as amended from time to time.

The Contractor must compile and maintain a register of all legal and other requirements applicable to the work that will be carried out and / or services that will be provided. This register must be updated regularly to ensure that it remains relevant.

Applicable laws and standards must be appropriately communicated to all employees of the contractor (as well as the employees of any sub-contractors that may be appointed by the contractor) through training, Toolbox Talks, and Daily Safe Task Instructions.

9. Health and Safety Objectives

In order to drive continual improvement, the contractor must set project-specific health and safety objectives, and must develop improvement action plans to achieve these objectives. The contractor's objectives must be aligned with the objectives set for the project as a whole as required by the Construction Regulations of 2014.

Eliminating health and safety hazards, minimising health and safety risks, preventing incidents, injuries and illnesses, and ensuring legal compliance must be the primary considerations for setting objectives.

When setting objectives, consideration must be given to the following:

- Leading indicators such as inspection findings, audit findings, hazard reporting, and observations;
- Lagging indicators (i.e. Incidents including Near Hits);
- Leading practices and lessons learnt; and
- Injury frequency rates with due understanding that the goal is “no harm”.

The objectives must be specific and measurable. The improvement action plans must specify the resources (both human and financial) required to achieve the objectives, the person’s responsible, and realistic timeframes for completion. The contractor must ensure that adequate resources are allocated and that progress towards meeting the objectives is monitored regularly.

The objectives and associated improvement action plans must be documented and must be communicated to all contractor employees. Furthermore, to ensure that the objectives remain relevant, they must be reviewed on a quarterly basis and whenever significant change has taken place on the project (i.e. Changes to activities, scope of work, operating conditions, etc.).

10. Resources, Accountabilities and Responsibilities

The Contractor must adequately allocate resources, responsibility and accountability to ensure the effective implementation, maintenance and continual improvement of the contractor’s health and safety management system on the projects required by Construction Regulation Of 2014, regulation 7(2)(c).

For each role that carries health and safety accountability and / or responsibilities (including legislative requirements), a role description detailing the accountability and / or responsibilities must be documented.

All health and safety appointments (i.e. the assignment of specific health and safety responsibilities to individuals in accordance with legal or project requirements) must be done in writing. Documented proof of each appointment (i.e. a signed appointment letter) must be retained.

Contractor should not discharge any legal responsibilities to employees who are not legally appointed.

The contractor must comply with the requirements of all applicable legislation concerning health and safety related appointments and delegations for the project.

A health and safety organisational chart specific to the project must be documented and maintained. All roles that carry health and safety accountability and / or responsibilities must be included, and all individuals that carry health and safety appointments must be clearly identified.

The provision of dedicated health and safety professionals on the project must be appropriate for the nature and scale of the work to be carried out.

The contractor is solely responsible for carrying out the work under the contract whilst having the highest regard for the health and safety of all persons on the project site(s).

Health and safety is the responsibility of each and every individual on the project site(s), but in particular, it is the responsibility of the contractor's management team who must set the tone.

Visible commitment is essential to providing and maintaining a safe workplace. The contractor's managers and supervisors at all levels must demonstrate their commitment and support by adopting a risk management approach to all health and safety issues. These individuals must consistently take immediate and firm action to address violations of health and safety rules, and must actively participate in day to day activities with the objective of preventing harm.

The contractor's management representatives are responsible and accountable for health and safety performance on the project. Key responsibilities include the following:

- Preparing, implementing and maintaining a risk-based Health and Safety Management Plan specific to the work that will be carried out;
- Establishing, implementing and maintaining health and safety programmes and procedures to ensure that all work is carried out in compliance with the requirements of this specification, the contract, and all applicable legislation;
- Establishing, implementing and maintaining effective hazard identification and risk management processes and procedures to ensure that all reasonably foreseeable hazards are controlled in order to minimise risk;
- Providing the resources necessary to meet the requirements of this specification;
- Ensuring that all contractor employees have clearly defined responsibilities with regard to health and safety, and that these responsibilities are clearly communicated and understood;
- Establishing, implementing and maintaining a system for on-going training and assessment of skills and competence;
- Establishing, implementing and maintaining procedures to ensure that only qualified and competent personnel are permitted to work on the project site(s);
- Establishing, implementing and maintaining effective communication and consultative processes concerning health and safety for the duration of the contract;
- Maintaining operational control for the protection of all persons on the project site(s) as well as the public;
- Establishing, implementing and maintaining effective emergency preparedness and response procedures;
- Establishing, implementing and maintaining effective management of change processes and procedures;
- Establishing, implementing and maintaining effective incident reporting and investigation processes and procedures;
- Establishing, implementing and maintaining effective auditing and inspection processes and procedures; and
- Formally reviewing the contractor's Health and Safety Management System annually to ensure that the system continues to be effective in managing health and safety performance and meeting project requirements.

All costs associated with meeting these responsibilities shall be borne by the contractor.

Any cost associated with any work stoppage due to non-compliance with a health and safety requirement shall be for the contractor's account.

10.1 Contractor Construction Manager

The Contractor must appoint a competent Construction Manager who shall be responsible for the successful and safe completion of all work to be carried out by the contractor as required by the Construction regulations of 2014, regulation 8(1). Construction Manager to be registered as a Pr.CM with SACPCMP and in good standing with SACPCMP. Construction Manager to be full-time on site.

The contractor's Construction Manager shall be responsible for:

- Ensuring that a Health and Safety Policy that clearly states the contractor's values and objectives for the effective management of health and safety on the project is in place and is communicated to all contractor and sub-contractor employees;
- Ensuring that all applicable legal and project health and safety requirements are identified and complied with at all times;
- Ensuring that effective hazard identification and risk management processes are established and implemented for all work to be carried out by the contractor;
- Participating in the Baseline Risk Assessment for the contractor's scope of work (prior to site establishment);
- Participating in (and approving) all Task-Based Risk Assessments conducted for the work to be carried out by the contractor;
- Driving the achievement of agreed health and safety objectives;
- Ensuring that the necessary resources are made available for the effective implementation of the contractor's Health and Safety Management Plan;
- Ensuring that all work is adequately and competently supervised;
- Ensuring that all contractor employees have clearly defined responsibilities with regard to health and safety (assigned in writing), and that these responsibilities are clearly communicated and understood;
- Ensuring as far as is reasonably practicable that each contractor and sub-contractor employee is competent to perform his role, and has received appropriate workplace health and safety training and instruction;
- Managing all appointed sub-contractors with regard to health and safety performance;
- Establishing and maintaining effective communication and consultative processes to ensure that all contractor and sub-contractor employees are kept up to date with regard to health and safety information (e.g. Incidents and lessons learnt, leading practices, hazards, risks and control measures, etc.) And that feedback is provided promptly regarding issues and / or concerns raised;
- Participating in the project's Visible Felt Leadership (VFL) programme;
- Chairing monthly Contractor Health and Safety Meetings and attending monthly Site Health and Safety Meetings;

- Implementing programmes that encourage continual improvement and providing recognition for suggestions made by contractor and sub-contractor employees;
- Implementing the contractor’s Health and Safety Management Plan and associated Safe Work Procedures;
- Acting consistently and strictly against any contractor or sub-contractor employee who transgresses a health and safety rule or requirement;
- Ensuring that an effective management of change process is in place;
- Implementing, testing and maintaining an effective Emergency Response Plan for all contractor and sub-contractor activities, and ensuring that the plan is adequately resourced;
- Ensuring that workplace exposure of contractor and sub-contractor employees to hazardous substances or agents is measured and monitored to determine the effectiveness of controls and compliance with legal (and project) requirements;
- Ensuring that all incidents are reported without delay and are investigated thoroughly;
- Participating in investigations into significant incidents;
- Ensuring that accurate health and safety statistics are maintained, and that health and safety performance reports are compiled as required;
- Providing the necessary resources for regular health and safety audits and inspections to be conducted, and supporting the auditing process;
- Participating in health and safety audits, and carrying out workplace inspections;
- Ensuring that corrective actions (arising from incident investigations, audits, inspections, etc.) Are implemented, and that adequate resources are provided for this purpose; and
- Participating in an annual review of the contractor’s Health and Safety Management System.

10.2 Contractor Construction Health and Safety Officer(s)

The contractor must appoint a full-time Construction Health and Safety Officer for the duration of the contract who is registered with the SACPCMP (The South African Council for Project Construction Management Professions). The project site(s) (directly or through sub-contractors), must appoint full-time Construction Health and Safety Officers, the number of which depending on the scope, complexity, budget and high risk activities involved, as required by the Construction regulations of 2014, regulation 8(5).

The Construction Health and Safety Officer(s) must be on site when work commences at the start of the day and must remain on site until all activities for that day (including the activities of sub-contractors) have been completed. A Construction Health and Safety Officer must be present during all shifts, so if work is carried out over more than one shift per day, the contractor must make provision for additional Construction Health and Safety Officers.

Each Contractor Construction Health and Safety Officer shall be responsible for:

- Reviewing all applicable legal and project health and safety requirements and providing guidance to contractor and sub-contractor personnel (particularly the contractor’s Project Manager) to help ensure compliance at all times;
- Assisting with the implementation of effective hazard identification and risk management processes for all work to be carried out by the contractor;

- Participating in the Baseline Risk Assessment for the contractor's scope of work (prior to site establishment) and ensuring that identified control measures are implemented;
- Participating in all Task-Based Risk Assessments conducted for the work to be carried out by the contractor and ensuring that identified control measures are implemented;
- Conducting contractor health and safety induction training for all contractor and sub-contractor personnel;
- Compiling and maintaining all health and safety related documents and records required of the contractor;
- Communicating relevant health and safety information to contractor and sub-contractor personnel (e.g. Incidents and lessons learnt, leading practices, hazards, risks and control measures, etc.);
- Carrying out Safety Observations and Coaching (one per day);
- Evaluating (on a daily basis) the content of the Daily Safe Task Instructions (DSTI's) conducted by the contractor's appointed supervisors, and attending at least one DSTI each day;
- Attending monthly Contractor and Site Health and Safety Meetings;
- Assisting with the implementation of the contractor's Health and Safety Management Plan and associated Safe Work Procedures;
- Carrying out Planned Task Observations on an ad hoc basis;
- Assisting with the implementation, testing and maintenance of an effective Emergency Response Plan for all contractor and sub-contractor activities;
- Responding to workplace incidents (as appropriate);
- Participating in incident investigations;
- Maintaining accurate health and safety statistics (for the contractor and all sub-contractors), and compiling health and safety performance reports as required;
- Auditing the health and safety management system and workplace activities of the contractor and each sub-contractor on a monthly basis to assess compliance with the project health and safety requirements; and
- Tracking and reporting on the implementation of corrective actions (arising from incident investigations, audits, inspections, etc.).

The contractor must ensure that each Construction Health and Safety Officer is adequately equipped to enable him to perform his duties effectively. Each Construction Health and Safety Officer must be provided with the following:

- A computer with access to all necessary systems, including access to e-mail and the internet;
- A mobile telephone on contract or with adequate pre-paid airtime; and
- A vehicle where required or instructed by a nominated project management representative (depending on the size and location of the project site(s)).

A Construction Health and Safety Officer must over and above the SACPCMP registration as an Officer; be computer literate, fluent in English, and must have the following minimum qualifications, training and experience:

- At least 5 years' experience on construction health and safety projects relevant to the scope;
- National Diploma in Safety Management or National Diploma in Environmental Health or any equivalent/relevant health and safety qualification.
- SAMTRAC, NEBOSH or an equivalent training course with accredited health and safety service provider as a minimum qualification ;
- Experience and appropriate training with regard to implementing and maintaining a health and safety management system compliant with national legislation or an international standard;
- Experience and appropriate training with regard to construction related hazard identification and risk management processes;
- Competence, experience and relevant training with regard to incident investigation procedures and causation analysis;
- Health and safety auditing experience and training;
- A valid First Aid certificate of competency;
- Fire prevention and protection training; and
- A valid Driving Licence (light motor vehicle).
- Registered as a Construction Health and Safety Officer or Construction Health and Safety Manager with SACPCMP. The Client will stipulate which is required depending on the size of the project and on the risk.

The Client will stipulate whether a CHSO or CHSM is required depending on the size of the project and on the risks. Before placing a Construction Health and Safety Officer on the project site(s), the contractor must forward a copy of the person's CV to the nominated TRANSNET Project Management Representative or to the Health and Safety Manager for review and acceptance. A proposed candidate may be rejected should he/she not meet the experience and/or qualification requirements, or due to poor work performance on previous projects.

10.3 Contractor Construction Supervisors

The contractor must ensure that all project and/or construction works are supervised at all times by an adequate number of qualified, competent and appointed Construction supervisors who have experience in the type of work being carried out as required by Construction regulations of 2014, regulation 8(7) and 8(8).

No work may be carried out without an appointed Construction supervisor being physically present in the work area(s) and without a daily safety task instruction having been completed.

Each Contractor Construction Supervisor shall be responsible for:

- Ensuring that all work carried out under his supervision is done so in accordance with the requirements of all applicable legislation, rules, standards, specifications, plans and procedures;
- Participating in Baseline and Task-Based Risk Assessments;
- Ensuring that all employees under his supervision are made aware of the hazards, risk scenarios and control measures identified in relevant risk assessments;

- Ensuring that the control measures stipulated in all relevant risk assessments are in place and are implemented fully for all work carried out under his supervision;
- Ensuring that all employees under his supervision conduct pre-task hazard assessments when necessary;
- Driving the achievement of health and safety objectives set for his team;
- Ensuring that the necessary written appointments are in place for each employee under his supervision (e.g. First aider, mobile crane operator, etc.);
- Ensuring that all employees under his supervision attend all required training;
- Ensuring that no employee carries out any work that he is not competent to perform or has not been appointed to perform;
- Identifying training needs within his team;
- Carrying out Safety Observations and Coaching (one per day);
- Conducting a weekly Toolbox Talk with his team;
- Leading a Daily Safe Task Instruction discussion with his team;
- Attending Health and Safety Meetings as required;
- Maintaining a Health and Safety Management Information Notice Board in the work area for which he is responsible;
- Recording, on a daily basis, a description of the day's activities as well as a breakdown (by occupation) of the personnel on site under his supervision (e.g. 5 bricklayers, 2 carpenters, 3 welders, 22 general workers, and 1 supervisor);
- Ensuring that all Safe Work Procedures applicable to the work carried out under his supervision are adhered to and are fully implemented;
- Maintaining discipline and taking the necessary action whenever an employee under his supervision does not adhere to a rule or requirement;
- Carrying out Planned Task Observations (one per day);
- Ensuring that emergency response procedures are understood by all employees under his supervision and that these procedures are followed in the event of an emergency;
- Reporting all incidents immediately, participating in incident investigations, communicating the lessons learnt to all employees under his supervision, and implementing corrective actions where required; and
- Carrying out workplace health and safety inspections.

Each Construction supervisor must accept these responsibilities in writing as part of his appointment.

Each Construction supervisor must be equipped with a mobile telephone to ensure that effective communication can be maintained for the duration of the contract.

10.4 Health and Safety Representatives

The team of employees on site must have a health and safety representative deployed on the project site(s). A Health and Safety Representative must be elected and appointed. Taking into consideration the number of employees deployed, the geographical area in which the work is taking place, the different work disciplines, and the shift pattern (if applicable), the contractor must ensure that an adequate number of Health and Safety Representatives (at a minimum ratio of one Health and Safety Representative per 50 employees) are elected and appointed to effectively represent all site personnel as required by the OHS Act 85 of 1993, section 17 - 18.

Each Health and Safety Representative must attend an accredited training course for health and safety representatives. The cost of this training shall be for the contractor's account.

The contractor must make the necessary allowances for the Health and Safety Representatives to carry out their duties as specified in the applicable legislation.

The contractor must ensure that an appropriate sticker is affixed to the safety helmet of each Health and Safety Representative for identification purposes.

10.5 First Aiders

At least one trained and competent First Aider must be in place and must be appointed for the project site(s). Taking into consideration the number of employees deployed, the geographical area in which the work is taking place, the different work disciplines, and the shift pattern (if applicable), the contractor must ensure that an adequate number of First Aiders (at a minimum ratio of one First Aider per 50 employees) are in place and have been appointed to administer first aid treatment should this be required.

First Aid training must be done through an accredited training institution. The cost of this training shall be for the contractor's account.

The contractor must ensure that an appropriate sticker is affixed to the safety helmet of each First Aider for identification purposes.

10.6 Duties of Client

The duties of the Client, Transnet are as per the Construction regulations of 2014, regulation 5(1) – (8).

If the project requires a construction work permit as contemplated in CR 3(1), the client will have appointed a competent person in writing as a Construction Health and Safety Agent to act as his or her representative. The duties that are imposed by these Regulations upon a client, apply as far as reasonably practicable to the appointed Agent.

10.7 Duties of the Designer

The duties of the Designer are as per the Construction regulations of 2014, regulation 6(1) &(2).

A design team must be established to review all health and safety issues that may affect the safety of any structure during construction and ensure that all HAZOP recommendations are considered by the appointed principal contractor. The team must consider plans, calculations, specifications, instructions or drawings for a structure, including variations to a plan or changes to a structure or making decisions for a design that may affect the health or safety of persons during construction, occupy, use or carry out other activities in relation to the structure.

10.8 Duties of Principal Contractor

The duties of the Principal Contractor are as per the Construction regulations of 2014, regulation 17(1) – (8).

10.9 Duties of Contractor

The duties of the Contractor as per Construction Regulations of 2014, Regulations 7(2).

11. Competence, Training and Awareness

Each employee (including sub-contractor employees) must be suitably trained and competent, and must understand the health and safety hazards, risks and control measures associated with his work as required by the OHS Act 85 of 1993.

The contractor must implement systems and procedures to ensure that:

- The necessary competencies required by employees are identified (by occupation), along with selection, placement and any training requirements;

Please Note: Specific competency profiles and selection criteria (fitness for work) must be developed for all roles where significant health or safety risk exists.

Please Note: A formal training needs analysis must be carried out based on the competency profiles and a training matrix must be developed for the project.

Roles requiring technical certification, registration or licensing are identified and documented, and these roles are filled only by suitably qualified personnel;

- Minimum core health and safety skills required by employees in leadership and supervisory roles are identified and suitable training is provided including hazard identification and risk assessment, incident investigation, and health and safety interactions (i.e. Observation and coaching techniques);
- Competency-based training is provided and it includes operational controls (procedures and work instructions), management of change, and emergency response;
- All employees hold and maintain the required competencies (including appropriate qualifications, certificates and licences) and are under competent supervision;
- A site-specific induction and orientation programme that highlights health and safety requirements, procedures, and significant hazards, risks and associated control measures is in place for all new employees and visitors (understanding must be assessed);
- Personnel are trained and / or briefed on new or amended standards, rules, safe work procedures, risk assessments, etc.;
- Refresher training is carried out as required (e.g. Re-induction following an absence from site);
- Records of education, qualifications, training, experience and competency assessments are maintained on site for all employees; and
- The effectiveness of training is reviewed and evaluated.

Prior to the commencement of any work, including mobilisation and site set-up activities, the contractor must provide, to the satisfaction of the nominated project management representative, current documentation verifying that the contractor's employees, as well as the employees of any

appointed sub-contractors, are competent and have the necessary qualifications, certificates, licences, job skills, training and experience (as required by this specification and applicable legislation) to safely carry out the work that is to be performed.

The Contractor and sub-contractor must ensure that the following training takes place:

- health and safety induction training pertaining to the hazards prevalent on the site at the time of entry
- training for all persons required to erect, move or dismantle temporary works structures and instruction to perform those operations safely
- training of employees working from a fall risk position
- training to work or to be suspended on a platform which includes at least:
 - how to access and egress the suspended platform safely;
 - how to correctly operate the controls and safety devices of the equipment;
 - information on the dangers related to the misuse of safety devices; and
 - information on the procedures to be followed in the case of-
 - o an emergency;
 - o the malfunctioning of equipment; and
 - o the discovery of a suspected defect in the equipment;
 - o an instructions on the proper use of body harnesses.
- Training for all operators of construction vehicles and mobile plant.

A contractor must at all times keep on his or her construction site records of the health and safety induction training and such records must be made available on request to an inspector, the client, the client's agent or the principal contractor.

Please Note: Only certified copies of certificates, licences, etc. will be accepted.

An Employee Profile (dossier) must be completed for each employee who will be performing work on site. All documentation pertaining to an employee's competence (i.e. certified copies of qualifications, certificates and licences as well as proof of job skills, training and experience) must be maintained in this dossier.

If it is determined through observation that an employee is not yet competent to carry out a particular task in a safe and capable manner, the employee will be required to cease work immediately and must either be reassigned or be retrained at the contractor's expense.

The contractor must provide proof that the training institutions and trainers that are used are appropriately registered with a governing authority (a trainer's registration certificate or registration number alone will not be adequate). The following must be made available for verification purposes:

- Proof of registration of the training institution including the training programmes that the institution is accredited to provide; and
- For each trainer, proof of competency and registration for the specific training programmes presented.

Foreign qualifications held by employees in health and safety critical roles must be verified against the requirements of local legislation.

11.1 Health and Safety Induction Training

Each employee must attend all mandatory Health and Safety Induction Training applicable to the project. No employee will be permitted to enter any project work site until he has attended this training. Each employee must carry proof that he has completed the induction training and may be removed from a site if such proof cannot be produced on request, this as required by the Construction regulations of 2014, Regulation 7(5).

Furthermore, employees must attend (where applicable) Area-Specific Health and Safety Induction Training pertaining to the particular hazards identified in the area(s) where the employees will be working. No employee will be permitted to enter a work area until he has attended the relevant area-specific training.

All visitors must receive a visitor induction briefing before entering any project work site. However, this induction does not permit a visitor to enter a site unescorted. Visitors must be accompanied at all times by an appropriately senior employee who has been fully inducted.

11.2 Specific Training and Competency Requirements

The following specific training and competency requirements must be complied with, where applicable to the project.

Please Note: An employee must be trained, assessed and found competent before he will be given authorisation to perform certain tasks or fill certain roles.

Table 12-1: Specific Training and Competency Requirements

Training	Applicable To
Health and Safety Induction	All employees
Safety Observations and Conversations (Safety Interactions)	All employees
Risk Assessment*	All managers and supervisors
Incident Investigation*	All managers and supervisors
Safety Leadership	All managers and supervisors
Legal Liability*	All managers and supervisors
Health and Safety Rep*	All elected Health and Safety Representatives
First Aid Levels 1, 2 and 3*	All nominated First Aiders
Fire Fighting (Fire Extinguisher Use)*	All employees
Working at Height*	All employees working at elevated positions where using a safety harness is required
Confined Spaces*	All Confined Space Entry Officers and Standby Persons
Permit to Work	All Authorised Persons (i.e. Permit issuers) and all Applicants (i.e. Employees who will be applying for permits)
Isolation and Lockout	All Authorised Persons (i.e. Persons who authorise work that requires Isolation and Lockout), all Isolation Officers, and all Applicants (i.e. Persons who request permission to work on systems or equipment requiring Isolation and Lockout)
Mobile Equipment Site Licence*	All mobile equipment operators

Training requirements marked with an * must be arranged by the contractor through accredited external training institutions.

12. Communication, Participation and Consultation

The contractor must establish and maintain effective communication and consultative processes (allowing for a two-way dialogue) for the duration of the project to ensure that:

- All personnel are kept up to date with regard to health and safety matters (e.g. Hazards and risks, incidents and lessons learnt, leading practices, performance against objectives, etc.);
- General health and safety awareness levels are kept high;
- Prompt feedback is given to personnel with regard to health and safety issues or concerns that they raise; and
- Relevant, and often critical, health and safety related information (e.g. Design changes, instructions, reporting of hazardous conditions or situations, etc.) is effectively disseminated.

This must be achieved as follows:

12.1 Visible Felt Leadership (VFL) and Safety Observations and Conversations (SOCs)

The contractor's supervisory personnel (i.e. Managers and supervisors) must participate in the project's Visible Felt Leadership (VFL) programme. Each manager and each supervisor must, as part of his normal duties, perform Safety Observations and Coaching (SOCs). The intention of this programme is to encourage interaction between supervisors and workers concerning health and safety matters in order to:

- Reinforce behaviours consistent with standards, procedures and management system requirements;
- Correct behaviours inconsistent with standards, procedures and management system requirements; and
- Verify whether employees have the necessary training, certification, equipment, etc. To perform the work that they are carrying out.

Each manager, construction supervisor, safety personnel has a required number of SOCs to be completed per week. All SOCs that are recorded must be submitted to the nominated project management representative on a weekly basis.

The information that is gathered must be analysed and any trends that are identified must be acted on to correct unsafe behaviour or conditions.

12.2 Toolbox Talks

The contractor must prepare a Toolbox Talk on a weekly basis and must share it with all personnel for which the contractor is responsible (including all sub-contractors). Toolbox Talks must address health and safety issues that are relevant to the work performed on the project site(s) and must include information and / or knowledge sharing, lessons learnt from incidents that have occurred, information concerning specific hazards and / or risks and control measures to prevent injury, etc.

Attendance records must be kept and maintained in the contractor's health and safety file.

12.3 Daily Safe Task Instructions (DSTIs)

A Daily Safe Task Instruction (DSTI) is a pre-start discussion amongst the members of a work team, led by the appointed supervisor, aimed at anticipating hazards and potential risks associated

with the activities planned for the day or shift, and ensuring that the necessary control measures are in place to prevent incidents.

At the start of each day or shift, prior to the start of any work, each appointed supervisor must inspect the work area for which he is responsible and ensure that it is safe. He must then conduct a DSTI with his work team specifically concerning the tasks that they will be performing during the course of the day or shift. The relevant Task-Based Risk Assessment for the activity must be used as the basis for the discussion. The correct work method must be reiterated and the identified hazards, risks and control measures must be discussed with the team (each team member must be given the opportunity to contribute and participate in the discussion).

Any team member arriving late must first be taken through the information that was discussed (work method, hazards, risks and control measures) before being permitted to start working. If the work method changes after activities have already begun, the DSTI must be revisited, updated and re-communicated with the team, and the changes must be signed off by the relevant Contractor Health and Safety Officer.

Every member of the work team must sign the DSTI attendance register. The attendance records must be kept and maintained in the contractor's health and safety file.

The contractor's Health and Safety Officer must evaluate the content of the DSTI's daily to ensure that they are task-specific. Furthermore, the Health and Safety Officer must attend the DSTI discussion but must not lead the DSTI discussions, as this is the responsibility of the appointed supervisor.

12.4 Health and Safety Suggestions

All employees must be encouraged to submit suggestions to enhance health and safety management on the project site(s). A process must be in place for documenting, evaluating, implementing (as appropriate), archiving and recognising the improvement ideas.

12.5 Health and Safety Meetings

12.5.1 Contractor Health and Safety Meetings

The contractor must schedule and consistently hold monthly health and safety meetings. These meetings must be chaired by the contractor's Project Manager and the following persons must be in attendance:

- Contractor and sub-contractor management representatives;
- Contractor and sub-contractor supervisors;
- Contractor and sub-contractor appointed Health and Safety (Employee) Representatives;
- Contractor and sub-contractor Construction Health and Safety Officers; and

The meeting must address the following as a minimum:

- New incidents for the period and corrective actions taken or to be taken;
- Implementation status of outstanding actions associated with previous incidents;
- SOCs, PTOs and DSTIs carried out for the period and action required to correct trends identified;
- Results of any audits, inspections (including H&S Rep inspections) or site visits carried out;
- A look ahead to ensure that appropriate health and safety planning and preparation is done for upcoming work;
- Risk Assessments, Safe Work Procedures, etc. That are outstanding or due for review (as well as the quality of these documents); and

- Any other health and safety related matter.

The contractor must compile minutes of each meeting and such minutes must be signed off by the Chairperson as a true reflection and attendance records must be kept. These records must be maintained in the contractor's health and safety file.

12.5.2 Site Health and Safety Meetings

In addition to the Contractor Health and Safety Meetings, the Project will schedule monthly Site Health and Safety Meetings that the contractor must attend. These meetings will be chaired by the Project Construction Manager and the following persons must be in attendance:

- Contractor management representatives;
- Contractor Health and Safety Officers;
- The Project Health and Safety Manager;
- Project Health and Safety Advisors; and
- Client representatives (ad hoc).

The meeting will address the following as a minimum:

- Feedback from the contractor concerning health and safety performance for the period;
- New incidents for the period and corrective actions taken or to be taken;
- Implementation status of outstanding actions associated with previous incidents;
- SOCs, PTOs and DSTIs carried out for the period and action required to correct trends identified;
- Results of any audits, inspections or site visits carried out;
- A look ahead to ensure that appropriate health and safety planning and preparation is done for upcoming work;
- Risk Assessments, Safe Work Procedures, etc. That are outstanding or due for review (as well as the quality of these documents); and
- Any other health and safety related matter.

12.6 Health and Safety Performance Boards

The contractor must provide and maintain a Health and Safety Performance Board to be approved by the nominated project management representative and to be positioned at the entrance to the contractor's site office area. This board must display the following information as a minimum:

- The contractor's logo;
- Current manpower (heads) on site;
- Man-hours worked for the current month and project to date;
- Lost Time Injury Frequency Rate (LTIFR);
- Dates of last injuries (FAI, MTI and LTI);
- Number of hours worked since the last recorded LTI; and
- Names and contact telephone numbers for the appointed Project Manager and the Health and Safety Officers.

12.7 Health and Safety Management Information Notice Boards

The contractor must provide, for each construction site, a portable Health and Safety Management Information Notice Board to be placed in the work area. The following information and documentation, as a minimum, must be posted on these boards:

- The relevant Method Statements, Risk Assessments and Safe Work Procedures for the work that is being performed that day;
- The DSTI for the day;
- The most recent Toolbox Talk;
- Where applicable, all required permits and permissions for the work that is being performed;
- Safety Data Sheets (SDS) for any chemical substances being used;
- The health and safety objectives for the work team;

- Details of the last incident involving the work team;
- The most recent weekly health and safety report;
- Emergency procedures;
- A site plan indicating evacuation routes and emergency assembly point locations;
- First Aider and Health and Safety Representatives names, contact telephone numbers as well as recent photo; and
- The appointed supervisor's contact details.

12.8 Involvement (Other)

The participation of all contractor (and sub-contractor) employees in activities that promote improvements in health and safety performance must be encouraged. In particular, this must include their appropriate involvement in:

- Hazard identification, risk analysis and determining control measures;
- Incident investigation; and
- Reviewing policy and objectives.

All regulations, instructions, signage, etc. Must be communicated in a language understood by all employees.

Health and safety personnel must be actively involved in planning activities so that they have the opportunity to highlight hazards and risks associated with upcoming work well in advance to ensure sufficient time to arrange and / or implement the necessary control measures.

13. Documentation and Document Control

The contractor must develop and maintain project-specific documentation required for the effective management of health and safety on the project.

All documents related to the contractor's health and safety management system must be effectively controlled.

The document control process must:

- Provide for the review, revision and version control of documents;
- Uniquely identify documents (as appropriate) to control their use and function;
- Require approval of the documents for adequacy prior to issue;
- Clearly identify changes and record the status of any revisions to documents; and
- Provide for the effective distribution of documents to, and where necessary the timely removal of obsolete documents from, all points of issue and use.

The contractor must establish a process for the systematic control of health and safety records and related data. Controls must be in place for the creation, receipt, secure storage, maintenance, accessing, use and disposal of such records and data.

Each record must be legible, identifiable and traceable, and must contain adequate information and data for its purpose.

The confidentiality and security of records and data must be maintained in a manner that is appropriate for the nature of the records and data, and in accordance with any applicable data or privacy protection legislation.

Personal information originating from medical surveillance and occupational hygiene monitoring must be reported in a form that respects the privacy of the individual, but enables management to

fulfil their duty of care obligations to employees. The names of individuals must not be disclosed without their written authorisation.

Retention periods for all records (based on legal requirements and / or knowledge preservation considerations) must be established and documented in accordance with applicable legislation.

13.1 Contractor Health and Safety File Requirements

The contractor must compile and maintain a file containing all necessary health and safety related documentation. The contents of the file will be audited by a Project Health and Safety Representative on a monthly basis.

Required documentation to be compliant with the health and safety file assessment checklist. The contractor must ensure that an equivalent file is compiled and maintained by each appointed sub-contractor.

A copy of the Construction Work Permit (where applicable) will be made available to the Contractor for inclusion into the Health and safety file as well as to display at the entrance of the construction site.

14. Construction Work Permit (CWP)

Transnet appointed Construction Health and Safety Agent will obtain Construction Work Permit prior commencement of any construction work on the project and the permit will be issued to the Principal Contractor. The Principal Contractor must conspicuously display the permit at the entrance to the site for which that number is assigned.

The Principal Contractor must keep a copy of the permit in the health and safety file for inspection.

NB: No construction work can commence or be carried out before the CWP and number has been issued and assigned by the Department of Employment and Labour to Transnet. A site specific CWP number is not transferrable.

15. Operational Control

For project operations and activities, the contractor shall implement and maintain:

- Operational controls, as applicable to the organization and its activities;
- The organization shall integrate those operational controls into its overall OH&S Management System;
- Controls related to purchased goods, equipment and services;
- Controls related to contractors and other visitors to the workplace;
- Documented procedures, to cover situations where their absence could lead to deviations from the OH&S policy and the objectives;
- Stipulated operating criteria where their absence could lead to deviations from the OH&S policy and objectives.

15.1 Safe Work Procedures

The contractor must develop, document and implement Safe Work Procedures for all activities involving significant health or safety risk. These procedures must detail the control measures required to effectively manage the health and safety risks associated with the work activities.

Each Safe Work Procedure must be consistent with the Task-Based Risk Assessment completed for the activity.

Every person engaged in an activity for which a Safe Work Procedure has been developed must receive suitable training on the procedure.

Furthermore, the contractor must develop, document, communicate and implement formal procedures, work instructions and / or programmes for the operation, maintenance, inspection and testing of all plant and equipment (including protective systems and devices) brought onto the project site(s).

15.2 Planned Task Observations

All contractor, management supervisors must perform Planned Task Observations (PTOs) to verify that the control measures that have been identified in Safe Work Procedures (and associated Risk Assessments) are being adhered to and are being properly implemented, and to provide guidance where deviations are noted.

Each supervisor must complete at least two PTO per week involving one or more employees in his work team. This number of PTOs is at the discretion of TRANSNET's Project Manager or appointed Representative.

When an unsafe act or condition is identified, the supervisor must coach the work team to correct the act or condition in line with the Safe Work Procedure.

Where valid changes to the work method are identified, the supervisor must ensure that the Safe Work Procedure and Risk Assessment are updated to reflect the current practice.

Project representatives will carry out PTOs on contractor employees on an ad hoc basis. Should deviations from the contractor's Safe Work Procedures be observed, the work may be stopped until these deviations are rectified.

15.3 General Rules of Conduct

All persons are required to conform to the following rules of conduct while on the site.

The following acts are prohibited:

- Engaging in practical jokes, horseplay, scuffling, wrestling, fighting, or gambling;
- Assault, intimidation, or abuse of any person;
- Insubordination towards any supervisor or manager;
- Refusing to carry out a reasonable and lawful instruction concerning health and safety;
- Entry into any restricted area (including barricaded areas), unless authorised to do so by the responsible person;
- Unauthorised use / operation of any equipment or machinery;
- Negligently, carelessly or wilfully causing damage to any property;
- Destroying or tampering with safety devices, signs, or signals;
- The use of water from fire hydrants or hose reels for any purpose other than extinguishing a fire;
- The wilful and unnecessary discharging of fire extinguishers;
- Refusing to give evidence or deliberately making false statements during incident investigations;
- Bringing alcohol, drugs, or any other intoxicating substance onto site;
- Bringing a firearm, ammunition, or any other offensive weapon onto site;
- Bringing animals onto site;
- Running, except in an emergency;
- The use of cell-phones (or similar devices) whilst working on site;
- Sleeping on the job;

- Building fires on site, unless in a suitably constructed barbequing facility; and
- Pouring / pumping / flushing any substance (chemical / hydrocarbon / waste water) into a storm water drain, onto bare soil, or into any area where the substance is not effectively contained.

Any of the above actions may result in the temporary or permanent removal of the offending person(s) from site, as well as possible prosecution. The decision of the nominated project management representative shall be final and binding in respect of any dispute that may arise from the interpretation of these requirements.

TRANSNET will not get involved in contractor disciplinary rules and procedures. The contractor will simply be informed (with reasons) that the offending employee(s) will be denied access to the project site. Once the contractor has been informed, the employee(s) must be removed from the site immediately.

15.4 Site Access

The contractor may not hire any security services for the project site unless authorisation has been obtained in writing from a nominated project management representative.

15.4.1 Access Control

The contractor must comply with all access control, procedures and systems applicable to the project site.

Failure to comply with these requirements will be viewed as a serious safety breach and may result in the permanent removal of the individual(s) / contracting company from site or suspension without payment.

Access will be controlled as follows:

Contract period access – an access card valid for the full contract period will be issued to an individual once the following requirements have been met:

- Completion of a pre-employment medical examination which states that the employee is fit for duty;
- Completion of all required project induction training;
- Completion of special training / licensing if applicable (e.g. Driving/operating Licence).

Note: No access card will be issued unless proof of identification is provided (i.e. an identity document or a valid passport). For foreign labour, an access card will only be issued if a valid work visa is produced.

Note: A driving licence will not be accepted as proof of identification.

15.4.2 Trespassing

The contractor must ensure that no employee (including sub-contractor employees) trespasses on any land lying beyond the boundaries of the project site.

If instructed by a nominated project management representative to do so, the contractor must remove any employee who fails to comply with this requirement from the project.

The contractor's activities must be confined to the specified construction areas, and access to these areas may only be by means of specified routes.

All required barricading (fencing) must be erected and maintained by the contractor.

15.4.3 Visitors

Visitors (including reps and suppliers) must be advised in advance of the mandatory Personal Protective Equipment (PPE) requirements for the site, and must arrive with all of this PPE.

Upon arrival, all visitors must report to the Contractors designated Site Office where they must sign in.

All visitors must undergo a visitor induction briefing before entering the site.

Whilst on site, visitors must be accompanied at all times by an appropriately senior employee who has been inducted fully. The visitor(s) must be met at the designated Site Office, and when the visit is over, must be escorted back to the Site Office.

Note: Visitors are not permitted to perform any work on site.

Note: Any request (typically made by a government official) to carry out a site inspection must be referred to the nominated project management representative. The contractor must not arrange any such inspection without prior approval from the nominated project management representative.

15.4.4 Alcohol, Drugs and Other Intoxicating Substances

The contractor must ensure that all personnel under his authority do not at any time enter the site or perform any work whilst under the influence of alcohol, a drug, or any other intoxicating substance.

Selling or possessing drugs, alcoholic beverages or any other intoxicating substance on the site is strictly prohibited.

A drugs and alcohol testing program will be implemented. Persons entering the site will be daily tested which will be documented. Any person who tests positive for alcohol or drug consumption will be subject to disciplinary action and shall be permanently removed from the site.

Any person have the opportunity to rather report that he/she is under the influence before accessing the project site – in these case the employee may only be send home for the day by the responsible project manager representative but will then be tested for the following five days (each day) on his return to the project site. If it is found that the same person is frequently reporting that he/she is under the influence before even accessing the project site, It shall be the responsibility of the nominated project management representative to take disciplinary action and remove such a person's form the project site.

Should the actions and / or demeanour of an employee suggest possible narcosis or drunkenness, the employee must be removed from the site. This may be done without testing.

Note: All personnel involved in an incident / accident must immediately be subjected to an alcohol test and a drug test as part of the investigation.

15.4.5 Firearms, Ammunition and Offensive Weapons

Firearms, ammunition, and offensive weapons of any kind are strictly prohibited. No person may enter /shall not be permitted to enter the site carrying any such item.

15.5 Construction Vehicles

Construction vehicles, such as transportation vehicles, vehicles being used by the Contractors team, that is brought onto site must meet safety requirements. Each vehicle to be used on site must be inspected and approved by the nominated project management representative before a site access permit will be issued for the vehicle / equipment. No vehicle shall be permitted to enter the site unless it is duly authorised. Access permits are vehicle-specific and may not be transferred between vehicles.

The contractor must allow any vehicle that is brought onto site (including privately owned vehicles) to be searched at any time while on the premises, or when entering or leaving the premises.

The contractor is solely responsible for the safety and security of all vehicles (including private vehicles) that is brought onto the site. All road-going vehicles used by the contractor on the site must be roadworthy and registered with the relevant traffic authority.

A vehicle will not be permitted to enter the site in an un-roadworthy condition. Access will be denied if, for example, but not limited to:

- The vehicle has a defective exhaust system;
- A serious oil or fuel leak is evident;
- The vehicle has unsafe bodywork or is carrying an unsafe load;
- The vehicle is fitted with extraneous or non-standard equipment;
- Passengers are not seated properly;
- The vehicle is not fitted with a seat belt for each occupant; or
- The vehicle has any obvious mechanical defect;
- Pre-inspection requirements are not met.

Overloaded vehicles will not be permitted to enter the site. The driver / operator of any vehicle / mobile equipment must carry a copy of his appointment with him at all times. Each driver / operator must:

- Comply with all site / project rules and regulations pertaining to traffic and the safe operation of vehicles / mobile equipment;
- Obey all road signs;
- Obey all instructions given by security or emergency services personnel;
- Remain within the boundaries of the site; and
- Ensure that the vehicle that he is operating is never overloaded, and that loads are always properly secured.

In the interest of safety, only the minimum number of vehicles required by the contractor to complete the work under the contract will be permitted to enter the site. When not in operation, the contractor's vehicles / mobile equipment must be parked within the boundaries of his lay-down area or yard.

Parking is only permitted in designated parking areas. All cars are parked on site at the owner's risk.

In the event of a vehicle accident on site, the driver(s) must report the incident immediately and must remain at the scene until a nominated project management representative arrives, or until a nominated project management representative authorises him to leave (unless, of course, the driver requires medical attention).

15.5.1 Mobile Equipment

All Contractors must ensure that mobile equipment and light vehicles comply with relevant/applicable legislation.

Each contractor must provide evidence to the nominated project management representative that all light vehicles and mobile equipment to be used on the project (including, but not limited to, lift and carry cranes (or mobi-lifts), mobile cranes, forklifts, mobile elevating work platforms (e.g. Cherry pickers), tractors, dozers, dump trucks, haul trucks, graders, excavators, loaders, back-actors, drill rigs, and road-going cars, light delivery vehicles, and trucks) comply with the requirements of relevant/applicable legislation. This evidence must be provided prior to the equipment being brought onto the project site. The contractor remains responsible for meeting

this requirement even if the equipment to be used is leased or provided by a sub-contractor (i.e. not owned directly by the contractor).

An Equipment Profile (dossier) must be compiled for each light vehicle and each item of mobile equipment to be used on the project site. All mobile equipment and light vehicles (used for work purposes) must be subject to a risk assessment. The assessment must:

- Involve operators and maintenance personnel who will use and work on the equipment; and
- Address all aspects of safe operation including but not limited to handling, driver vision, brake failure, tyre blow out, and access and egress for operators and maintenance personnel.

Each light vehicle and each item of mobile equipment must be serviced and maintained as prescribed by the manufacturer of the vehicle or equipment. No major repairs or services may be carried out on site. No repairs may be carried out by a driver or operator. Only suitably qualified and competent persons may carry out repair work.

An appropriate pre-operation safety check based on a risk assessment must be carried out for each light vehicle or item of mobile equipment driven or operated for work purposes. For each vehicle or equipment type, an approved checklist must be in place (and must be used). The pre-operation check must include, but not be limited to, inspection and / or testing of the following safety critical features:

- Brakes (testing method must be provided);
- Wheels and tyres (including the spare);
- Lights and indicators;
- Steering;
- Seats and seat belts; and
- Windscreen and windows, including windscreen wipers and washers.

Should any critical feature be defective or damaged, the vehicle or equipment may not be operated until it has been fully repaired.

Supervisors must review the completed checklists on a daily basis to satisfy themselves that there are no major deficiencies that could place a driver or operator at risk. No person may drive or operate any light vehicle or item of mobile equipment without authorisation. All drivers and operators must be appointed in writing by the contractor's Project Manager.

No driver or operator may be appointed without proof that the individual has been trained, tested and found competent, or is currently licensed. The appointment letter must specify the type of vehicle or equipment for which authorisation is being given and must clearly confirm that the driver or operator:

- Is 18 (eighteen) years of age or older;
- Has undergone a medical examination and has been declared fit for work by an occupational medical practitioner; and
- Has received suitable training and has been found competent, or is in possession of a valid driving licence issued by a state, provincial or civil authority that is applicable to the class of vehicle or equipment that is to be driven or operated.

The principal accountability for preventing accidents and incidents lies with the driver or operator of a light vehicle or item of mobile equipment, as he is in full control of any given situation at any

given time. It must be stressed to each driver and each operator that safety is his prime responsibility – this must be clearly instructed and understood.

Drivers and operators must be empowered to stop driving or operating immediately should an unsafe condition arise, and refuse to drive or operate any light vehicle or item of mobile equipment that is defective and / or has any inoperative safety features. Similarly, a supervisor must never force a driver or operator to drive or operate a defective vehicle or item of equipment.

If a driver or operator does not adhere to the site rules and regulations, his appointment must be withdrawn and he must not be permitted to continue with his duties. If necessary, site access will be denied (either temporarily or permanently) to any driver or operator who is deemed to not be adhering to site requirements.

No person may drive or operate a light vehicle or item of mobile equipment if he suffers from a medical condition that places both him and those around him at risk of injury. A fit-for-work policy must be in place. Daily alcohol testing and random drug testing must be carried out.

Supervisors must regularly check on the physical condition of drivers and operators during the course of a shift. A system must be in place to manage driver fatigue. No eating or drinking is permitted while driving or operating a light vehicle or item of mobile equipment.

A mobile phone, whether hands-free or not, may not be used by the driver or operator of a light vehicle or item of mobile equipment unless the vehicle/equipment is parked in a safe location and not operational. Behaviour-based observations and coaching must include the operation of light vehicles and mobile equipment.

A site-specific traffic management plan must be compiled and submitted to the nominated project management representative for approval. The plan must include, but not be limited to, (where relevant to the scope of work) the following:

- Segregation of pedestrians, light vehicles, and mobile equipment where possible (using barriers where feasible);
- Systems to control the movement of mobile equipment in areas accessible to pedestrians, the movement of mobile equipment into and out of workshops, and pedestrian and light vehicle movement around mobile equipment;
- Setting of appropriate speed limits for vehicle types, road surfaces and environmental conditions;
- Installation and maintenance of road traffic control signs;
- Right-of-way rules (including overtaking restrictions);
- Overtaking protocols;
- Clear communication protocols for interactions between all vehicles and equipment;
- Procedures for light vehicles and / or mobile equipment entering hazardous or restricted areas;
- Standards for safe following distances based on operational circumstances, environmental conditions and near sight (blind spot) limitations of mobile equipment;
- The minimum safe distance to be maintained between light vehicles and mobile equipment (i.e. 50 metres unless positive contact is made);
- Designated parking areas for mobile equipment and light vehicles, including parking associated with maintenance areas;
- Parking procedures (e.g. Safe parking distances, safe parking locations, requirements for reverse parking, etc.);

- Systems to control approaching, refuelling, parking, boarding and disembarking mobile equipment (a driver or operator must exit the cabin and must disembark the vehicle or equipment entirely when his direct involvement with maintenance or servicing is not required);
- Guidelines for abnormal road conditions (e.g. Heavy rain, fog, or high winds) providing “go / no go” criteria and contact details for the person(s) responsible for making the “go / no go” decisions;
- Truck loading and unloading procedures to avoid material or objects falling from the vehicle;
- Guidelines for wide or abnormal loads including offsite transport; and
- Systems to control mobile equipment use in the vicinity of overhead power lines.

The Traffic management Plan must be reviewed/revised where changes to the works areas require. A risk assessment must be carried out prior to any changes being made to traffic movements or road systems.

Designated walkways (both indoors and outdoors) must be provided for pedestrians, and pedestrians must make use of these walkways. Good lighting must be provided along all walkways, particularly at road junctions. Wherever possible, rigid barricading must be used to separate pedestrians from moving light vehicles and / or mobile equipment.

All personnel must be transported to site and must be dropped off at a designated area. Controls must be in place to ensure the safety of people working on roads, including those working on broken-down vehicles.

High visibility clothing must be worn at all times whilst on the project site. Speed limits and traffic rules must be reviewed regularly and must be rigorously enforced. Local traffic rules must be complied with at all times.

Pedestrians must give way to light vehicles and / or mobile equipment except at pedestrian crossings. All light vehicles and mobile equipment must give way to emergency vehicles. Pedestrians and light vehicle drivers must be made aware of the blind spots associated with mobile equipment.

The driver or operator of a light vehicle or item of mobile equipment must stop the vehicle or equipment and sound the horn before proceeding at blind corners, where his view of the path or intended path is obstructed, and when entering or leaving a building. Whenever a light vehicle or item of mobile equipment is stopped or parked, the handbrake (if applicable) must be applied.

No light vehicle or item of mobile equipment may be left unattended with the engine running or with a key in the ignition. No light vehicle or item of mobile equipment may be parked so as to cause an obstruction to any roadway, passage or access way. No light vehicle or item of mobile equipment may be parked within 50 metres of a loading or off-loading point.

All loads must be secure and must be within the load limit of the vehicle or equipment. A load must be properly secured before the vehicle or equipment is set in motion. Adequate precautions must be taken for any overhanging load. No unauthorised light vehicle or item of mobile equipment may enter a restricted area or building.

15.5.2 Light Vehicles

All Contractors must ensure that Light vehicles have the following minimum safety features:

- Fixed seats and suitable seat (safety) belts for all occupants (i.e. Driver and all passengers);
- Roll-over protection for all vehicles intended to be driven on dirt or steep roads;
- Cargo barriers and load restraints for all vehicles designed for carrying loads (other than passengers), or that are unable to have cargo separated from the occupant-carrying space of the vehicle; and
- An air bag on the driver's side, and where available as a manufacturer fitted item, a passenger's air bag;
- A Reverse Alarm.

All Contractors must ensure that Light vehicles that interact with mobile equipment are equipped or fitted with:

- Systems that enable positive communication with the equipment operators (e.g. A two-way radio);
- A high visibility flag (e.g. A whip flag or buggy whip);
- An amber flashing light (revolving or strobe);
- Reflective taping; and
- High visibility signage (i.e. Vehicle call numbers) facilitating easy and positive identification from a reasonable distance.

All Contractors must ensure that Light vehicles carry:

- Emergency roadside triangles or beacons (three of either);
- Chock blocks for preventing uncontrolled movement of the vehicle when parked;
- A flashlight;
- A fire extinguisher (2.5kg DCP);
- A first aid kit; and
- Survival or emergency equipment (e.g. a vehicle recovery kit) suitable for the operating environment.

A change management process must accompany all vehicle modifications, including the attachment of any equipment. Examples of changes or modifications include, but are not limited to, any change or modification:

- Made to the overall structure or design of the vehicle body;
- Made to the original manufacturer-fitted type of tyres or wheels;
- Made to the suspension system of the vehicle;
- Made to the mechanical system of the vehicle;
- That may adversely alter the centre of gravity of the vehicle;
- That alters the load carrying capacity of the vehicle; and
- That may affect the ability of the vehicle to withstand a crash (e.g. the fitment of a "bull bar").

Vehicle selection must be based on a risk assessment where consideration is given to the tasks, the application, the environment, roll-over protection and the rating of sturdiness in the event of a crash.

All Contractors must have a formal inspection and preventative maintenance system in place to ensure that vehicles are maintained in a safe and roadworthy condition at all times and, as a minimum, are serviced in line with the vehicle manufacturer's service schedule.

Should any safety critical feature be defective or damaged, the vehicle must be withdrawn from service until it has been fully repaired. Inspection and maintenance must be undertaken on critical features such as:

- Wheels and tyres (including the spare);
- Steering, suspension and braking systems;
- Seats and seat belts;
- Lights, indicators and reflectors;
- Windscreen and windows, including windscreen wipers and washers;
- The vehicle structure itself; and
- Other safety-related items on the vehicle body, chassis or engine, including instrumentation.

Persons may only be transported in vehicles equipped with manufacturer fitted or approved seats and seat belts. Seat belts must be worn by all occupants of a light vehicle (i.e. the driver and all passengers) at all times.

Only the driver and one passenger are permitted in the cab (front) of a light delivery vehicle. No personnel may be transported in the load-bin of a light delivery vehicle, even if the vehicle is fitted with a canopy. Only tools and equipment may be transported in the load-bin. Furthermore, no persons may be transported in a trailer behind a vehicle.

A pre-operation vehicle safety check and familiarisation system must be in place and must be used by the driver. An approved checklist must be used. All vehicle faults that are recorded must be attended to immediately.

Light vehicle running lights (low-beam headlights) must be switched on at all times when the vehicle is in operation.

All Contractors must have a system in place to ensure that drivers receive adequate training to ensure that the vehicle intended to be operated or driven can be operated or driven safely. As a minimum, training must include:

- Behaviour-based defensive driving principles;
- Vehicle familiarisation, taking into account the handling dynamics of the vehicle, maximum number of passengers, load limits and various features;
- Loading and restraining principles where the vehicle to be operated is designed for carrying cargo loads;
- Education and awareness concerning driving and travel risks that may be encountered within the environment where the vehicle may be operated or driven, and the requirements pertaining to traffic rules and speed limits;
- Securing (locking) equipment to prevent unauthorised use;
- Emergency crash and breakdown procedures; and
- Basic mechanical principles, including how to change a tyre and perform an adequate pre-operation check.

15.5.3 Machinery

The contractor must ensure that all plant and equipment brought onto the site is:

- Appropriate for the type of work to be performed.
- Approved, inspected, tested, numbered and tagged (if appropriate) before being brought onto site.
- Properly maintained in accordance with the manufacturer's recommendations; and
- Placed on a register and checked at least once per month or as required by the applicable legislation.

Items of plant or equipment brought onto site by the contractor or his sub-contractors may be inspected by a nominated project management representative. Should the nominated project management representative determine that any item is inadequate, faulty, unsafe or in any other way unsuitable for the safe and satisfactory execution of the work for which it is intended, the contractor must, on instruction from the nominated project management representative, immediately remove the item from the site and replace it with a safe and adequate substitute.

15.5.4 Training and Licensing

No person may drive a light vehicle or operate an item of mobile equipment unless he has been trained, tested and found competent, or is currently licensed to drive or operate that specific vehicle or item of equipment. The training must address hazards and risks assessed for that specific vehicle; and the tasks for which it is to be used.

No person may be appointed to drive a light vehicle or operate an item of mobile equipment unless he is in possession of a valid medical certificate of fitness (issued by an occupational medical practitioner).

Each person required to drive a light vehicle or operate an item of mobile equipment on the project site must have a project-specific site licence or appointment to drive or operate that vehicle or item of equipment.

The Contractor must ensure that Licenses and Operators' competency certificates are valid for the duration of their activities on site. No training of drivers or operators may be carried out on site unless authorised by a nominated project management representative.

15.5.5 Tyre and Rim Safety

These requirements apply to tyres and rims with a rim diameter of 60cm (24 inches) or greater. Safe Work Procedures must be in place for all tyre maintenance and servicing activities and for tyre fire emergency response.

In the event of a tyre fire, an exclusion zone of 300 metres must be established and may only be accessed by emergency services personnel who are shielded while fighting the fire.

Restricted Work Zones must be established for tyre installation, removal and handling processes. All tyre and rim handling equipment must have fall back prevention in place prior to anyone entering the Restricted Work Zone.

No hot work (e.g. Welding or cutting) may be carried out on a rim (wheel) while the rim is fitted with a tyre – whether inflated or deflated. A periodic testing and / or inspection regime must be in place for tyres, rims (wheels), and assemblies.

All tyres and rims (wheels) must be made unserviceable when deemed unfit for service or before being sent off site for disposal. A tracking system must be in place to track the lifecycle of tyres and rims (wheels).

15.6 Access Road to Project Site

The contractor shall ensure that trained flagman are placed at strategic positions that may be identified along the access roads where high risk activities are being undertaken and/or at points of traffic interface.

The project access roads may not be closed without permission from a nominated project management representative.

15.7 Signs and Notices

The contractor must ensure that all required safety signs and notices are prominently displayed in accordance with the applicable legislation and good safety practice. Signs and notices must be in English as well as any other language(s) commonly spoken on the project site.

All symbolic signs must comply with the applicable national standards. No person may deface or damage any safety sign or notice. No person may remove or alter any safety sign or notice unless authorised to do so.

15.8 Barricading

Barricading requirements found within the Construction Regulations, 2014 as well as TRANSNET's barricading standards, but not limited to, must be complied with at all times.

Each contractor required to erect barricading on the project site(s) must develop, document and implement Safe Work Procedures that are aligned with the requirements of this standard.

Barricading must be erected to:

- Prevent persons from making contact with an identified hazard;
- Provide warning of the existence of a hazard;
- Prevent unauthorised access (by people, vehicles and mobile equipment) into an area where a hazard exists or where a hazardous activity is being carried out;
- Define the boundaries of a hazardous location and / or restricted area; and
- Allow a work team to perform hazardous tasks without persons unfamiliar with the hazard(s) accessing the area.

Although not limited to these situations, barricading must be erected or installed:

- Around excavations (trenches, pits, etc.);
- To protect openings and edges (to prevent persons from falling, all openings and edges associated with floors, stairs, and the open sides of buildings and structures during the course of construction must be protected by sturdy, rigid barriers capable of withstanding a force of at least 110 kilograms applied in any direction at any point);
- To prevent access into areas where overhead work is in progress;
- To route vehicles safely through (or around) construction areas; and
- To protect members of the public who may be in the vicinity of a work or construction site (by preventing access).

In all cases, the erection of barricading must be a temporary measure. It must only remain in place until the hazard is eliminated or the potentially dangerous situation is rectified.

A barricade must present a sturdy physical barrier to entering an area. Therefore, plastic cones, post and chain systems, "danger tape" and "snow netting" will not be accepted as barricading and may only be used for the purposes of low risk demarcation.

For example, snow netting may be used for the demarcation of lay down areas.

Acceptable forms of barricading include:

- Hoarding panels (no less than one metre in height) that can be securely fastened together to form a fence line may be used. Hoarding panels may be constructed from a variety of materials (e.g. wooden board, steel sheeting, wire mesh on a steel frame, etc.)
- Wire mesh fencing (no less than one metre in height with sturdy posts spaced at intervals of no more than 3 metres) may be used in certain circumstances, e.g. Around excavations.
- Sturdy, rigid, and securely fixed (i.e. bolted, welded, clamped, etc.) metal guard rails may be used, particularly for protecting openings, holes and edges associated with floors, platforms, walkways, etc. The top rail must be positioned at a height of one metre above the working surface, and a mid-rail must be provided.
- Concrete Jersey barriers must be used for the routing of traffic and when work is being conducted in or alongside a roadway.

Regardless of the type of barricade used, the following requirements must be met:

- The installation, alteration and removal of barricades must be supervised by a competent person;
- The barricading must be uniformly and intelligently configured;
- The barricading must be stable, conspicuous and effective;
- The barricading must completely surround the work or hazardous area;
- General access requirements around the work or hazardous area (such as pedestrian walkways, operational access, or general thoroughfares) must be taken into consideration when erecting a barricade;
- The extent of the area that is barricaded must be kept to a minimum so as not to unnecessarily restrict access to other areas. If access routes to other areas are blocked by the barricade, alternative routes must be identified and signposted.
- All barricaded areas must have properly designated points of entry and exit for persons and / or vehicles. Each pedestrian access point must be fitted with a self-closing gate. A sign indicating, "DESIGNATED ACCESS POINT – AUTHORISED PERSONNEL ONLY", must be fitted to each gate;
- Additional signage providing warning of specific hazards (e.g. falling objects, electricity, etc.) Including, "NO UNAUTHORISED ENTRY", must be attached to all gates and, where required, to the barricading itself. The signage must be visible from all angles and must be large enough to be read from a distance of 10 metres;
- Barricading must be clearly visible at all times (day and night). If necessary, flashing warning lights must be used;
- Tags must be attached to the barricading displaying the name and cell phone number of the person responsible for the barricade, and specifying the reason for the barricading and the date on which it is scheduled to be removed;
- Should a person require access to a barricaded area, authorisation must be obtained from the person responsible for the erection of the barricade. The hazards that are present and the Personal Protective Equipment that must be worn within the barricaded area must be communicated to the person seeking access;
- Each barricade must be listed in a register, and each must be inspected daily to ensure that it is still intact and that its positioning is still effective;
- All barricades must be properly maintained and repaired as required;

- When the work has been completed and the hazard has been eliminated, all barricading must be removed without delay. A barricade may not be left in place if no hazard exists;
- Before a barricade is removed (allowing general access), the area must be inspected by the person responsible for the work that was carried out, to ensure that the area is once again safe. If applicable, the person accepting the area back for general use shall do so on completion of his own safety inspection;
- Authorisation to remove (or modify) a barricade may only be granted by the person responsible for the erection of the barricade.

15.9 Excavations

Excavation work or activities which are required as part of the scope shall be undertaken in accordance with the requirements of this Specification as well as all applicable legislation concerning excavation work.

The contractor will be required to develop, document and implement Safe Work Procedures that are aligned with the requirements of this standard. All excavation work must be properly planned. Site-specific conditions and hazards must be considered, including traffic, overhead and buried utilities, proximity to nearby structures, soil properties, presence of surface and / or ground water, position of the water table, and weather conditions.

Excavation work may only be carried out under the personal supervision of a competent Excavation Supervisor who has been appointed in writing.

Before any excavation work is carried out, a Permit to Work authorising the activities will be issued. Similarly, no person may enter an excavation unless a Permit to Work has been issued providing authorisation for specific tasks to be carried out within the excavation.

Before issuing a Permit to Work for excavation works, the Authorised Person (i.e. Permit issuer) must verify that:

- A detailed Risk Assessment has been conducted for the work to be performed;
- A Safe Work Procedure is in place; and
- No buried services are present in the area where the excavation works are to be carried out.

As a minimum, the Risk Assessment must consider hazards and risks associated with:

- A person being trapped or buried as a result of an excavation collapsing;
- A person being struck by an object falling into an excavation;
- A person falling into an excavation;
- A person being exposed to a hazardous atmosphere within an excavation (i.e. An oxygen deficiency, explosive or flammable gases, and / or harmful concentrations of a contaminant);
- Contact with belowground services; and
- Mobile equipment and / or light vehicle movement in proximity to an excavation.

If buried services are identified (or are suspected to be present) then the safe work procedure must be altered if necessary to avoid these services. Machinery may not be used to excavate material lying within one metre of any belowground service (i.e. Cable or pipe).

Excavation work that is carried out must be limited to what is described in the Permit to Work. All controls, precautions and restrictions identified in the Permit to Work (and Risk Assessment) must

be strictly observed and fully implemented. The Excavation Supervisor must discuss these controls, precautions and restrictions with all persons who will be carrying out the work. All excavation work must be carried out by persons who have been trained and are competent to perform the work.

All material removed from an excavation (spoil) must be placed no closer than three times the depth of the excavation away from the edges of the excavation. The profile of this spoil must be flattened out to prevent the material from being washed back into the excavation by rain water. Scaling must be carried out on the sides of all excavations to remove loose material.

Tools, equipment and materials may not be placed within two metres of the edges of an excavation. Alternatively, a suitable retaining device may be used to prevent tools, equipment and materials from falling, rolling or sliding into an excavation.

To prevent persons and / or mobile equipment from accidentally falling into an excavation and to prevent unauthorised entry into an excavation, rigid barricading must be erected around every excavation that is deeper than 500mm. Warning signage must be prominently displayed and, if necessary, flashing warning lights must be used at night.

The barricading must remain in place for as long as the hazard (i.e. the excavation) exists. Sections of barricading around an excavation may only be removed (and then only temporarily) to enable excavation work to continue.

If equipment is used to prevent water from entering an excavation or to prevent water accumulation within an excavation, then the equipment must be monitored by a competent person to ensure that it remains operational and effective.

A high standard of housekeeping must be maintained in and around all excavations. Tools that are not in use, and materials that are no longer required, must be removed from an excavation to prevent these items from causing injury or being lost (buried). A register of all excavations must be compiled and maintained.

An excavation must be inspected for collapses, signs of instability, failures or signs of overloading of protective systems and equipment, hazardous atmospheres, water accumulation, and any other hazardous condition that may arise.

If a hazardous condition is identified, no person may enter the excavation until suitable corrective actions have been taken and / or suitable controls have been put in place to either eliminate the hazard or reduce the risks to acceptable levels. If a hazardous condition is identified while work is being carried out in an excavation, then all persons in the excavation must be evacuated to safety without delay.

A record of each inspection (including date, time, findings, and signature of the Excavation Supervisor who carried out the inspection) must be captured in the excavations register. Each inspection record must include a declaration as to whether the excavation is safe to work in or not. All excavations must be monitored closely throughout each work day (or shift) by the Excavation Supervisor.

Excavations must be backfilled as soon as possible, and the material used (usually the original material) must be properly compacted.

15.10 Working on/near water

All applicable legislation concerning working on/near water must be complied with at all times. Each contractor carrying out work on/near water must develop, document and implement Safe Work Procedures that are aligned with the requirements of this specification as well as any applicable legislation, standards and codes. A task specific risk assessment for the relevant work to be carried out on/near water should be conducted before any such work commences and submitted to the TNPA Project Manager or Representative for approval before any work can commence. The Risk assessment should be reviewed periodically. All potential hazards involved in the work to be carried out on/near water e.g. drowning, plant/equipment falling into water, vessel collisions should be identified and mitigated.

Contractors Health and Safety Plan for such work should include, but not be limited to:

- Dredging activities;
- Piling activities;
- Blasting activities;
- Methodology for carrying out such work;
- Formulation of method statement/safe work procedures
- Emergency Preparedness e.g. contingency plans, rescue plans, evacuation plans.

Lifting equipment/mobile plant should be kept a safe distance from dangerous locations e.g. openings, edges close to the water. Lifting equipment/mobile plant carrying out work on/near water should be fixed and securely anchored. The operating zone should be clearly demarcated. No lifting equipment/mobile plant should be allowed to operate beyond its safe working load.

The suitability of the ground on which the lifting equipment/mobile plant will be stationed should be identified before work commences with these activities.

15.11 Cranes and Lifting Equipment

All applicable legislation concerning cranes and lifting equipment must be complied with at all times (Driven Machinery Regulation, Construction Regulations, Code of Practice 29, but not limited to). Each contractor carrying out lifting operations on the project site(s) must develop, document and implement Safe Work Procedures that are aligned with the requirements of this Specification.

15.11.1 Planning and Risk Assessment

For each critical lift that must be carried out on site, a documented and detailed lift plan and risk assessment must be prepared to address all associated hazards.

Only suitably qualified, competent and experienced persons (lift planners) may evaluate critical lifts and prepare lift plans.

The lifting supervisor, crane operators, riggers and spotters responsible for carrying out a critical lift must have input into the lift plan and risk assessment and must be consulted before these documents are finalised.

All lift planners, lifting supervisors, crane operators, riggers and spotters (safety observers) must be appointed in writing. No critical lift may commence until the lift plan and risk assessment have been authorised by the nominated project management representative and a Permit to Work has been issued.

Critical lifts include, but not limited to:

- All multiple (including dual) crane lifts;
- Lifts where the operational arcs of two or more cranes can overlap;
- Lifts over operating facilities where this may endanger personnel;
- Lifts over or adjacent to power lines;
- Any lift carried out in close proximity to equipment or a vessel containing a flammable or toxic substance;
- Lifts where the centre of gravity of the load could change;
- Any lift where the total weight on the hook exceeds 20 tonnes;
- Lifts near the rated capacity of the crane (i.e. Exceeding 85% of the rated capacity at the working radius);
- Any lift when the wind speed (including gusting) exceeds 30 kilometres per hour;
- Lifts involving a man basket (safety cage);
- Lifts to and from water;
- Lifts requiring specialised equipment or involving complicated lifting or rigging configurations;
- Lifts requiring non-standard rigging or slinging techniques;
- Lifts involving the simultaneous use of more than one hoist on the same crane; and
- Any other lift deemed to be critical by the nominated project management representative, or assessed as critical during a risk assessment.

The lift plan for a critical lift must include as a minimum:

- General Information – crane manufacturer, crane model, items to be lifted, and reason for lift;
- Lift Data – load weight, lifting block and hook weight, hoist rope weight, rigging weight, total weight, height of lift, radius of lift, surface area of load, and centre of gravity of load;
- Rigging Data – sling material (chain, wire rope, or synthetic), sling diameter, sling length, sling configuration, sling capacity, hook type, shackle size and capacity;
- Lift Computation – boom length, jib length, radius of lift, crane capacity as configured, size of outrigger footplates, and wind speed;
- Proximity to Power Lines and Process Areas – mobile cranes working in proximity to energised power lines must operate under a Permit to Work, which must define exclusion zones and spotter duties;
- Local Hazards and Controls – including the route for the crane, ground stability, proximity of people or equipment, and agreed communication method; and
- Diagrams (sketches) – a rigging diagram, and a crane set-up diagram illustrating the positioning of the crane(s) in relation to surrounding structures and the initial and final positions of the load (including crane boom movement).

Lifts that are not subject to detailed lift plans (i.e. Lifts that are not considered critical) must nevertheless be subject to a risk assessment, and be properly planned and executed.

The use of a crane-suspended man basket (safety cage) may only be considered when all other avenues to safely perform the work (e.g. Scaffolding, mobile elevating work platform, etc.) have been exhausted.

Cranes used to lift or suspend personnel must be approved as suitable for this purpose. If a crane must be operated in proximity to energised overhead power lines (or any other exposed electrical

conductors) then minimum clearance distances (specified by the electrical power utility or the nominated project management representative) must be observed. Whenever possible, power lines must be de-energised and isolated while lifting operations are carried out.

15.11.2 Operation

At the start of every day or shift, the operator of a crane or hoist must carry out a pre-operation safety check as per Driven Machinery Regulation 18.

Documented Safe Work Procedures must be in place to ensure the following:

- Access into an area where lifting operations are being carried out must be restricted. Such an area (i.e. where there is a risk of a load falling and striking a person) must be barricaded and only authorised persons may enter (i.e. those directly involved with the lifting operations). Warning signage must be conspicuously displayed;
- Where a load is being moved from one location to another (i.e. The lifting operations are not being carried out in a discrete area that can be barricaded), measures must be taken to ensure that all persons in the path of the suspended load are made aware of the approaching hazard and that they move, and remain, well clear of it. All persons potentially affected must be given warning before the load is lifted;
- A lift must be directed and controlled by a single person (a suitably qualified, competent and experienced rigger);
- Dedicated spotters must be in place during lifting operations to observe and provide warning (if necessary) to prevent incidents and ensure that safety protocols are adhered to;
- Before commencing with a lift, it must be verified that the load being lifted is both within the rated capacity of the crane (or hoist) and lifting equipment and within the limits set out in the lift plan and / or risk assessment. The rated load capacities of the crane, hoist, rope, chains, slings or other components may never be exceeded;
- Only certified lifting equipment (tackle) may be used to lift a load;
- No equipment (tackle) that has been used for towing may be used for lifting operations;
- Only an approved material box (skip box) may be used for lifting loose items or materials;
- Before commencing with a lift, it must be verified that no safety devices (including load limiting devices) have been bypassed, overridden or disconnected;
- To prevent the load from swinging as it is lifted, the hoist must be centred over the load (when using slings or chains) or positioned directly above the lifting point of the load;
- Hoisting ropes must be kept vertical. No side loading of a crane boom is permitted (i.e. A crane may not be used to make a side pull);
- Two full wraps of rope must remain on the hoisting drum at all times. If a lower hoist limit switch has been fitted, and it is working correctly, it should not be possible to lower the block below the point where less than two full wraps of rope are on the drum;
- Before commencing with a lift, it must be verified that all rigging connections are correct and secure. Slings, chains, or other lifting devices must be fully and securely seated in the saddle of the hook;
- Slack must be removed from the slings, chains and / or hoisting ropes before lifting the load. It must be ensured that multiple lines are not twisted around each other and that the hoist rope is not wrapped around the load;
- To ensure that the load is properly secured and balanced, it must initially only be lifted a few centimetres. Slings must be repositioned if required;

- Before moving a suspended load, it must be lifted high enough to clear all obstructions. The load must only be lifted to the height necessary to clear obstructions, and no higher;
- Directional movement must be made smoothly and deliberately (there must be no sudden acceleration or deceleration of the moving load). Abrupt, jerky movements of the load in any direction must be avoided;
- Tag lines must be used in situations where a load needs to be steadied or guided while suspended;
- When using tag lines to steady or guide a suspended load that is being moved using a mobile crane, personnel on foot must remain in sight of and in communication with the crane operator at all times, must never walk between the crane and the load, and must remain clear of the load and the crane at all times (at least 5 metres). The load must be moved at a slow walking speed;
- A suspended load must be monitored closely at all times;
- If a crane operator's view of a suspended load is unavoidably obscured (completely or partially), or if a suspended load is unavoidably obscuring (completely or partially) a crane operator's view, then suitably positioned spotters must be in place to provide guidance to the crane operator;
- A load MAY NOT be moved over, or be suspended above, any person or any occupied building. No person may walk beneath, or position himself below, a suspended load;
- No person may pass or work beneath the boom of a crane;
- No person may be positioned between a suspended load and a solid object where there is a risk of being crushed should the load swing;
- No person may be positioned within the radius of the boom of a crane unless directly involved with the lift;
- Under no circumstances may any person ride on a crane's hook or on a load;
- No load may be left suspended unless the operator is at the controls and is monitoring the load. In such a situation, the load must be kept as close as possible to the ground or floor to minimise the possibility of injury should the load drop;
- The controls of a crane or hoist may never be left unattended while a load is suspended. If it becomes necessary to leave the controls, the operator must lower the load to the ground or floor;
- With the exception of pick-up and carry operations, no lifting may be carried out using a mobile crane unless the outriggers have been deployed and are locked in position;
- Load spreaders or packing under the outriggers must be used irrespective of the underfoot conditions;
- Before a mobile crane is moved into position to carry out a lift, the area must be inspected by a suitably qualified person who must verify that the underfoot conditions are satisfactory;
- When using a mobile crane, slewing to test the effectiveness of the outriggers must be carried out prior to commencing with a lift;
- Slew pins must be securely in place while a mobile crane is travelling;
- Unauthorised use of a crane or hoist must be prevented by removing the keys, locking the cabin, isolating the controls, etc. When lifting operations have been completed;
- When not in use, lifting equipment must be stored off the ground and must be protected from the elements (rain, harsh sunlight, etc.) And contamination (dust, solvents and other chemicals) in order to prevent damage and / or deterioration.

A crane or hoist or an item of lifting equipment may only be used for the purposes for which it was designed.

15.11.3 Inspection, Testing and Maintenance

Any crane or hoist brought onto the project premises must have a current test certificate and record of inspection as well as a suitable checklist (derived from the crane or hoist manufacturer's

inspection recommendations) for use by the operator(s) when carrying out pre-operation safety checks.

An Equipment Profile (dossier) must be compiled for each crane. A register of all cranes, hoists and lifting equipment (tackle) brought onto the project premises must be compiled and maintained. Each crane, hoist and item of lifting equipment must have a unique identification code or number, which must be referenced in the register.

For each crane, hoist and item of lifting equipment, the following documentation must be kept on site and must be made available (on request) to the nominated project management representative for inspection:

- Test records and certificates;
- Inspection records;
- Maintenance records; and
- Details of any modifications or repairs made.

All cranes, hoists and lifting equipment must be inspected, tested and confirmed fit for purpose (i.e. Safe for use):

- Before being operated or put into service;
- Before being returned to service following any repair or modification; and
- Periodically as follows (unless local regulations require examination more frequently):
 - Each crane or hoist (including all ropes, chains, hooks or other attaching devices, sheaves, brakes and safety devices that form an integral part of the crane or hoist) must be thoroughly examined by a competent, experienced and appointed person every 6 months;
 - Each crane or hoist must be subjected to an annual performance test (i.e. A load test) by a competent, experienced and appointed person; and
 - All lifting equipment (tackle) must be thoroughly inspected by a competent, experienced and appointed person every 3 months.
 - The system of inspection and testing must provide verification that each crane or hoist is able to function to its design specifications, and must verify the integrity of:
 - Mechanical and electrical components;
 - Controls;
 - Cables and all lifting attachments;
 - Structural components including boom, hoist, brakes, wheels, hooks, baskets, out-riggers, hook-blocks and rails; and
 - Load limiting devices, hoist limit switches, alarms or warning devices, and other safety devices and control systems (including independent fail-safe braking systems, devices to stop the crane or hoist such as a dead man's switch, and emergency shut-off switches).

A preventative maintenance system must be in place to ensure that all cranes and hoists are maintained in a safe and serviceable condition. For any crane or hoist, all inspections, testing, maintenance and repairs must, as a minimum, be carried out in compliance with the requirements and specifications of the manufacturer as well as all applicable regulatory requirements (in terms of both the frequency of inspection, testing and maintenance, and the physical condition of the crane or hoist).

Repairs to a crane or hoist may only be carried out by competent persons. After repairs have been made, the crane or hoist must be tested and recertified fit for purpose (unless the repairs did not affect the integrity of the lifting mechanism).

Any modification to a crane or hoist must be subject to the approval of the original equipment manufacturer and a rigorous change management process. Each item of lifting equipment (tackle) must be tagged following each quarterly (3-monthly) inspection. Details of these inspections must be recorded in the lifting equipment register which must be made available to the nominated project management representative on request.

The following colour coding system must be used for the tagging of all lifting equipment:

Table 27-1 colour coding system for lifting equipment

Quarter	Tag colour
January – march	Blue
April – June	Red
July – September	Green
October – December	Yellow

The tag placed on an item of lifting equipment must be traceable to an entry in the lifting equipment register where the following information concerning the inspection of that item of equipment must be recorded:

- Item description;
- Unique item identification code or number;
- Item owner;
- Item location;
- Date of inspection;
- Name and signature of competent person who carried out the inspection; and
- Any comments concerning the inspection.

Any item of lifting equipment that is found to be damaged or defective must be removed from service (and tagged, “out of service”) immediately and must then either be repaired and recertified (if possible) or destroyed to prevent further use. Similarly, any lifting equipment that is known (or is suspected) to have been overloaded must be removed from service immediately and destroyed to prevent further use.

If an item of lifting equipment is removed from service or destroyed (scrapped), this must be indicated in the lifting equipment register. Any item of lifting equipment without a tag or with an out-of-date inspection may not be used.

15.11.4 Training and Competency

Only suitably trained, competent and experienced persons who have been authorised in writing by the contractor’s project manager are permitted to:

- Evaluate and plan critical lifts;
- Supervise lifting operations;
- Operate cranes and hoists;
- Use lifting equipment, and rig (sling) loads;
- Provide signals for controlling lifts; and
- Inspect, maintain or test cranes, hoists and lifting equipment.

Each operator must meet the competency requirements for the particular class or type of crane or hoist to be operated. Depending on the project location and applicable legislation, operators may need to hold a certificate of competency issued by a recognised training institution.

15.12 Working at Heights

All applicable legislation concerning work performed from an elevated position must be complied with at all times. Fall prevention or fall protection measures must be in place whenever the potential exists for a person to fall.

15.12.1 Work Platforms

Wherever practical, a safe working area must be provided in the form of a work platform with fixed edge protection. This may include:

- a permanent work platform or walkway (i.e. A fixed steel structure);
- a fixed or mobile scaffold; or
- an elevating work platform such as a scissor lift, man lift, boom lift or cherry picker.

All work platforms and walkways elevated one metre or more must have complete floors, and edge protection must be in place in the form of toe boards and sturdy guard rails properly secured (i.e. bolted, welded, clamped, etc.) to prevent accidental displacement. Safe means of access and egress must be provided.

Guard rails must be capable of withstanding a force of at least 100 kilograms applied in any direction at any point. The top rail must be positioned at a height of one metre above the working surface, and a mid-rail must be provided.

15.12.2 Floor openings, holes and edges

Any opening or hole (temporary or permanent) in a floor, platform or walkway must be protected by sturdy guard rails (removable if required) or a cover to prevent a person from stepping into or falling through the gap. Covers must be strong enough to support the loads that will be imposed on them and must be secured to prevent accidental displacement.

Ladder way floor openings and platforms must be protected by guard rails of standard construction and toe boards must be fitted along all edges, except at the entrance to an opening where a gate must be installed and so arranged that a person cannot walk directly into the opening.

When open, hatchways and floor openings must be protected by removable guard rails and toe boards of standard construction. When these openings are not in use, covers of adequate strength must be put in place and must be secured to prevent accidental displacement.

Where doors or gates open directly onto a stairway, a platform must be provided and the swing of the door or gate must not reduce the effective width of the platform to less than 500mm.

15.12.3 Wall openings

Wall openings, from which there is a drop of more than one metre, must be guarded as follows:

- When the height and position of the opening in relation to the working surface is such that standard guard rails will effectively eliminate the risk of accidentally falling through the opening, then these must be provided. The bottom edge of the opening must be fitted with a toe board. The guard rails and toe board may be removable if required;

- Alternatively, the opening may be closed using a screen. Wall opening screens must be of such construction and mounting that they are capable of withstanding a force of at least 100 kilograms applied horizontally at any point on the near side of the screen. A screen may be of solid construction, of grillwork, or of slat work.

An extension platform outside a wall opening, onto which materials can be hoisted, must have sturdy guard rails (or equivalent edge protection) on all sides. One side of the extension platform may have removable railings in order to facilitate the handling of materials.

15.12.4 Stairways

Each flight of stairs having four or more risers must be fitted with handrails. Handrails must be installed on both sides of every stairway. Riser height and tread width must be uniform throughout any flight of stairs, including any foundation structure used as one or more treads.

Stairways must be free of hazardous projections, such as protruding nails. No materials, equipment or waste may be placed on or beneath any stairway. All stairways must be well lit.

15.12.5 Fall Protection

Whenever there is a risk of falling onto dangerous equipment or machinery, or whenever work must be carried out near an opening through which (or an edge over which) a person could fall, no work may commence unless:

- A fall protection (and rescue) plan is in place (prepared by a competent person, approved by the nominated project management representative, and implemented by the contractor);
- A detailed task-specific risk assessment has been carried out;
- A safe work procedure is in place for the task to be performed;
- A permit to work has been obtained; and
- Each person has been provided with suitable fall protection equipment.

Fall protection equipment (either fall restraint or fall arrest equipment) must be used at all times whilst the work is being carried out. To prevent persons from falling, fall restraint equipment must be used whenever work must be carried out within an opening through which (or an edge over which) a person could fall.

Fall arrest equipment must be used whenever the potential exists for a person to fall. A person has been provided with suitable fall protection equipment if he is secured by means of an approved full body harness (well fitted) with two shock absorbing lanyards or an inertia reel (when fall arrest equipment is required) or two short restraining lanyards (when fall restraint equipment is required), double or triple action snap hooks (or karabiner type rings), and secure anchorage points (a person's lanyard may be attached either directly to an anchorage point or indirectly through the use of a variety of systems that incorporate a lifeline).

A dual lanyard system must be used to ensure that at least one connection point is maintained at all times.

Note: When selecting fall arrest equipment, care must be taken to ensure that the potential fall distance is greater than the height of the person plus the length of the lanyard with its shock absorber deployed (taking the height of attachment into account).

Anchorage points must, where practical, be above the head of the person, and must ensure that in the event of a fall the person will neither swing nor touch the ground. All permanent anchorage points must be designed and approved by a professional structural engineer.

All anchorage points must be periodically inspected and tested by a competent person to ensure that they are secure and can support the required load. A system must be in place to identify anchorage points as authorised for use. Temporary anchorage points (and lifeline systems) may only be used if a competent person has certified them safe to use.

If an elevating work platform is used, such equipment must be fitted with a fixed anchorage point for the attachment of fall protection equipment.

The use of fall protection (fall restraint or fall arrest) systems must be avoided wherever and whenever possible through design, the installation of physical barriers that protect persons from falling, and employing alternative methods of working. Only if physical barriers protecting against free falls cannot be installed must fall protection equipment be used.

Fall protection (fall restraint or fall arrest) systems are items of personal protective equipment and, if required, must be purchased, installed and provided to employees. Prior to commencing with any work at height, an assessment must be conducted to determine if the work requires the use of fall protection equipment, and if so, which fall protection system is the most appropriate for the work.

There must be a system for ensuring that fall protection equipment is:

- Tested and certified for use;
- Inspected by the user before use; and
- Destroyed following a fall or where inspection has shown evidence of excessive wear or mechanical malfunction.

All persons that are required to work at height (in order to carry out routine or non-routine tasks) must first be trained and certified competent to do so. Furthermore, each person must be in possession of a valid medical certificate of fitness specifically indicating that the person is fit to work at height.

All persons required to use personal fall protection equipment must be trained and certified competent in the correct selection, use, maintenance and inspection of such equipment.

All fall protection equipment must be thoroughly inspected visually prior to use and on a monthly basis thereafter by competent persons appointed in writing and each item of equipment must be tagged to show when it was last inspected. All inspections must be recorded in a register. On finding defective or damaged equipment, appropriate action must be taken by the competent person (i.e. the destruction of the equipment to prevent further use).

Persons making use of personal fall protection equipment must do so in strict accordance with the instructions or requirements specified by the manufacturer or supplier of the equipment or system. Specific pre-use inspection, maintenance and fitting protocols must be established in accordance with the manufacturer's requirements or guidelines and these protocols must be followed by all users of the fall protection equipment.

Solvents may not be used to clean fall protection equipment. Only manufacturer-approved cleaning solutions may be used.

No person required to use personal fall protection equipment may work in isolation (a minimum of two persons working together is required). Competent supervision must be in place at all times for all work carried out at height. Supervisors must be appointed in writing.

Emergency response (rescue) procedures for the rapid retrieval of suspended persons in the event of a fall from height must be prepared and tested.

Note: Even though there is no risk of free fall, fall protection equipment may be required in situations where there is a risk of falling, slipping or sliding down a slope of more than 45 degrees.

Note: The maximum service life of fall protection equipment manufactured of synthetic fibre shall be 5 years from the date of first use and / or manufacture unless otherwise specified by the manufacturer.

A person may climb or descend a ladder without fall protection provided that he is able to use both hands and legs to do so, faces the ladder, and uses one step at a time. The ladder must be tied off or supported at its base.

Prior to any roof work being performed, or prior to persons accessing a roof, a structural engineer must verify that the roof is of sound construction and that it is capable of supporting the weight of the persons as well as any equipment that may be required. Should the engineer's findings be to the contrary, alternative methods of performing the work must be found. Particular care must be taken when work is carried out on an asbestos cement roof or a fibreglass roof.

15.12.6 Risk Assessment and Permitting

The following documentation is required for any work where fall protection is required (i.e. where a risk of falling exists):

- A Fall Protection (and Rescue) Plan;
- A Risk Assessment for the task to be performed;
- A Safe Work Procedure for the task to be performed; and
- A Permit to Work.

As part of the Risk Assessment and planning processes, the following must be considered, but not limited to:

- Hazards relating to accessing the location at height;
- The nature of the work location;
- The nature of the work activities to be undertaken at height;
- Environmental and weather conditions;
- The presence of nearby persons who may be at risk due to falling objects (potentially) or who's activities may be affected by the work being performed at height;
- The selection of fall protection equipment (considering fall clearances) and / or access equipment;
- The selection of anchorage points;
- The load ratings of access platforms, work areas, anchorage points, etc.;
- The condition of supporting structures such as roofs;
- The need for the work to be carried out by multiple persons and the means of communication;
- A rescue plan that addresses retrieval or rescue contingencies;
- Working above open furnaces or molten metal;
- Exposure to heat sources;
- The use of a mobile elevating work platform, man basket, suspended scaffold or boatswain's chair; and
- Any other conditions that may affect the safe execution of the task.

15.12.7 Elevating Work Platforms

Before hiring or purchasing an elevating work platform (e.g. a scissor lift, man lift, boom lift, cherry picker or similar equipment), the certification of the equipment (with regard to suitability of design and construction) must be verified.

Before using an elevating work platform, it must be verified that the equipment is in good working order and has been serviced regularly. The service record and instruction manual must be kept on site. A system must be in place to ensure that the equipment is maintained and inspected as required by the manufacturer and / or local regulations.

Persons (operators) must be formally trained through an accredited training provider and certified competent in the operation of the equipment. Once a person has been issued with the necessary licence or qualification as required under local regulations, he must be appointed in writing to operate the equipment.

Before using an elevating work platform, the operator must inspect the equipment and a pre-use checklist must be completed. The operator of an elevating work platform must be in the "basket" unless it can be demonstrated to the satisfaction of the nominated project management representative that this is not possible or practical.

Every person in the "basket" must keep his feet on the floor at all times. Every person in the "basket" must be secured at all times by means of personal fall protection equipment attached to an approved anchorage point, and systems must be in place to prevent tools and equipment from falling.

A mobile elevating work platform must not be driven unless the "basket" has been lowered and secured in a stable position. Every elevating work platform that is used must be equipped with a dead man's switch or foot pedal at the operator controls. An elevating work platform must only be operated on a firm surface with the outriggers extended (where fitted).

An elevating work platform must not be operated on a grade or slope beyond the capability of the machine (every mobile elevating work platform that is used must be fitted with an inclinometer which sounds an audible alarm before the maximum safe incline has been reached).

The area beneath the "basket" and the boom must be barricaded. A second competent operator of the mobile elevated work platform to be in place on the ground level – to ensure that the elevated work platform could be lowered in case of an emergency. A spotter must be used at all times when moving a mobile elevating work platform and when the "basket" is in an elevated position.

15.12.8 Man Baskets, Suspended Scaffolds and Boatswain's Chairs

The use of a man basket, suspended scaffold or a boatswain's chair may only be considered when all other avenues to safely perform the work (e.g. ladder, scaffolding, mobile elevating work platform, etc.) have been exhausted. Authorisation to use a man basket, suspended scaffold or a boatswain's chair must be obtained from the nominated project management representative. If permission is granted, the use of such equipment must be in strict compliance with all applicable legislation.

Each person working from a man basket, suspended scaffold or a boatswain's chair must be in possession of a valid medical certificate of fitness and must be trained (and assessed competent) in the Safe Work Procedures pertaining to the use of the equipment, as well as the Fall Protection Plan.

Each person working from within a man basket or suspended scaffold or from a boatswain's chair must wear personal fall protection equipment at all times (i.e. an approved full body harness connected by means of a shock absorbing lanyard to an anchorage point or lifeline that does not form part of the basket or chair).

If suspended using a crane, the man basket, suspended scaffold or boatswain's chair must be visible to the crane operator at all times. A suitable means of communication must be in place to ensure that the suspended person(s) are able to communicate with the crane operator and personnel on the ground.

The crane operator must remain at the controls at all times while the man basket, suspended scaffold or boatswain's chair is occupied. Where feasible (and if it is safe to do so), tag lines must be used to stabilise the man basket, suspended scaffold or boatswain's chair.

A man basket or suspended scaffold (including the suspension system) must be designed by a qualified engineer. Only an approved and certified man basket or suspended scaffold from a Regulatory Body can be used. Regulations require approval by an authority or certification to a national or international standard. The manufacturer's procedures and conditions for use must be strictly complied with at all times.

Each man basket or suspended scaffold must be fitted with an information plate indicating the maximum weight and number of persons that may be lifted. Copies of the welding x-rays and engineering drawings must be kept on site.

Any work involving the use of a man basket, suspended scaffold or boatswain's chair must be carried out under the supervision of a competent person who has been appointed in writing.

A man basket, suspended scaffold or boatswain's chair must be thoroughly inspected (examined for damage) by a competent person prior to use (every time the equipment is used) and the results of each inspection must be recorded in a register. The crane or hoist as well as all lifting equipment (tackle) that is used to suspend the man basket, suspended scaffold or boatswain's chair must be tested and inspected as stipulated according to applicable Legislation.

All suspended scaffold erectors, operators and inspectors must be appointed in writing and proof of competency must be provided.

Persons carrying out welding or flame cutting work from within a man basket or suspended scaffold or from a boatswain's chair must take precautions to ensure that they do not accidentally cut or burn through the cables or wire ropes that are suspending them.

15.13 Falling Objects

In the process of planning work activities, the risks associated with falling objects (i.e. materials, tools or equipment) must be assessed and appropriate control measures must be identified, implemented, and monitored taking the following hierarchy of controls into consideration:

- Preventing objects from falling – by using containment sheeting, toe boards, lanyards to secure tools (to a person or to the structure), ropes or chains to secure equipment (to the structure), lift boxes, brick cages, etc. and by properly securing loads when lifted by crane or hoist;
- Protecting people from falling objects – by establishing barricaded exclusion zones, installing catch platforms or catch nets, displaying warning signage, and posting safety watchers and / or traffic controllers. The risk of rock falls at Areas B and C will be addressed and preventative measures put into place before any construction work commences; Transnet employees working within the office block at Area A will be safeguarded from falling objects during construction and measures will be implemented before construction commences; and
- Personal Protective Equipment (particularly safety helmets and safety boots) – protective equipment is a last line of defence and must be worn.

Where overhead work is being carried out, barricading must be erected around the work area (at the level at which the work is taking place and at every level below including ground level) to prevent persons from entering such an area and potentially being struck by falling objects. Wherever hazards related to falling objects exist, appropriate warning signage (i.e. "Overhead Work In Progress" and "No Unauthorised Access") must be prominently displayed.

No items are permitted to lie loose in elevated positions (e.g. nuts and bolts must be securely stored) and good housekeeping standards must be maintained at all times. No tools, equipment, material, debris, waste, etc. may be dropped from height. Objects must be lowered or chuted to ground level in a safe and controlled manner.

15.14 Scaffolding

15.14.1 Training, Competency and Supervision

Scaffolding may only be erected, maintained, altered or dismantled under the strict personal supervision of a competent Scaffolding Supervisor (or Scaffolding Inspector) who has been appointed in writing.

It is the Scaffolding Supervisor's responsibility to ensure that all persons carrying out such work are suitably trained and experienced. A certificate of competency issued by a reputable (i.e. accredited and approved) training provider must be produced for each Scaffolding Supervisor and each Scaffolding Erector and Inspector.

15.14.2 Erection and Dismantling of Scaffolding

Only approved scaffolding components may be used to erect a scaffold. Scaffolding must be erected, modified and used in accordance with the manufacturer's guidelines or recommendations, and in strict compliance with all applicable legislation and standards.

A free-standing scaffold must not exceed a height of three times the smallest dimension of its base. Scaffolds with a height to base width ratio of more than 3:1 must be restrained from tipping over by guying, tying, or bracing. Guy wires and ties prevent scaffolding from tipping away from the building or structure, and braces are rigid supports that prevent the scaffolding from tipping into the building or structure.

Scaffolding must be secured to the structure every 6 metres vertically and every 9 metres horizontally (as a minimum). Adequate underpinning, sills or footplates must be provided for scaffolds erected on filled or otherwise soft ground (including sand or gravel).

If the scaffolding is to be load bearing (i.e. other than normal access and workplace storage) then full calculations and a design must be prepared and authorised in writing by a structural engineer. The load limits specified by the scaffolding manufacturer may not be exceeded under any circumstances.

Scaffolds must be plumb and level at all times. All scaffolding components must be in good condition (i.e. undamaged and free of corrosion). All scaffolding components must be properly connected or secured and scaffolding must be effectively braced (diagonal bracing).

Each person erecting, maintaining, altering or dismantling scaffolding must use fall protection at all times (i.e. a full body safety harness with two shock absorbing lanyards fitted with scaffold hooks). The work must be planned to enable every Scaffolding Erector to be securely anchored at all times. A suitable lanyard length (not exceeding 2 metres) must be selected taking the potential fall distance and height of attachment (height of anchorage point) into account. If the lanyard is too long or the anchorage point is too low, the person may hit the ground, a platform, or objects below him before the lanyard is able to break his fall.

The area around the base of a scaffold must be barricaded to prevent unauthorised access into the work area. When scaffolding is erected or dismantled on a level, platform, or floor lying above ground level and the potential exists for components to fall to levels below the level on which the scaffolding is positioned, then the area directly below the scaffolding on each of those levels must also be barricaded. Appropriate warning signage (i.e. "Overhead Work In Progress" and "No Unauthorised Access") must be prominently displayed.

Hoists, lifts and approved material baskets must be used (where available) to lift scaffolding components to elevated positions.

No scaffolding components, tools, or any other material may be dropped from height or thrown from one level to another. Components, tools and materials must be lowered or lifted in a controlled manner. Chutes may be considered for use.

Each tool must be secured to the wrist, harness or structure by means of a lanyard. A tool bag (around the waist or over the shoulder) may be used for carrying tools up and down a scaffold structure. Tools or equipment may not be carried by hand up or down a structure, as both hands must be used for climbing. If necessary, a rope must be used for lifting or lowering tools or equipment.

While a scaffold is being erected or dismantled, no scaffolding components may be stacked on the scaffold structure unless it has been designed for that purpose. Any loading of a scaffold structure must be authorised in writing by a structural engineer.

For special scaffolding, a design must be prepared by the appointed Scaffolding Supervisor and this design must be authorised in writing by a structural engineer before the scaffolding is erected. Scaffolding may not stand on steel grating unless the grating is adequately supported from below. Scaffolding must rather stand on the structure that supports the grating.

Empty drums, crates or bricks may not be used to prop up, support or anchor scaffolding. Before scaffolding is erected in close proximity to an electrical installation or live conductors, an electrical

engineer (employed by Project or the client) must inspect the area and determine whether or not the scaffolding must be earthed. Should the scaffolding require earthing, this must be done as soon as possible while the scaffolding is being erected.

Scaffolding may not be erected if it is raining or in winds stronger than 32 km/h.

A green tag (displaying the words, "Scaffold Safe for Use") or a red tag (displaying the words, "Danger: Do Not Use Scaffold") must be prominently displayed on each scaffold at all times. The tag must be positioned close to the base of the ladder or staircase provided for safe access. The wording on the tags must be in English and any other language commonly used on site.

As a minimum, a green tag must display the Scaffolding Supervisor's name, the date that the scaffold was erected, and the date that the scaffold was last inspected.

Only an appointed Scaffolding Supervisor may attach, change, update the information on, or remove these tags.

Scaffolding must not be:

- Left partially erected or partially dismantled except for normal work stoppages (for example, over weekends);
- Left in an unsafe condition (if scaffolding is unavoidably in an unsafe condition, barricading must be in place to prevent unauthorised access and the required red tags must be prominently displayed on the scaffold structure); or
- Moved or altered while work is in progress.

Mobile scaffolding must be equipped with brakes, which must be engaged at all times when the scaffolding is in use. A scaffold may not be moved if any person is on the structure.

15.14.3 Safe Access

Safe and convenient access must be provided to every scaffold platform by means of properly installed ladders or approved stairways, which must remain unobstructed at all times. Climbing up or down a scaffold on the braces or ledgers is forbidden.

All ladders used to access scaffolding must be securely attached to the scaffold structure. Hook-on and attachable ladders must be specifically designed for use with the type of scaffolding being used.

If a ladder is used to access a scaffold platform at a height greater than 1.5 metres above the ground, then the ladder must be secured internally (i.e. within the scaffold structure) and there must be an opening (closed with a trap-door) in the platform at the top of the ladder.

If the scaffold platform is at a height of less than 1.5 metres above the ground, then the ladder may be attached externally provided the guard rails around the platform are modified to allow access (the opening in the guard rails must be kept closed using a self-closing gate). No person may climb over or through the guard rails to gain access to a platform.

If a vertical ladder used on scaffolding is more than 5 metres in length it must be equipped with a ladder cage extending from a point 2 metres from the base of the ladder to a height of 1 metre above the platform (or the uppermost platform) that the ladder is providing access to.

The requirement for a ladder cage may be waived if platforms are provided at height intervals not exceeding 4 metres, with the vertical ladder secured on the inside of the scaffolding framework and an opening (closed with a trap-door) in each platform. Vertical ladders must be braced at three metre intervals (as a minimum) to prevent undue movement.

All vertical ladders providing access to a platform must be left in place for as long as the scaffold remains in place and must be inspected as part of the scaffold structure.

Any deviation from the requirements stipulated above must be subjected to a risk assessment and the nominated project management representative must authorise the deviation in writing.

15.14.4 Scaffolding Platforms

Safe work platforms must be provided. Every work platform must be complete (i.e. from ledger to ledger and from transom to transom without any gaps) in order to prevent personnel, materials, tools, etc. from falling through the platform.

Every work platform must be constructed from manufactured steel scaffold boards (planks) of equal thickness (height). Timber boards are not permitted under any circumstances.

Each steel scaffold board must be securely hooked (fastened) onto the ledgers or transoms that support it.

On all sides except the one facing the structure, every scaffold platform must be provided with:

- Sturdy guard rails positioned 500mm above the platform floor (the mid rail) and 1000mm above the platform floor (the top rail); and
- Steel toe boards that are at least 150mm high and securely attached such that no gap exists between the toe boards and the platform floor.

Note: Wire mesh infill panels incorporating a toe board may be used instead of a mid-rail.

Scaffold platforms must be as close to the structure as is practicable (but not closer than 75mm) except where personnel need to sit on the edge of the platform while they work in which case the distance may be increased to no more than 300mm.

Scaffold platforms must, at all times, be kept free of waste, protruding objects, and any other obstructions. Platforms must be cleaned if necessary to ensure that they are maintained in a non-slip state.

15.14.5 Inspection of Scaffolding

Every scaffold structure must be inspected by a competent Scaffolding Inspector/Supervisor who is appointed in writing:

- Prior to use after erection, and at least weekly thereafter;
- After inclement weather (heavy rain, strong winds, etc.);
- After any incident resulting in jarring, tilting or overloading;
- After any alteration is made; and
- Before being dismantled.

On completion of an inspection, the Scaffolding Inspector/Supervisor must update the information on the scaffold tag.

A record of each inspection (date and time of inspection, location of scaffolding, findings, etc.) must be captured in a register. The register(s) must be maintained by the Scaffolding Inspector/Supervisor(s) carrying out the inspections.

15.14.6 Using Scaffolding

The user of a scaffold (i.e. the responsible supervisor) must inspect the erected structure prior to acceptance and must ensure, as far as is reasonably possible, that the scaffold is safe and fit for purpose before allowing his team to make use of the scaffold.

In particular, the user must ensure that:

- The scaffold and the platforms have been constructed to meet the loading requirements of the work that is to be carried out (the Scaffolding Inspector/Supervisor must be consulted in this regard);
- The Scaffolding Inspector/Supervisor has checked that adequate ties and braces are in place;
- The work platforms are in the correct positions and are complete with toe boards and guard rails;
- Safe and convenient access has been provided (ladders and / or stairways); and
- A green ("Scaffold Safe for Use") tag has been attached to the scaffold by the Scaffolding Inspector/Supervisor.

Use of an incomplete or unsafe scaffold is prohibited. Unsteady or non-rigid scaffolds must not be used and inadequacies must be reported to, and rectified by the responsible Scaffolding Supervisor.

The user of a scaffold must ensure that every person in his team is aware that no alterations to the scaffold may be made by the team during the course of their work, and that if any alterations are required, they must be made by competent Scaffolding Erectors under the supervision of an appointed Scaffolding Supervisor.

A scaffold may not be used:

- If a red tag is displayed indicating that the scaffold is not safe to use; or
- During inclement weather, defined as wind speeds greater than 40km/h, thunderstorms, or heavy rain (in excess of 40mm/h).

Note: With due consideration of possible educational limitations, the contractor must ensure that all persons understand what green and red tags mean.

The area around the base of a scaffold must be appropriately barricaded to prevent unauthorised access into the work area. Appropriate warning signage (i.e. "Overhead Work In Progress" and "No Unauthorised Access") must be prominently displayed.

Loose tools and / or materials on scaffold platforms must be secured using lanyards, wire or fibre rope, or must be placed in secured containers. Where appropriate, "catch nets" may be installed as an additional safety measure to prevent materials or tools from falling to the ground.

The storage or placement of materials on scaffolding platforms must be kept to a minimum. Debris as well as tools and materials that are no longer required must be removed from all working platforms at least once per day.

Scaffolding platforms must be cleaned regularly. A heavy load may not be placed on a scaffolding platform unless the scaffold has been designed and constructed specifically for that purpose. Any loading of a scaffold structure must be authorised in writing by a structural engineer.

Scaffolds may not be used as hoisting towers or to support piping or equipment. Each person working from scaffolding must wear fall protection (i.e. a full body safety harness with two shock absorbing lanyards fitted with scaffold hooks) and must be securely anchored at all times.

All work must be carried out from properly constructed work platforms. Standing on railings or braces in order to perform work is forbidden. Drums, boxes and other makeshift substitutes for scaffolding may not be used under any circumstances.

Where work on an electrical system is to be undertaken from a scaffold, an electrical engineer (employed by Project or the client) must determine whether or not the scaffolding structure requires bonding and earthing. The scaffolding may not be used until this has been determined, and if required, until the structure has been bonded and earthed.

15.14.7 Identification and Inspection of Scaffolding Components

All scaffolding components belonging to a contractor must be properly marked or uniquely coloured to enable positive identification.

Prior to erecting a scaffold, all scaffolding components must be carefully inspected by a competent Scaffolding Inspector/Supervisor.

Components found to be defective during an inspection must be conspicuously marked and removed to a suitably demarcated quarantine area for destruction, repair, refurbishment or removal from site. Deformed and bent wedges must be straightened and inspected for cracks before being put back into service.

15.14.8 Storage of Scaffolding Components

All scaffolding components must be stored in a demarcated storage area in such a manner that they are not exposed to environmental extremes and will not cause injury to persons. Suitable barricading or fencing must be erected and warning signage must be posted (e.g. No Unauthorised Entry).

Within a storage area, scaffolding components must be stacked such that pathways (750mm in width) are maintained between the stacks. Each stack must be stable and components must be neatly placed to ensure that no ends protrude into any pathway. The various components must be stacked separately.

The weight of scaffolding components must be considered when stacking them in elevated positions.

Any storage area for scaffolding components must be positioned such that it will not interfere with any onsite activity (including the operation of any plant or equipment), block any access way, or obstruct access to any plant or equipment. Before establishing a storage area, the location must be agreed with the nominated project management representative.

15.15 Ladders

All ladders used on site must be of sound construction and adequate strength. Only non-conductive ladders made of wood or fibreglass may be used for electrical work or work being performed in proximity to energised electrical equipment. Metal ladders and ladders with metal reinforcing may not be used.

The use of makeshift ladders is forbidden. All ladders must be numbered, listed in a register, and inspected by a competent person on a monthly basis (the results of each inspection must be recorded in the register). Before using a ladder, the user must inspect it for damage.

Ladders with missing, broken, cracked or loose rungs, split stiles, missing or broken spreaders (stepladders) or any other form of damage or defect may not be used. A damaged ladder must be removed from service (and tagged, "Out of Service") without delay and must then either be repaired (if possible) or destroyed to prevent further use. Persons must receive instruction in the correct use and proper care of ladders.

Ladders may only be used as a means of access and egress. The use of ladders as working platforms is prohibited, except for inspection and carrying out minor tasks (i.e. light work and short duration) such as changing a light bulb.

Ladders may not be positioned horizontally and used as walkways or runways or as scaffolding. All portable ladders must be fitted with non-skid safety feet (or some other means to prevent the base of the ladder from slipping) and the feet must always be placed (stand) on a firm level surface. The use of bricks, stones, wood or any other material to level the stiles of a ladder is prohibited. Ladders may not be placed on movable bases such as boxes, tables, trucks, etc.

The base or foot of a ladder must always be secured to prevent it from slipping. The ladder must be held by an assistant if the base cannot be secured in any other way (e.g. tied off). A straight ladder must extend at least one metre above its support (or above the working platform that it is providing access to). The top of the ladder must be tied off (or otherwise secured to its support) to prevent accidental movement.

A straight ladder must be placed at a safe angle, i.e. tilted at a ratio of approximately 4:1, meaning that the base of the ladder must be one metre away from the wall (or other vertical surface) for every four metres of height to the point of support.

A stepladder may never be used as a straight ladder. A stepladder must be opened fully and the spreaders must be locked securely. When using an extension ladder, at least four rungs must always overlap at the centre of the ladder. Ladders may not be joined together unless they have been specifically designed and manufactured for that purpose.

A suspended ladder (i.e. not standing on a base) must be attached in a secure manner to prevent undue swinging or swaying, and to ensure that it cannot be displaced.

A ladder may not be placed against a window, glass or any other material which is unlikely to withstand the force exerted on it by the top of the ladder. A ladder may not be placed in front of a door or window that opens towards the ladder unless the door or window has been locked or barricaded.

When a ladder is used near an entrance or exit, the base of the ladder must be barricaded. Materials and / or equipment may not be placed in close proximity to the base or landing of any ladder.

When ascending or descending a ladder, a person must always face the ladder and use both hands (i.e. maintain three points of contact).

Nothing may be carried up or down a ladder if it prevents the person from holding on to the ladder with both hands. Tools must always be properly secured. This can be achieved by attaching them to the wrist using lanyards or placing them in a tool belt around the waist. Tools and materials may also be carried in a bag over the shoulder or hoisted to the landing using a tool bag and rope. Only one person at a time may use (i.e. be positioned on) a ladder.

No person may stand or step above the third rung from the top of a straight ladder or above the second highest step of a stepladder.

Overreaching from a ladder is prohibited. If the target is not within comfortable reach, the person must climb down and reposition the ladder. No person may run up or down a ladder, or jump from the lower rungs or steps to the ground. All ladders must be properly maintained and cared for. Ladders must be stored under cover and should be hung in a horizontal position from several brackets.

No ladder may be left lying on the ground or be left exposed to the weather. A ladder left lying on the ground presents a tripping hazard and it may be damaged by vehicles running over it. No ladder may be left in such a position where it may fall over, be accidentally knocked over, or be blown over by the wind.

Ladders may not be painted, as the paint may conceal damage, defects, labels or other markings. Instead of paint, clear varnish or wood oil may be used to preserve wooden ladders. Ladders must be kept clean, as dirt may conceal damage or defects. Oil or grease accumulation on the rungs of a ladder may cause a person to slip.

Before making use of a ladder, each person must make an effort to remove mud, oil, grease, etc. from his boots.

15.16 Permit to Work

All personnel must comply with the Permit to Work system applicable to the project. A Permit to Work must be obtained before carrying out any work that involves:

- A hazardous energy source or system, including electricity, compressed fluids (e.g. hydraulics and pneumatics), chemical substances (e.g. toxic, corrosive, flammable or explosive gases and liquids), heat (e.g. steam), radiation, and machinery or materials with potential energy (gravitational and elastic) – isolation and lockout may be required;
- Confined space entry;
- Working at heights;
- A critical lift;
- Hot work outside of designated workshops;
- Excavation; or
- A service (e.g. water supply, fire suppression systems, etc.).

Note: A Permit to Work may only be issued by an Authorised Person, and may only be received (or accepted) by an appointed Applicant.

All costs associated with the Compliance to Permits section is for the Contractors account.

Each Permit to Work that is issued must make reference to an approved Task-Based Risk Assessment for the work that is to be carried out.

The Permit to Work system that is employed must incorporate the following basic procedures:

- Prior to meeting with the Authorised Person, the Applicant must familiarise himself with all of the hazards associated with the system, plant, equipment, structure or area on or in which the work must be performed. He must also consider the risks that may arise as a result of the tasks that will be carried out. A Task-Based Risk Assessment must be in place;
- The Applicant must then request permission to carry out the work and must meet with the Authorised Person to discuss and document the scope of the work as well as the hazards, risks and associated control measures. Isolation and lockout requirements must be identified (if applicable). The isolation and lockout process must be initiated by the Authorised Person who must contact the necessary Isolation Officers.

Note: The Applicant must ensure his own safety and that of his team, and has the right to accompany the Isolation Officers to verify that all of the necessary locks have been fitted to all of the isolation and lockout points in accordance with the applicable plant or equipment-specific Isolation and Lockout Procedure.

- Once all of the necessary isolations have been completed and the necessary Clearance Certificates have been issued by the Isolation Officer(s) (if applicable), and the Authorised Person is satisfied that the system, plant, equipment, structure or area is safe to work on or in provided all identified precautions are observed by the Applicant, then he must issue (sign) the Permit to Work to the Applicant;
- The Applicant must accept (sign) the Permit to Work. If equipment has been isolated, the Applicant must attach his Personal Lock to the relevant Isolation Bar (or Local Isolation Point) and must ensure that every other person working on the isolated equipment also attaches his or her Personal Lock to the Isolation Bar (or Local Isolation Point) before starting any work;
- Before commencing with any work, the Applicant must discuss the hazards, risks, control measures, precautions and limitations as stated in the Permit to Work (and associated Task-Based Risk Assessment) with all personnel who will be carrying out the work. A register must be kept and all persons must sign the register once they have been briefed by the Applicant;
- The work performed must be limited to what is described in the Permit to Work;
- When a particular employee has completed his work, he must sign the personnel register to this effect and (if applicable) must remove his Personal Lock from the Isolation Bar (or Local Isolation Point);
- Once all work is complete, the Applicant must:
 - Ensure that all machine guards have been replaced;
 - Ensure that all tools and materials have been removed from the work area;
 - Ensure that the work area is clean and tidy;
 - Ensure that all Personal Locks (including his) have been removed from the Isolation Bar or Local Isolation Point (if applicable);
 - Inform the Authorised Person that the work has been completed; and
 - Sign off the Permit to Work.
- Once the work is complete and the Applicant has signed off the Permit to Work, the Authorised Person must:
 - Ensure that the relevant Isolation Officers perform all of the necessary de-isolations (if applicable);
 - On completion of the de-isolations, sign off the Permit to Work accepting the system, plant, equipment, structure or area back for service; and

- Inform all relevant personnel that the system, plant, equipment, structure or area is ready to use.
- Where the work must continue over more than one shift, the Permit to Work must be reviewed at every shift change by an Authorised Person. If the scope of work has changed, the permit must be cancelled and a new permit must be issued.

If any of the original conditions or precautions pertaining to the work is not being complied with, is no longer adequate or is no longer applicable, the Authorised Person must cancel the Permit to Work and must ensure that all work stops until full compliance with either the original or amended (as required) conditions and precautions is achieved and a new permit has been issued.

The Applicant must ensure that the Permit to Work (including the personnel register) is kept where the work is being carried out (i.e. posted on a portable Health and Safety Management Information Notice Board) and that the work is monitored against the permit conditions.

All Permit to Work records must be retained and must be made available for inspection when required.

The implementation of the Permit to Work system applicable to the project must be audited on a regular basis by a nominated project management representative. Furthermore, planned task observations must be carried out periodically.

15.17 Isolation and Lockout

Isolation and lockout procedures that make it impossible to inadvertently energise any system, plant or equipment so isolated, must be in place for all work where hazardous energy sources exist, including electricity, compressed fluids (e.g. hydraulics and pneumatics), chemical substances (e.g. toxic, corrosive, flammable or explosive gases and liquids), heat (e.g. steam), radiation, and machinery or materials with potential energy (gravitational and elastic). These procedures must be strictly enforced. All personnel must comply with the isolation and lockout system and procedures applicable to the project.

All Isolation and Lockout Procedures must incorporate the following basic requirements:

- The issuing of a formal Permit to Work for any work that requires the isolation of any system, plant or equipment;
- The use of defined Equipment, Discipline and Personal Locks (see Definitions), and multiple lockout systems (i.e. Isolation Bars and lockout hasps);
- Clear identification of all isolation and lockout points ensuring there is no duplication;
- Isolation of the main energy source;
- The use of slip plates or the blanking off of pipelines or ducting, in addition to the chaining and locking of valves, as determined by a risk assessment;
- Suitable methods of preventing the movement of equipment; and
- Methods to test the effectiveness or completeness of the isolation.

Note: No work may commence on a system, plant or equipment until a Permit to Work has been issued by an Authorised Person.

Note: A Permit to Work may only be issued by an Authorised Person once all required Clearance Certificates have been issued by appointed Isolation Officers.

The isolation and lockout system that is employed must incorporate the following basic procedures:

- In accordance with a system, plant or equipment-specific Isolation and Lockout Procedure, an appointed Isolation Officer(s) must isolate all points that need to be isolated in order to render the system, plant or equipment safe to work on. An Equipment Lock (and a suitable, highly visible warning tag) must be attached to each isolation point;
- On completion of an isolation (and lockout), the Isolation Officer must clear the area of all persons and must then carry out tests to ensure that the isolation is effective. This may be done by pressing a start button or by asking a control room operator to try to start the equipment. Special care must be taken to ensure that the attempted starting of the equipment has not been deactivated by another interlock forming part of the system, or by a different up-stream isolation. Alternatively, appropriate equipment may be used to test for energy (e.g. voltage verification or continuity tests).

Note: In the case of electrical isolation, a test for voltage must be carried out, after the switching device, to ensure the absence of voltage.

- The Isolation Officer must place the key to the Equipment Locks on an Isolation Bar (at a Lockout Station) and must then attach a Discipline Lock (to prevent the key from being removed) before issuing a Clearance Certificate;
The Discipline Lock must remain in place when handing over to subsequent shifts. All Discipline Locks for a particular discipline (e.g. low voltage electricity) must be keyed-alike so that any Isolation Officer appointed for that discipline (and issued with a key) can open any of the Discipline Locks used for that discipline. This enables an Isolation Officer to de-isolate equipment that may have been isolated by another Isolation Officer during an earlier shift. Appointed Isolation Officers for a particular discipline are the only persons permitted to hold keys to the Discipline Locks used for that discipline.

Note: Local isolations do not require the use of Equipment Locks (a Discipline Lock may be attached to the Local Isolation Point by the Isolation Officer, followed by the necessary Personal Locks).

Note: For local isolations, if the Isolation Officer is the only person who will be working on the isolated equipment, then he must attach his Personal Lock to the Local Isolation Point.

- Once all required Discipline Locks are in place (i.e. attached to the Isolation Bar) and all Clearance Certificates have been issued, the Permit to Work may be issued by the Authorised Person;
- Each person who will be working on the isolated system, plant or equipment must then attach his or her Personal Lock to the Isolation Bar before starting any work (including the Isolation Officer, if he intends to work on the isolated unit);
- The attachment of a Personal Lock to the Isolation Bar prevents the removal of the key to the Equipment Locks even if the Discipline Lock is removed;
- When called (by an Authorised Person) to de-isolate the system, plant or equipment (on completion of the work under the Permit to Work), the Isolation Officer must ensure that all Personal Locks have been removed from the Isolation Bar before removing the Discipline Lock and the key to the Equipment Locks;
- Before removing the Equipment Locks and de-isolating the energy source, the Isolation Officer must inspect the system, plant or equipment that was worked on to ensure that it is safe to

- perform the de-isolation. This includes guard inspections, housekeeping, ensuring that all doors and covers are in place, and most importantly, ensuring that no persons are present;
- Once all Equipment Locks have been removed and the system, plant or equipment is safe for use, the Isolation Officer must cancel the Clearance Certificate and inform the Authorised Person that the unit has been de-isolated.

Where a system, plant or equipment is sequence interlocked and a hazard could be created through the inadvertent start up or shut down of a system, plant or equipment lying before or after the unit to be worked on, then that system, plant or equipment must also be isolated and locked out. Redundant or out of service equipment must, in addition to being isolated and locked out using the relevant Discipline Lock, be fitted with a tag indicating why it is out of service, who performed the lockout, and the hazards associated with that equipment.

Where it is necessary to work on live equipment for the purposes of commissioning, testing, adjusting and sampling, such work must be carried out in accordance with a written Safe Work Procedure and controls must be in place to prevent unauthorised access into the work area. The implementation of the isolation and lockout system and procedures applicable to the project must be audited on a regular basis by a nominated project management representative. Furthermore, planned task observations must be carried out periodically.

15.17.1 Personal Locks

A Personal Lock must be such that it can only be unlocked by the person to whom it belongs. Combination locks may not be used. A Personal Lock, as well as the key(s) to the lock, must be kept under the exclusive control of the person to whom the lock belongs.

A Personal Lock must be issued to each person who requires one, and the person's details must be clearly and permanently engraved directly onto his Personal Lock. Alternatively, a thick durable plastic identification tag may be used that clearly displays the company's name, the employee's name, the employee's company number, and a contact telephone number (the tag must be securely fastened to the Personal Lock). Where the above is hand written, it must be done using a permanent marker pen and it must be legible.

Each person issued with a Personal Lock must be trained and certified competent in the correct use of such a lock.

A Personal Lock may NEVER be removed by anyone other than the person to whom it belongs, except if the removal (cutting) of the lock is authorised by the nominated project management representative (in the absence of this person, authorisation can only escalate upwards). Furthermore, the removal of the lock must be done under the personal supervision of the nominated project management representative, and in accordance with a written procedure. The removal (cutting) of a Personal Lock may be required if the person who applied the lock is unable or unavailable to remove it on completion of the work (e.g. lost his key, failed to remove his lock before going home, etc.).

15.18 Electrical Safety

All electrical work must be carried out by competent personnel in accordance with all legal requirements, codes, design criteria and safety standards applicable to the project. Each contractor carrying out electrical work on the project site(s) must develop, document and implement Safe Work Procedures that are aligned with the requirements of this standard.

All persons who will be carrying out electrical work must be certified against the requirements of job and equipment-specific electrical competency standards for the project, which must address job and equipment-specific Safe Work Procedures.

15.18.1 Electrical Installations

Each electrical installation (temporary or permanent) installed or worked on by a contractor must be inspected by a nominated project management representative to ensure that the installation complies with all statutory requirements, codes, design criteria and safety standards applicable to the project.

A nominated project management representative must approve all electrical work before the installation is energised. Any installation deemed unsatisfactory by a nominated project management representative must be removed, repaired or modified by the contractor at his expense.

For every permanent or temporary electrical installation, a certificate of compliance must be issued by a competent and appropriately qualified electrician. These certificates must be available for inspection.

Work on electrical installations (new installations, and modifications or repairs to existing installations) may only be carried out by qualified and authorised personnel (i.e. electricians). Electrical safety devices (specifically, earth leakage protection and overcurrent protection) must be installed on all distribution circuits and the settings must be established by suitably qualified personnel.

To ensure the safety of the user, each distribution panel must be completely enclosed, must be of the dead-front type, and must be properly constructed and earthed.

All electrical cabling must be covered (e.g. in cable trenches) or elevated (in cable trays) to protect it from damage and to eliminate tripping hazards.

All permanent and temporary electrical installations (cabling, sockets, distribution panels, transformers, switchgear, etc.) must be inspected and tested by a competent and suitably qualified electrician on a monthly basis. The testing must include a grounding (earthing) continuity test and testing of the electrical safety devices. Details of these inspections and tests must be recorded in a register which must be made available to the nominated project management representative for inspection.

A rigorous Isolation, Lockout and Permit to Work system must be applied to all electrical work (i.e. work on electrical installations, machinery or equipment). All personnel must comply with the system and procedures applicable to the project.

Before any work on an electrical installation or equipment is carried out, the installation or equipment must be de-energised.

No electrical work may be performed live, regardless of the voltage, unless written approval is obtained from the nominated project management representative (a justification as to why it is necessary for the work to be carried out with the equipment in an energised state must be provided).

For all energised electrical work, a Safe Work Procedure must be in place and, with the exception of voltage testing and where no tools are used, a Permit to Work (specifically authorising energised electrical work) must be issued. When carrying out any energised electrical work, approved electrically insulated gloves, blankets, mats and other protective equipment must be used.

Control centres, switchgear rooms, substations, generators, transformers, capacitor banks, and other similar electrical plant and equipment must be appropriately guarded and labelled and, with the exception of emergency shut-off mechanisms, must be made inaccessible to unauthorised personnel (i.e. plant or equipment of this nature must be positioned within rooms or fenced enclosures which must be kept locked).

Appropriate warning signage must be prominently displayed within, and at all entrances to, these rooms or enclosures. The signage must indicate that unauthorised persons are prohibited from entering, that unauthorised persons are prohibited from handling or interfering with any electrical plant or equipment, the procedure to be followed in the event of a fire, and the first aid procedure to be followed should a person suffer electric shock. Suitable fire-fighting equipment must be provided in all such rooms or enclosures.

All electrical panels must be kept locked (using keyed-alike padlocks). Keys may only be issued to authorised personnel.

All un-insulated (bare) or partially insulated conductors must be enclosed and protected to prevent accidental contact therewith. Measures must be taken to prevent unauthorised access and appropriate warning signage must be conspicuously displayed.

Only authorised persons may enter rooms or enclosures housing electrical plant or equipment, and only authorised persons may access electrical panels or cabinets, and cable ducts or trenches. If any work must be carried out in such an area or on such equipment, a Permit to Work must first be obtained from the nominated project management representative.

No connection to any electrical system may be made without prior approval and a valid Permit to Work from the nominated project management representative.

No electrical equipment or apparatus may be modified without written authorisation from the nominated project management representative.

Conductive ladders may not be used in proximity to non-insulated electrically energised lines or equipment.

All permanent and temporary electrical cables, whether energised or not, must at all times be handled as if they are energised.

Only appropriately certified intrinsically safe electrical equipment may be used in flammable or potentially explosive atmospheres such as in confined spaces. Any equipment or structure on which electric charges may accumulate (such as storage tanks) must be grounded (earthed).

Grounding (earthing) and lightning protection systems and devices must be designed, engineered, selected and installed based on site-specific requirements where required.

15.18.2 Arc Flash Safety

Depending on the scope and nature of the work, a documented arc flash protection programme must be in place. The PPE required (specific to a task and the equipment on which the task is performed) and associated procedures to mitigate the hazard must be included.

An Arc Flash Hazard Assessment must be carried out based on accurate and current data. All electrical cabinets where the potential for an arc flash hazard exists must be labelled in accordance with the hazard assessment and the potential incident energies calculated. A process must be in place for updating the Arc Flash Hazard Assessment and labelling as changes and electrical upgrades occur that might affect the available short circuit current on the system.

In order to mitigate the hazard, Safe Work Procedures must be in place and all persons potentially exposed to arc flash hazards must be trained in these Safe Work Procedures and must be supplied with appropriate arc flash PPE.

15.19 Portable Electrical Equipment

Prior to site establishment, each contractor must provide a complete inventory of all portable electrical equipment that he and his sub-contractors intend to use on the site (including plant, machines, appliances, generators, hand tools, lighting, extension cords, etc.). The nameplate data for each item of equipment must be included.

All portable electrical equipment to be used on the site must be supplied and maintained in a serviceable condition. Any electrical equipment that is in poor condition or is not in proper operating order may not be used. Any electrical equipment that a nominated project management representative deems to be unsafe or unsuitable must be removed from site.

Electrical repair work or diagnostic work on electrical equipment may only be performed by personnel who are competent and authorised to perform this work (i.e. qualified electricians). With the exception of double-insulated equipment, all electrical equipment must have an equipment grounding (earthing) conductor that connects the frame of the equipment being utilised to the grounding (earthing) conductor of the electricity supply system.

All electrical equipment and all electricity supply systems used (including generators) must be inspected and tested by a registered and competent electrician to ensure that all equipment is properly grounded (earthed).

All electrical equipment used on site must be supplied electricity through (i.e. must be protected by) an approved and tested residual current device (or earth leakage device or unit). If a socket outlet does not have a residual current device in the circuit, a portable residual current device must be used. Outlets without residual current device protection must be labelled as such.

Any electrical equipment that causes an earth leakage device to trip or deactivate the circuit may not be used again until an electrician has inspected and tested the equipment and has recorded in a register that the equipment is safe to use.

All generators must be fitted with suitable overcurrent protective devices (i.e. circuit breakers or fuses). All generators must be used in compliance with the manufacturer's requirements. Any

proposed modification to a generator must be authorised in writing by the manufacturer prior to the modification being made.

Each welding machine used on site must be fitted with a Voltage Reduction Device (VRD). If this is not practical (i.e. for arc welding processes other than stick welding), a dead man's (isolation) switch in the electrode circuit (operated by a trained observer) may be used as an alternative. All welding machines must be properly grounded (earthed).

All portable electrical hand tools used on the site must be double-insulated. Electrical equipment must be disconnected or unplugged when not in use. Portable lights must be stable and each light bulb must be protected by a substantial guard.

No person may wear a watch or any jewellery, or carry any metal objects such as a lighter or keys, while working on any electrical system or equipment. No person may work on or use electrical equipment if his clothing is wet or any part of his body is in contact with water.

No person may handle electrical equipment, equipment cords or extension cords with wet hands or if the floor or ground surface is wet.

Fire extinguishers filled with carbon dioxide must be used to fight electrical equipment fires (water may never be used). If possible, the electrical equipment should be de-energised before fire-fighting activities commence (refer to the Fire Protection and Prevention Standard).

When cleaning or performing maintenance work on an item of electrical equipment, the equipment must be unplugged.

Equipment may not be unplugged while that equipment is switched on. Nor may equipment be plugged into a receptacle (socket) with the equipment's switch turned on. Electrical equipment that has a defective plug or wiring may not be used. Repair work to defective or damaged electrical equipment may only be carried out by a qualified electrician. Extension cords may be used for temporary applications only. Permanent cabling must be installed for long-term needs.

Extension cords may not be run through doors, windows, ceilings or holes in walls. An extension cord must be uncoiled completely before it is used. An extension cord must be of sufficient current-carrying capacity to power the equipment that it is supplying electricity to. Cords must not be overloaded. Extension cords must be unbroken and continuous (i.e. no joins or splices in the cord are permitted). Extension cords may not be daisy-chained (i.e. one extension cord plugged into another extension cord).

Extension cords and equipment cords may not be modified to fit a receptacle (socket). Two-conductor extension cords may not be used. A three-conductor extension cord (i.e. a grounded or earthed cord) must be used even if the equipment that it is supplying electricity to uses a two-prong plug.

Extension cords that are frayed, have insulation tears, cracks or abrasions, have exposed conductors, or have bent, broken or "spread" plug prongs may not be used. Extension cords that will be used outdoors must have heavy duty insulation and must be weather and UV resistant.

All electrical equipment cords and extension cords must be covered or elevated to protect them from damage and to eliminate tripping hazards. Each contractor is responsible for protecting his electrical equipment from the weather and from possible mechanical damage.

All portable electrical equipment (including generators) must be inspected, tested and tagged by a competent and appropriately qualified electrician on a monthly basis. Details of these inspections and tests must be recorded in a register which must be made available to the nominated project management representative for inspection.

The inspection and testing must include a continuity test of the grounding (earthing) conductor (as applicable) and a complete examination of the equipment or system to assure safe use. The following colour coding system must be used for the tagging of all electrical equipment:

Table 35-1 Colour Coding System for Electrical Equipment

Month	Tag Colour	Month	Tag Colour
January	Red	July	Red
February	Blue	August	Blue
March	Orange	September	Orange
April	Green	October	Green
May	White	November	White
June	Yellow	December	Yellow

The tag placed on a piece of equipment must be traceable to an entry in a register where the following information concerning the inspection and testing of that piece of equipment must be recorded:

- Date of inspection and testing;
- Equipment description;
- Equipment owner;
- Equipment location;
- Name, signature and licence number of the electrician who carried out the inspection and testing; and
- Comments concerning the inspection and testing, and details of any repair work carried out or required.

Any item of electrical equipment that does not pass an inspection or test must be removed from service (and tagged, "Out of Service") immediately and must then either be repaired (if possible) or removed from site. Any item of electrical equipment without a tag or with an out-of-date inspection or test may not be used.

Any item of electrical equipment found without a tag or with an out-of-date inspection or test must be removed from service until it has been inspected and tested. If it is found that more than one item of equipment being used by a contractor has not been inspected and tested as required, all work with electrical equipment must be stopped until it can be demonstrated to the satisfaction of the nominated project management representative that the contractor's systems and controls are adequate and fully implemented.

In addition to the formal monthly inspections and testing carried out by an electrician, electrical equipment (particularly extension cords, portable hand tools, welding machines, compressors and pumps) must be visually inspected by the user on a daily basis prior to use. Users must be trained

to look for cracks in casings, loose casings, outer cord sheathing that is not being held firmly in position at the equipment, cuts or cracks in cord or cable insulation, exposed conductors, damaged plugs or sockets, and missing covers. Damage and / or defects must be reported immediately.

Personnel must immediately stop using and report any electrical equipment or machinery that is shocking, sparking, overheating or smoking. Corroded outlets, switches and junction boxes must also be reported.

15.20 Confined Spaces

Entry into a confined space occurs when a person's whole body, upper body or head is within the confined space. This is not intended to prevent an authorised, competent person from inserting only his arm into the space to test for hazards using appropriate monitoring equipment. Precautions must be taken to prevent persons from being overcome by atmosphere escaping from the confined space.

Before any person enters a confined space, a detailed risk assessment must be carried out, including the need for an authorised person to assess such things as oxygen levels, contaminants, temperature extremes and concentration of flammable substances.

As a minimum the risk assessment shall address the following:

- Isolation and lockout procedures required for chemical substances, mechanical or electrical energy, steam, pressure, heat, gases, liquids and solids;
- Venting, purging, draining and cleaning prior to entering the confined space;
- Hazards created by carrying out particular tasks or through the use of chemical substances in the confined space. Task-Based (or Issue-Based) Risk Assessments and/or Written Safe Work Procedures must be available for work in confined spaces - in particular for abrasive blasting, welding, flame cutting, grinding, chemical/steam cleaning, rubber lining and painting;
- Entry, exit and escape routes as well as barricading;
- The electrical safety, intrinsic safety and other safety specifications of equipment to be used in the confined space (explosive atmospheres must be considered);
- The need to test for presence of toxic/asphyxiant substances, radioactivity, oxygen, temperature extremes and flammable substances prior to entry and during the performance of work;
- Provision of suitable mechanical ventilation and personal protective equipment e.g. lifejackets etc. and in particular the use of respiratory protection such as compressed air breathing apparatus; and
- A ventilation rate suitable for general use must take into account factors such as air contaminant type, rate of generation, rate of oxygen depletion, temperature, efficiency of ventilation distribution and contaminant removal from the breathing zone. Therefore each situation needs to be evaluated on its own merit by a risk assessment that will select a combination of ventilation method and respiratory protection that suits the particular circumstances. This must be achieved by consultation between competent operations personnel, engineers and a ventilation specialist.

Entry and work inside a permitted confined space must be controlled and regulated by the project Isolation / Lockout and Permit to Work control systems. The Authorised Person issuing the Permit to Work may only do so if the conditions applying to the specific confined space entry have been satisfied and documented.

As a minimum, the following must be included in the permitting process:

- Access barriers to prevent unauthorised entry;

- Isolation procedures for contaminants and other energy sources;
- The need for breathing apparatus / ventilation requirements;
- The sign-in and sign-out of all persons entering the confined space;
- Display of the permit;
- Communication procedures and/or equipment;
- Safety specifications of equipment to be taken into the confined space;
- Barricading of entrances and exits;
- Rescue plan and equipment;
- Standby person(s); and
- A completion and lock-in procedure (to ensure that space is evacuated and adequately secured).

The Permit to Work process must require competent rescue persons with suitable communication, rescue and fire-fighting equipment to be present where any of the following may exist:

- Compressed air breathing apparatus is required;
- There is a high risk of fires or explosions;
- The atmosphere can rapidly become unsafe for breathing purposes if the mechanical ventilation fails;
- There is a high risk of flooding or engulfment;
- Narrow tunnels or pipes are entered or where exit or escape routes cannot readily be accessed;
- Work is done in remote areas; and
- A single person, who cannot be observed directly or is isolated from other workers, does the work.

Where testing for toxic/asphyxiate substances, radioactivity, oxygen, temperature extremes and other health hazards as well as for flammable substances is carried out, it may only be done by persons trained, tested and certified competent in writing to do so. The ventilation method and quantity must be adequate to ensure oxygen levels and explosive or toxic gas levels remain within acceptable defined limits. Where ventilation is required, this must be covered by an approved documented procedure.

As a minimum standard, the volume of air pumped in and circulated in a confined space needs to be equivalent to 20 times the volume of the space per hour.

Where breathing apparatus or respiratory equipment is required, the contractor's Health and Safety Officer must be consulted with regard to the specification and selection of suitable equipment. All persons required to use respiratory protection must be medically fit and trained in the correct use of the equipment.

Safe and convenient entry, exit and escape routes from the confined space must be provided where possible and practical. Where this cannot be achieved effectively, the risk assessment must determine if a competent rescue person must be on duty at the confined space when work is in progress.

Where a standby/rescue person is required, they will have no other duties and will be positioned outside the confined space entry point at all times while personnel are within the space.

15.21 Arc Welding

All welding machines must be fitted with voltage reducers. The supply cable to every welding machine must be correctly rated and fitted with an approved plug to be used only with an approved matching plug socket. The electrical circuit to every plug socket must be protected by a correctly rated circuit breaker and a supply voltage rated earth leakage unit. Welding cables must be properly insulated and correctly rated for the welding machines on which they are to be used.

Welding cable terminals must either be covered with a properly designed, constructed and installed cover so that inadvertent human contact with the terminals is impossible, whether the cables are connected or not, or the welding cables must be fitted with insulated plugs so that inadvertent human contact with any live part is impossible when the cables are plugged into the machine. Also the plug socket should be such that when the cables are not plugged in, inadvertent contact with a live part of the socket is impossible.

Earth cable clamps and electrode holders must be of an approved type. Earth clamps and electrode holders must be fixed to welding cables with eye terminals and bolts. All welding machines and safety devices must be subjected to regular planned maintenance and a monthly electrical inspection. The inspection must include a test to ensure that the voltage reducer is functioning properly, by measuring and confirming that the open circuit output voltage is reduced.

Before using a welding machine, the welder must ensure that he is wearing all the required and approved protective clothing and equipment:

- Persons assisting the welder must also wear all of the required personal protective Welding hood;
- Leather welding gloves;
- Safety boots with steel toe protection;
- Flame resistant overalls; and
- Any other clothing or equipment necessary to perform his work safely and efficiently.

When changing electrodes or moving the earth clamp, the welder or his helpers must wear gloves to avoid possible skin contact with live electrical parts and to prevent burns. When attaching welding cables to the terminals of the welding machine, the welder or his helpers must wear gloves, or preferably, the machine should be switched off to avoid possible electric shock.

Helpers who may be holding the work piece being welded must wear gloves and protective goggles. Where practicable the welder should place protective screens around the area where he is welding, to prevent injury to the eyes of passers-by.

The welder must ensure that the earth cable follows the shortest practical route between the welding machine and the work piece. The earth connection must be directly between the welding machine and the work piece and no building or other structure must form part of the earth return path.

As far as is practicable, the welder should avoid welding under wet or damp conditions. If this is unavoidable, the following precautions should be taken:

- Use only oil filled or other watertight type welding machine;
- Keep the electrode holder as dry as is practical;
- Keep as dry as possible. Stand on an elevated surface out of the water and wear watertight boots and a rain suit. Also ensure that the gloves are in good condition, free of holes.

Under conditions that result in high perspiration levels, the following measures should be implemented:

- Use an insulated electrode holder;
- Change clothing regularly (if possible);
- Use insulated material like rubber mats and/or timber tuck board to separate yourself from the work piece;
- Wear dry gloves on both hands during welding;
- Use fans and air-conditioning to reduce humidity and temperature; and
- Use an observer capable of responding in an emergency.

When working inside metal vessels or under other conditions where parts of his body may come into contact with conducting surfaces, the welder must take precautions to insulate himself from such surfaces.

When working in confined spaces, the welder must take steps to ventilate the area to prevent inhalation of fumes, which may endanger his health and the health of any assistants. Engine powered welding machines must not be used in any place that is not very well ventilated since the welder and his helpers may be overcome by carbon monoxide fumes.

The welder should take the necessary precautions when welding objects that may catch alight, explode or release poisonous fumes or gases.

15.22 Gas Welding and Burning

Welding or cutting torches and hoses shall not be connected to cylinders when stored. When work is stopped and equipment is unattended, all valves at the gas and oxygen cylinders shall be closed. The hoses shall be bled and a check shall be made later for possible pressure build-up. Torches shall be removed from the hoses prior to putting them into the toolbox. Smoking SHALL NOT be permitted during this stopping procedure.

Special care shall be taken during overhead cutting and welding operations to safeguard and prevent falling sparks from starting a fire. Warning signs shall be posted around and at each level below the area of each overhead welding or burning operation. Fire extinguishers shall be available and fire blankets shall be used for protection.

When welding or cutting, adequate ventilation must be ensured / provided. Hoses shall be kept clear from passageways, ladders and stairs. When hoses are subject to damage, they shall be properly protected. Hoses shall be inspected daily. Fire extinguishers shall be ready for instant use in locations where cutting is performed.

Flash-back arrestors must be fitted to all cutting torches at the torch and at the bottle (a total of four arrestors).

Lighting of the cutting and welding torches must only be done using a striker and not an open flame. Soap Leak tests must be performed on all flash-back arrestors.

Hoses may only be secured using approved hose clips, and not by wire, cable ties or any other means. Special care shall be taken when welding with respect to piping that has been painted, as toxic fumes may be emitted in some cases. The supervisor's advice should be sought prior to the above welding operations being carried out.

15.23 Compressed Gas Cylinders

The contractor must establish a suitable storage area for oxygen, acetylene, LPG and argon cylinders in compliance with the following requirements:

- The storage area must be located at least 10 metres away from any building, and must be well ventilated;
- The storage area must have a concrete floor;
- The storage area must be enclosed using wire mesh fencing (as this will ensure adequate ventilation). This enclosure must be kept locked. Access into the storage area must be limited and controlled;
- A protective covering or roof must be fitted to the enclosure to provide shade;
- The enclosure may not be used for the storage of any other materials/equipment, and must be kept completely free of all combustible materials at all times;
- Appropriate warning signage (i.e. "No Smoking" and "No Naked Flames") must be prominently displayed on the enclosure;
- A 9kg dry chemical powder fire extinguisher must be mounted near the entrance to the enclosure;
- If electrical lighting is required, it must be of an approved intrinsically safe type;
- Oxygen, acetylene, argon and LPG cylinders must be stored separately in the enclosure. Furthermore, full and empty cylinders must be separated. Separate storage sections must be clearly designated within the enclosure for the different gas types, and for full and empty cylinders, i.e. oxygen – full, oxygen – empty, acetylene – full, acetylene – empty, etc.;
- When a cylinder is empty, the cylinder cap must be replaced to protect the valve. Empty cylinders must be clearly marked (there must be no need to open valves to check if cylinders are full or empty);
- All cylinders must be stored in an upright position and must be secured in this position by chaining, strapping or clamping them individually to a wall, a cylinder trolley, rack or carrier, or some other rigid structure;
- Cylinders must be stored in rows (when necessary due to the number of cylinders) with aisles between the rows to facilitate easy and rapid removal in the event of a fire;
- Oxygen cylinders may never be stored near highly combustible materials, particularly oil and grease, or near fuel gas cylinders. When in storage, oxygen cylinders must be separated from fuel gas (LPG and acetylene) cylinders by a distance of 6 metres or by a 2 metre high wall made of fire-resistant material;
- The total quantity of gases stored on site must be limited to a 2 week supply.

Compressed gas cylinders must always stand upright (i.e. when being used, stored or transported) and must be properly and individually secured to prevent them from falling over. Cylinders must be protected from flame, heat and from being struck by moving equipment and falling objects.

When handling gas cylinders (whether full or empty), care must be taken to prevent sudden impacts. Whenever a cylinder is not in use, the protective cap must be in place to prevent the valve from being damaged. Gas cylinders may not be carried, dragged, rolled or slid across a floor or surface. When gas cylinders are to be moved / used, they must be placed in a proper cylinder trolley fitted with a 1.5kg dry chemical powder fire extinguisher.

Gas cylinders may not, under any circumstances, be used as rollers or work supports. If transported by crane, hoist or derrick, compressed gas cylinders must be placed in a suitable cradle, net or skip box. Cylinders may NEVER be lifted using wire rope, fibre rope, a web sling or a chain sling. Before moving / transporting a gas cylinder, the regulator must be removed and the protective valve cap must be replaced.

Gas cylinders may not be taken into a confined space. Gas hoses that are run into a confined space must be removed during breaks. Gas cylinders may not be placed on scaffolding.

Cylinder valve keys must be in place. If no suitable valve key is available then the cylinder may not be used. Nothing but the manufacturer-supplied key may be used to open the valve. A flashback arrestor and a check valve (non-return valve) must be installed between the regulator and the hose and between the hose and the torch on the oxygen line and on the fuel (acetylene) line.

Connection fittings may not be forced and safety devices associated with cylinder valves or regulators may not be altered / tampered with. Gas hoses may not be joined. Only approved hose connectors of the crimp type are permitted. Wire and jubilee clamps are prohibited. Only high quality ancillary equipment may be used. This includes flashback arrestors, hoses, clamps, spindle keys, nozzles and torches. Only trained and competent personnel may operate gas welding / cutting equipment and appliances.

When an employee opens the valve to a cylinder, he must stand to one side and open it slowly. Valves may never be left partly open – they must either be closed or be opened fully. Leaking cylinders must immediately be removed from service and the workplace (if it is safe to do so).

Suitable firefighting equipment must be at hand wherever gas cylinders containing oxygen and / or fuel gas are being used. Gas cylinders must be prevented from coming into contact with electrical circuits, e.g. welding leads. Never strike an arc on a cylinder.

Oxygen may only be used for the purpose for which it is provided. Do not use oxygen in pneumatic tools or tyres, as an explosion may occur. Empty cylinders must immediately be marked as such and must be removed to the cylinder storage area at the end of each day / shift.

15.24 Electrically Powered Tools and Equipment

All powered hand tools, such as circular saws, drills, chainsaws, percussion tools, jigsaws etc., must be equipped with a constant pressure switch that will shut off the power when the pressure is released. (Exception: this requirement does not apply to concrete vibrators, concrete breakers, powered tampers, jack hammers, rock drills, and similar hand operated power tools).

Electrical power tools must be of the approved double-insulated type. The electric cord, pneumatic or hydraulic supply line of powered tools must not be used for hoisting or lowering of the tool. Loose clothing, jewellery or gloves that could get caught in the tool must not be worn when operating powered tools. Operators of powered tools who have long hair must keep their hair tied up.

The power source must be disconnected from the tool before making any repairs, servicing, adjustments, or replacing attachments such as drill bits.

15.25 Angle Grinders

The following personal protective equipment must be worn when using angle grinders:

- Safety helmet;
- Gloves;
- Safety glasses (or safety goggles) and a full face shield (i.e. double eye protection);
- Overalls with long sleeves and long pants, avoid any form of loose clothing;
- Safety boots with steel toe protection;

- Hearing protection;
- Breathing apparatus where dust or fumes may be generated;
- Where grinding machines are used, a face shield is to be worn as extra protection to the safety glasses; and
- Certain tasks may require the use of a leather apron as determined by a risk assessment.

A 230mm angle grinder may not be used for free cutting purposes. Exceptions may be approved only if alternative methods evaluated proved more hazardous or no alternative exists. The risk assessment for the task must then specifically include mitigating measures to ensure the safest possible way of performing the task.

The use of 230mm angle grinders for grinding purposes is acceptable, however should this form of grinding be required, the 115mm or 125mm grinders would be preferable. All angle grinders must have a dead man switch incorporated, with a pressure switch in the handle. A 230mm electrical angle grinder unit must incorporate a soft start to reduce the starting strain and a braking system to reduce run on after the unit has been switched off.

All angle grinders must have a spindle lock to assist with changing the disc or grinding wheel. Anti-vibration handles are recommended to further reduce the stress if used for extended periods. Angle grinders must be equipped and operated with disc guarding at all times. Angle grinder must not be stored with fitted discs, as this will lead to damaging of the discs.

Before use and mounting of discs it is essential to check the safety codes and specifications printed on the upper side of the disc. Such specifications include the following:

- Revolutions per minute (RPM). The allowable speed of the disc must be equal to or greater than the maximum achievable speed of the grinder;
- Physical dimensions of the disc must meet grinder specification; and
- The disc must be suitable for the material type to be cut / ground as indicated on the disk. Cutting discs must never be used for grinding and vice versa.

It is critical that the correct disc mounting procedure is followed:

- Check that the machine is plugged out;
- Check the machine spindle, backup washer and thread;
- Check the condition of spindle nut - ensure spanner drive holes are not elongated;
- Ensure spindle nut spanner is the tool recommended by machine manufacturers;
- Do not use a hammer, pipe or chisel to tighten the nut, or apply additional mechanical advantage to nut torque. A firm "nip" is sufficient to retain the disc;
- Ensure the spindle diameter is suited to disc bore. Excessive clearance will cause the machine to vibrate due to eccentricity;
- Check to see that the nut and backup washer do not "bottom out". This will result in the disc not being correctly clamped on the spindle;
- Ensure the spindle speed is marked on the grinder and that it is less than the allowable disc speed; and
- Fit the disc, with the metal ring or writing to the nut side.

15.26 Pneumatically Powered Tools and Equipment

Pneumatic powered tools must only be driven by filtered compressed air with an in-line lubrication system, or be lubricated prior to use if there is no in-line lubrication system. When using pneumatic powered tools the designated tool pressure must be attained by the use of a regulator.

Pneumatic powered tools must be disconnected when not in use. They must not be disconnected from the air supply until all the residual pressure has been released or contained by a shut-off device. Hoses must not be kinked as a means of containment.

Employees operating pneumatic powered tools, and any potentially affected employee in the vicinity of use, must wear suitable personal protective equipment. All rotary compressed air tools (e.g. drills) must have the rated revolution per minute (RPM) permanently marked on the casing. Only attachments of compatible RPM must be used with these machines.

The actual RPM of the tool must be checked every three months to ensure that the speed is as rated to manufacture specifications.

Pneumatic powered tools must be secured to the air supply hose by an approved positive means to prevent the tool from becoming accidentally disconnected. Safety clips or retainers must be securely installed and maintained on pneumatic impact (percussion) tools to prevent attachments from being accidentally expelled.

All pneumatically driven nailers, staplers, and other similar equipment provided with automatic fastener feed, which operate at more than 100 kPa pressure at the tool, must have a safety device on the muzzle to prevent the tool from ejecting fasteners unless the muzzle is in contact with the work surface.

Compressed air must not be used for cleaning purposes except where reduced to less than 30kPa, and then only with effective chip guarding and personal protective equipment in place. The 30kPa requirement does not apply to concrete form, mill scale and similar cleaning purposes.

The use of compressed air for cleaning purposes must be approved by the nominated project management representative. Compressed air must not be pointed at any part of the body or used for cleaning clothing.

Airless spray guns of the type which atomize paints and fluids at high pressures must be equipped with automatic or visible manual safety devices which will prevent pulling of the trigger to prevent release of the paint or fluid until the safety device is manually released. A diffuser nut which will prevent high pressure, high velocity release while the nozzle tip is removed, plus a nozzle tip guard which will prevent the tip from coming into contact with the operator, or other equivalent protection must be provided in lieu of the above.

Abrasive cleaning nozzles must be equipped with an operating valve, which must be held open manually to enable operation. A support must be provided on which the nozzle may be mounted when it is not in use.

15.27 Fuel Powered Tools and Equipment

Fuel powered tools must be shut down and allowed to cool before being refuelled, serviced, or maintained. Fuel must be transported, handled, and stored in approved fuel containers. Where possible, diesel driven engines must be used in preference to petrol driven engines. All fuel powered tools must be included on the contractor's Equipment Register and the register must be submitted to the nominated project management representative prior to the relevant work commencing.

When fuel powered tools are used in enclosed spaces, the space must be ventilated and the atmosphere monitored to measure toxic gas concentrations. Persons in the space must wear the necessary personal protective equipment. Confined Space Entry clearance may apply. This type of activity must only be undertaken in exceptional circumstances and requires the approval of the nominated project management representative.

15.28 Hydraulically Powered Tools and Equipment

Hydraulic powered tools must use only approved fluid that retains its operating characteristics at the most extreme temperatures to which it will be exposed. The manufacturer's stated safe operating pressures for hoses, valves, pipes, filters and fittings must not be exceeded. Only manufacturer approved hoses, valves, pipes, filters and fittings must be used.

15.29 Explosive Powered Tools

All operators shall be trained by the contractor. The contractor shall ascertain that the explosive charges to be used are of the correct strength for the purpose.

Projectiles from explosive powered tools shall NOT be driven into:

- Tile, terracotta, glazed brick, glass, marble, granite, thin slate or other brittle substances;
- High tensile steel, cast iron or steel hardened by heat treatment; or
- Concrete that contains aggregate that will not pass wholly through 25mm mesh screens.

Under no circumstances shall a tool be fired in such a manner as to cause the projectile to fly free. Suitable safety glasses and hearing protection shall be worn by operators when firing an explosive powered tool.

At all times when a tool is being used, the operator shall display clearly legible signs at or near the place where the tool is in use. Sign should read: WARNING: EXPLOSIVE POWERED TOOL IN USE – KEEP CLEAR. The operator shall warn all other employees in the vicinity of the area in which the tool is about to be used.

Tools shall never be stored in a loaded state. Cartridges and tools shall be stored separately in lockable containers. A logbook must be kept of the number of cartridges used and returned.

15.30 Hand Tools

Employees required to use hand tools must receive training relevant to the tool and have their competency assessed in the operation, inspection and maintenance of the tool. Where necessary, additional applicable personal protective equipment must be worn when using hand tools.

Wrenches, including adjustable, pipe, end, and socket wrenches, must not be used when the jaws are sprung to a point where slippage occurs. Impact tools such as drift pins, wedges and chisels, must be kept free of mushroomed heads. The wooden handles of tools must be kept free of splinters or cracks.

Adjustable wrenches must not be used in lieu of ring or open-end type spanners, unless a risk assessment has been conducted and the use of the adjustable wrench is approved by the nominated project management representative. Wherever possible, ring spanners must be used in preference to open end spanners.

Correct hand tools for the job must be used, e.g. screwdrivers must not be used as chisels, and pliers must not be used as hammers. All wedges and drifts that may spring, fly or fall to lower levels upon impact must be fitted with an attachment which attaches a safety "lanyard" to a solid structure to restrain the impact tool from becoming a projectile.

All hand tools used in elevated areas, that may be dropped or fall to lower levels must be fitted with safety lanyards and attached to solid structures or in the case of podges, scaffold keys etc., attached by wrist lanyard to the user.

A utility knife must be used as a last resort, when it is the safest tool to use. Always consider alternatives that pose less of a risk to the operator.

Whenever a utility knife is used, ensure that a complete risk assessment is done and that all possible hazards have been addressed. Only utility knives with retractable blades are to be used. The blade is to be retracted at all times when the knife is not in use or is being stored.

Before using the utility knife, ensure that the tool is in a good condition and the blade is secure in the holder (seated correctly and that there is no play). Ensure that the blade is always sharp and in good condition. This will prevent the use of excessive force.

Always wear cut resistant gloves and safety glasses when using a utility knife. There is always a risk of the blade breaking under tension and becoming a projectile. Always ensure that you cut away from your body, and that no part of your body is in the firing line. Always ensure cleanliness of all equipment in use during the cutting operations.

15.31 Inspection of Equipment and Tools

All tools must be inspected by the user before, during and after use. If any faults are identified, the tool must be taken out of service and not used until repaired. Faulty tools that are not able to be repaired must be tagged "out of service" and removed from site.

15.32 Manual Handling and Vibration

Any handling or lifting task that can only be done manually must be planned and rehearsed before the task is done. If more than one person is involved in a task a communication procedure must be agreed in advance. Lowering the load must be done in a controlled manner. Dropping a load is dangerous and must be avoided.

As a guideline 25 kg is considered to be the limit of what a person can safely handle. Where there are loads exceeding 25 kg the risk of handling the load must be mitigated to assure minimal potential for any injury. When mechanical lifting aids are provided, they should be used. Extra care should be taken when lifting awkwardly shaped objects. Correct lifting techniques must be used at all times when lifting a load manually.

The following, but not limited to, should be considered with conducting the Risk Assessment with regards Manual Handling and also take into consideration the task factors, physical demands and tools involved in the task:

- Load weight/frequency;
- Hand distance from lower back;
- Asymmetrical trunk/load;
- Postural constraints;
- Grip on the load;
- Floor surface;
- Environmental factors;
- Carry distance; and
- Obstacles en route.

Team Manual Handling:

- Load weight;
- Hand distance from lower back;
- Vertical lift region;
- Trunk twisting/sideways bending;
- Postural constraints;
- Grip on the load;
- Floor surface;
- Environmental factors; and
- Communication, co-ordination and control.

As far as possible, exposure to vibration must be eliminated. However, if this is not possible, short-term solutions to decrease exposure include:

- Reducing the vibration levels;
- Removing the person from the vibrating equipment / tools;
- Reducing the period of time that the person works with the vibrating equipment / tools (at least 40 minutes break after 20 minutes working with a machine that vibrates excessively).

In order to reduce exposure to vibration:

- Consider buying equipment that operates effectively at lower speeds;
- Buy equipment with built-in damping materials;
- Buy lighter tools if they are available - they require less of a grip;
- Maintain the equipment;
- Make sure equipment is balanced and there are no worn parts;
- Use remote controls when they are available;
- Reduce your grip on the equipment when it is safe. The less time you actually have your hands on the equipment the better. Relax your hands during these brief breaks;
- Take scheduled breaks; and
- Do other tasks that allow you to move away from vibrating tools and equipment.

The workplace must be assessed by a competent person for compliance with good design, layout and practice, to avoid or minimise adverse health consequences due to manual handling and vibration issues.

Quantitative evaluations of vibration produced by specific equipment must include the following measurement parameters: direction of movement, frequency, intensity, and variation with time and duration, as per documented methods.

Employees and contractors must be informed of the results of assessments and instructed in appropriate manual handling techniques, where the risk assessment indicates a need. Workplace vibration sources that could contribute to the exceedance of an Occupational Exposure Limit (hence potential for impact on worker musculo-skeletal fitness) must be identified and adequately characterised.

Manual handling tasks assessed as having the potential to cause a Lost Time Injury (i.e. with potential for impact on worker musculo-skeletal fitness) must be identified and adequately characterised. Workplace manual / materials handling tasks risk rated as "significant" must be assessed and recorded to include biomechanical factors (e.g. posture, bending, twisting, repetitive motions, working overhead, and exerting force away from the body).

15.33 Demolition Work

Demolition work must be carried out as per the requirements of Construction Regulations, 2014, Regulations 14.

The contractor must appoint a competent person in writing to supervise and control all demolition work on a project site.

15.34 Temporary Works

The contractor must appoint a temporary works designer in writing to design, inspect and approve the erected temporary works on site before use.

The contractor must ensure that all temporary works operations are carried out under the supervision of a competent person who has been appointed in writing for that purpose. The contractor must ensure that, all temporary works structures are adequately erected, supported, braced and maintained by a competent person so that they are capable of supporting all anticipated vertical and lateral loads that may be applied to them, and that no loads are imposed onto the structure that the structure is not designed to withstand.

All temporary works structures are done with close reference to the structural design drawings, and where any uncertainty exists the structural designer should be consulted. Detailed activity specific drawings pertaining to the design of temporary works structures are kept on the site and are available on request to an inspector, other contractors, the client, the client's agent or any employee.

All persons required to erect, move or dismantle temporary works structures are provided with adequate training and instruction to perform those operations safely. All equipment used in temporary works structure are carefully examined and checked for suitability by a competent person, before being used.

All temporary works structures are inspected by a competent person immediately before, during and after the placement of concrete, after inclement weather or any other imposed load and at least on a daily basis until the temporary works structure has been removed and the results have been recorded in a register and made available on site;

No person may cast concrete, until authorization in writing has been given by the competent person; if, after erection, any temporary works structure is found to be damaged or weakened to such a degree that its integrity is affected, it is safely removed or reinforced immediately. Adequate precautionary measures must be taken in order to:

- Secure any deck panels against displacement; and
- Prevent any person from slipping on temporary works due to the application of release agents;
- As far as is reasonably practicable, the health of any person is not affected through the use of solvents or oils or any other similar substances;
- Upon casting concrete, the temporary works structure is left in place until the concrete has acquired sufficient strength to safely support its own weight and any imposed load, and is not removed until authorization in writing has been given by the competent person contemplated in paragraph (a);
- The foundation conditions are suitable to withstand the loads caused by the temporary works structure and any imposed load in accordance with the temporary works design.
- Provision is made for safe access by means of secured ladders or staircases for

- A temporary works drawing or any other relevant document includes construction sequences and methods statements;
- The temporary works designer has been issued with the latest revision of any relevant structural design drawing;
- A temporary works design and drawing is used only for its intended purpose and for a specific portion of a construction site; and
- The temporary works drawings are approved by the temporary works designer before the erection of any temporary works.

No contractor may use a temporary works design and drawing for any work other than its intended purpose.

15.35 Structure

The contractor must ensure that:

- All reasonably practicable steps are taken to prevent the uncontrolled collapse of any new or existing structure or any part thereof, which may become unstable or is in a temporary state of weakness or instability due to the carrying out of construction work;
- No structure or part of a structure is loaded in a manner which would render it unsafe; and
- All drawings pertaining to the design of the relevant structure are kept on site and are available on request to an inspector, other contractors, the client and the client's agent or employee.

An owner of a structure must ensure that;

- Inspections of that structure are carried out periodically by competent persons in order to render the structure safe for continued use;
- The structure is maintained in such a manner that it remains safe for continued use;
- The records of inspections and maintenance are kept and made available on request to an inspector.

15.36 Personal Protective Equipment

Applicable legislation, standards, procedures and safe work procedures (such as but not limited to Construction Regulations, General Safety Regulations, Client HS Specification) concerning Personal Protective Equipment (PPE) must be complied with at all times. As a minimum, the following PPE must be worn by all persons (including visitors) at all times whilst on the project site:

- Safety footwear with steel toe protection;
- Safety glasses (individuals who wear prescription spectacles must be provided with either over-spec safety glasses or prescription safety glasses);
- Safety helmet (hard hat); and
- High visibility protective clothing with reflective taping (long trousers and long-sleeved shirts with collars and cuffs).
- Additional PPE requirements must be determined through hazard identification and risk assessment. This hazard-specific PPE (such as hand protection, hearing protection and respiratory protection) must be worn as required (e.g. when in a certain area, when performing a certain task, or when working with a certain substance);
- The correct PPE must always be worn:
 - In accordance with site requirements (as indicated at the entrances to a project site and at the entrances to buildings and / or designated areas on the premises);
 - In zoned areas (e.g. noise zones and respirator zones); or
 - As required by a Safe Work Procedure, a risk assessment, safety information boards or a Material Safety Data Sheet (SDS).

Each contractor must provide each of his employees with all required PPE (at no cost to the employee). The specific PPE that is provided to a particular employee must be based on the nature of that employee's work and the location in which the work is performed (i.e. must be based on the hazards to which the employee is exposed). PPE requirements for a particular job or for a particular area must be determined through a risk assessment for that job or area.

Any employee who does not have all of the PPE that is required for him to perform his duties safely will not be permitted to work. Each employee must care for his PPE, maintain it in good condition, and inspect it on a daily basis. If an item of PPE has worn out, has become damaged, or is found to be defective in any way, it must be replaced by the contractor.

PPE must be stored in accordance with the manufacturer's requirements and/or recommendations.

Each employee must receive training in the use, maintenance and limitations of the PPE that is provided to him, and must be made aware of why the PPE is necessary as well as the consequences of not wearing it as instructed (i.e. the potential for injury and / or disciplinary action). Training records must be retained.

Any person who refuses to wear PPE as required must be removed from the site. Symbolic signs indicating mandatory PPE requirements must be prominently displayed at the entrances to a project site and at the entrances to buildings and / or designated areas on the premises where additional PPE is required. These signs must comply with the applicable national standard (if one exists).

Contractors must appoint an employee to:

- Control the issuing and replacement of PPE;
- Keep an up-to-date register as proof that items of PPE have been issued to individuals (an employee must sign for the items that he receives);
- Ensure that there is an adequate supply of all required PPE (i.e. maintain PPE stock levels on site); and
- Carry out regular inspections to ensure that PPE is being used correctly, is being maintained in a good, serviceable and hygienic state, and is not being shared between employees.

15.36.1 Head Protection

A safety helmet (or hard hat) worn correctly will help protect the head in the event of:

- An employee being struck on the head by a falling or flying object;
- An employee striking his head against a fixed or protruding object; or
- Accidental head contact being made with an electrical hazard.

A safety helmet must be worn at all times on a project site, with the following exceptions:

- Vehicle and equipment operators inside enclosed cabs;
- In offices and in office or administration buildings; and
- At designated lunch and break areas (provided that no work is in progress in the immediate break area).

A safety helmet must be worn in accordance with the manufacturer's requirements. A safety helmet must be worn directly on the head. The wearing of a cap or other headgear beneath a safety helmet is prohibited unless the items have been specifically designed to be used in combination (i.e. the arrangement is approved by the safety helmet manufacturer).

The suspension system inside a safety helmet (that acts as a shock absorber) may not be removed. The painting of safety helmets is prohibited. Safety helmets may only be cleaned using a mild detergent and water. No solvents may be used.

15.36.2 Eye Protection

If an employee is carrying out, assisting with, or working adjacent to any activity where sparks or projectile particles are being generated, where chemical mists or fumes are being generated, where liquids may splash or spray, where harmful electromagnetic radiation (heat or light) is being generated, or where there is a risk of wind-blown particles entering the eyes, then suitable protective eyewear must be worn at all times (i.e. safety glasses, safety goggles, a face shield, a welding helmet, or a combination of these).

Such activities include:

- Working with rotating equipment (e.g. grinders, drills, mills, lathes, and saws);
- Welding and cutting;
- Chipping, chiselling or caulking;
- Using explosive powered tools;
- Abrasive blasting;
- Sanding; and
- Working with chemical substances (e.g. drilling fluids, acids, solvents, paints, pesticides, etc.).

For certain activities, special eye protection is required (e.g. a heat-resistant face shield is required when working near molten metal). Double eye protection is required for activities such as:

- Grinding, cutting, chipping, chasing and reaming (employees must wear both a full face shield and safety glasses or goggles); and
- Arc welding (welders must wear both safety glasses and a welding helmet).

Screens must be erected to protect passers-by, where practical.

Safety glasses must be worn at all times on a project site, with the following exceptions:

- Vehicle and equipment operators inside enclosed cabs with the windows fully closed;
- In offices and in office or administration buildings;
- At designated lunch and break areas (provided that no work is in progress in the immediate break area); and

When another form of eye protection is required (e.g. safety goggles).

All safety glasses used on site must have suitable permanent side protection.

In strong sunlight, dark safety glasses should be worn to reduce eyestrain and fatigue. However, caution must be exercised when employees are required to frequently move between outdoor and indoor environments. Dark safety glasses may not be worn indoors or in poor daylight conditions. Prescription spectacles with tinted lenses are prohibited inside buildings or other structures with limited illumination unless the lenses are light-sensing and adjust to changing illumination levels.

Employees who wear prescription spectacles (i.e. require corrective lenses) must make use of either:

- Prescription safety glasses (with permanent fixed side shields) that conform to the requirements of a recognised national or international standard (e.g. CSA, ANSI, or equivalent); or
- Over-spec safety glasses or goggles.

The use of contact lenses in certain areas may not be suitable because of increased risk to the eye due to dust or heat.

15.36.3 Hearing Protection

Local regulations concerning occupational exposure to noise and the use of hearing protection must be complied with as a minimum. “Low noise” tools and machinery must be used wherever possible to reduce noise levels. Where noise cannot be reduced to an acceptable level through engineering and work practice controls, measures must be put in place to minimise the exposure of employees to the noise (i.e. administrative controls and personal hearing protection).

Areas where it is likely that the 95% upper confidence limit of an eight hour L_{eq} mean exceeds 85dB(A), or areas where impulse noise exceeds 140dB(C), must be designated as noise zones. These noise zones must be clearly demarcated and mapped, signs must be posted, and all employees must be made aware of the requirements for working in such an area.

Suitable hearing protection must be worn in all designated noise zones and when carrying out (or working in the vicinity of) any activity where the noise level exceeds 85dB(A).

Where hearing protection is required, a hearing conservation programme (applicable to all personnel and visitors) must be implemented. The programme must include training in the correct use and proper storage of hearing protection devices as well as replacement requirements. Training must be provided when hearing protection is first issued to an employee and refresher training must be carried out at least annually thereafter. Training records must be retained.

At least two types of personal hearing protection must be made available to employees. The hearing protection devices provided must have adequate noise reduction ratings (i.e. must be able to attenuate the noise level to below 85dB(A)).

Personal hearing protection must be issued on an individual basis and must not be shared. In addition to personally issued hearing protection, suitable disposable hearing protection must be made available at the entrances to all noise zones. All Hearing Protection Devices (except for disposable hearing protection) must be properly inspected and cleaned on a regular basis.

15.36.4 Respiratory Protection

Designated areas (respirator zones) must be established where:

- It is likely that the 95% upper confidence limit of a Similar Exposure Group’s mean exposure concentration exceeds the relevant Occupational Exposure Limit (OEL) for agents resulting in chronic effects, such as total inhalable dust, respirable dust, respirable crystalline silica, PAH, fluorides, lead, mercury, asbestos or non-asbestos fibrous materials; or
- The concentration of an agent (particulate, vapour or gas) with an acute effect exceeds 50% of the relevant OEL.

Note: For a particular hazardous agent, the OEL to be adopted must be either the client’s OEL or the OEL specified in local legislation, whichever is the most stringent.

Respirator zones identified must be clearly demarcated and mapped, signs must be posted, and all employees must be made aware of the requirements for working in such an area.

Suitable Respiratory Protection Devices (RPDs) must be worn in all designated respirator zones and when carrying out (or working in the vicinity of) any activity where the risk assessment has identified the need for respiratory protection.

RPD's must be selected based on:

- The type(s) of airborne contaminants that are present (gases, vapours, and particulates and aerosols including dusts, fumes, sprays, mists, and smoke);
- The potential particulate size distribution;
- Substance toxicity; and
- The likely concentrations.

Compatibility with the work tasks and other PPE, comfort (as it affects wear-time), and the ability to communicate adequately, must also be considered.

The risk assessment and method statement for the work to be performed, the information contained in the relevant Safety Data Sheets (SDSs), and the results of any air monitoring associated with the substances to be worked with or activities to be carried out, must be used to ensure that the most suitable RPD is selected.

Only RPDs certified to a recognised standard and approved by the nominated project management representative may be used.

Where respiratory protection is required, a respiratory protection programme (applicable to all personnel and visitors) must be implemented.

The respiratory protection programme must include:

- Periodic inspection of RPDs, including before each use;
- Periodic evaluation (by competent persons) of cleaning, sanitising, maintenance and storage practices;
- Performance of positive pressure and negative pressure fit checks by RPD wearers before each use to ensure that the respirator is functioning properly; and
- Training at first issue of a RPD and regular refresher training thereafter in accordance with regulatory requirements or at least once every two years (the training must cover fit testing, use, cleaning, maintenance, filter cartridge replacement, and storage). Training records must be retained.

RPDs must be used, maintained, and stored in compliance with the manufacturer's requirements as well as the respiratory protection programme. Suitable facilities must be provided for the cleaning and sanitary storage of RPD's.

As a minimum, qualitative and documented fit testing must be carried out (although quantitative fit testing is preferred) to ensure that the use of negative pressure RPDs (including disposable RPDs) is effective. Fit testing must be performed by a competent person when an RPD is first issued and must be repeated periodically in accordance with legal requirements or every two years as a minimum. A policy must be in place requiring a clean shaven face when using a negative or neutral pressure RPD for routine tasks (otherwise a positive pressure RPD must be used). A medical evaluation including a pulmonary function test may be required to determine whether or not an individual is medically fit to wear a respirator.

For air-supplied RPDs, breathing air must be effectively filtered and / or isolated from plant and instrument air, and isolated from sources of potential contaminants. The supplied air must be tested to determine if the air quality complies with the requirements of applicable standards for breathing air.

For nuisance dust, dust masks with a protection level of at least FFP2 must be worn.

15.36.5 Hand and Arm Protection

Gloves must be worn when handling or working with equipment, materials or substances with the potential to cause injury or illness. Suitable gloves must be selected based on the task to be performed and the specific hazard against which the employee requires protection, such as:

- Sharp edges;
- Sharp points and splinters;
- Abrasive surfaces;
- Hazardous chemical substances (toxic, corrosive, sensitising, etc.);
- Extreme temperatures; and
- Viruses, bacteria and parasites.

15.36.6 Foot Protection

Safety boots must be worn at all times whilst on a project site, with the exception of offices and office or administration buildings in which closed athletic, business or similar shoes may be worn. Sandals, slaps, slippers, open-toed and high-heeled shoes are not permitted on any project premises.

Safety boots must provide the following protection:

- Steel toe cap to protect against crushing (impact and compression forces);
- Leather uppers that provide resistance against water penetration and water absorption;
- Slip resistant soles;

And where a risk assessment identifies the need:

- Puncture resistant soles (i.e. steel midsoles) for protection against sharp objects;
- Chemical resistant soles for protection against spilt chemical substances (such as solvents, hydrocarbons, acids, and alkalis);
- Heat resistant soles for protection against hot surfaces or molten metal; or
- Electrical shock resistant soles for protection (insulation) against live electrical conductors.
- Gumboots with steel toe caps must be worn when working in water or very wet conditions.

15.36.7 Clothing

All employees working on a project site must wear high visibility protective clothing with reflective taping. Trousers must be long and shirts must be long-sleeved. Shirts must be buttoned at the neck and wrists.

Protective clothing must preferably be made of natural fibres. Short pants, short-sleeved shirts, sleeveless shirts, and vests are prohibited as outer garments (with the exception of a high visibility vest worn over a long-sleeved shirt).

Loose clothing may not be worn where it may become caught in moving machinery or equipment. For hot work (e.g. welding, cutting, etc.), work in the vicinity of molten metal, and any work carried out in the vicinity of an open flame, the protective clothing worn (shirt and trousers) must be made of a suitable fire retardant fabric. Underwear and socks must be made of natural fibres (preferably wool) or fire retardant fabric.

15.36.8 Body Protection

Suitable body protection must be provided as required to protect employees against specific hazards. A range of work activities require body protection in one form or another, including but not limited to:

- Working in extremes of temperature, such as fire-fighting, attending to a heating furnace, working with molten metal, working in refrigerated environments, etc.;
- Hot work (e.g. welding, burning, cutting and grinding);
- Working with hazardous chemical substances (e.g. acids, solvents, pesticides, etc.); and
- Clean up and disposal of hazardous materials and wastes (e.g. asbestos, hydrocarbons, etc.).

A wide variety of protective garments are available, such as fire-fighting suits, furnace suits, freezer jackets, leather aprons, leather spats, laboratory coats, chemical resistant aprons, chemical resistant (or hazmat) suits, and disposable coveralls. Suitable items must be selected to provide protection against the specific hazard(s) to which an employee is exposed. Hazards must be carefully identified and characterised to ensure that the correct protection is used.

Body protection must be sized properly to prevent tearing, the parting of seams, tripping, or restriction of movement.

15.36.9 Electrical Protective Equipment

To reduce the risk of electric shock, electrical insulating equipment appropriate for the voltage that may be encountered must be worn when working on energised electrical installations and when working within two metres of exposed energised conductors.

All rubber electrical insulating equipment (including gloves, sleeves, matting, covers, blankets, and line hoses) must be inspected for damage prior to and after each use, and immediately following any incident that can reasonably be suspected of having caused damage.

Rubber insulating equipment with any of the following defects and / or damage may not be used:

- A cut, rip, tear, hole, or puncture;
- Ozone cutting or ozone checking (i.e. the cutting action of ozone on rubber under mechanical stress causing a series of interlacing cracks);
- An embedded foreign object;
- Chemical deterioration (texture changes) such as swelling, softening, hardening, or becoming sticky or inelastic; or
- Any other defect that damages the insulating properties.

Rubber insulating gloves must be electrically tested before first issue and every 12 months thereafter as a minimum. Insulating gloves must also be given an air test along with the daily inspection. Essentially, this involves filling a glove with air and checking for any holes or leakage.

Insulating equipment that fails an inspection or electrical test may be repaired only as follows:

- Rubber insulating line hose may be used in shorter lengths with the defective portion(s) cut off;
- A rubber insulating blanket may be repaired using a compatible patch that results in the patched area having electrical and physical properties equal to those of the blanket;
- A rubber insulating blanket may be salvaged by cutting the defective area off the undamaged portion of the blanket;
- Rubber insulating gloves and sleeves with minor physical defects, such as small cuts, tears, or punctures, may be repaired by applying compatible patches. The patched areas must have electrical and physical properties equal to those of the surrounding material.

Repairs to gloves are permitted only in the area between the wrist and the reinforced edge of the opening.

Repaired insulating equipment must be retested before it is put back into use. Insulating equipment must be cleaned as required to remove foreign substances (using a mild detergent).

Insulating equipment must be stored in such a location and in such a manner so as to protect it from light, temperature extremes, excessive humidity, ozone, and other damaging substances and conditions.

Leather protective gloves must be worn over rubber insulating gloves to provide mechanical protection against cuts, abrasions, and punctures.

Suitable arc flash PPE (e.g. voltage rated gloves, fire retardant clothing, arc rated face shield, arc flash hood, arc flash suit, etc.) must be worn whenever an employee is potentially exposed to an arc flash hazard. The appropriate level of PPE must be worn depending on the task and the potential energy exposure. These PPE requirements must be clearly specified as part of a project-specific arc flash protection programme.

15.36.10 Jewellery

Necklaces, dangling earrings, and bracelets may not be worn on a project site. No ring or watch may be worn where there is a risk that it may become caught in machinery or equipment. No jewellery or other conductive apparel (such as a key chain or watch) may be worn when carrying out energised electrical work.

15.36.11 Hair

Scalp hair that is longer than the top of the shoulders must be tied up and restrained within the person's safety helmet or within the collar of his or her overalls, shirt or jacket.

For negative or neutral pressure Respiratory Protection Devices, facial hair must not cause the seal between the respirator and facial skin to be broken (or prevent a seal from being formed in the first place).

15.36.12 Task-Specific PPE

In addition to the standard PPE required for a project site (including a safety helmet, safety glasses, safety boots, and high visibility protective clothing), the following task-specific PPE must be used as a minimum by any person carrying out or assisting with such a task:

- Arc Welding – safety glasses and welding helmet (i.e. double eye protection), respiratory protection against the specific airborne contaminants being generated (fumes, gases, dusts, etc.), leather welding gloves, leather apron, leather spats, leather yoke (for work above shoulder height), and knee pads for welders in kneeling positions;
- Gas Welding, Cutting or Brazing – gas cutting or welding goggles with shade 4 filter lenses and full face shield (i.e. double eye protection), respiratory protection against the specific airborne contaminants being generated (fumes, gases, dusts, etc.), leather gloves (long cuff for welding and cutting, short cuff may be used for brazing), leather apron, leather spats, and leather yoke (for work above shoulder height);
- Grinding – safety glasses or goggles and full face shield (i.e. double eye protection), hearing protection, respiratory protection where dust or fumes may be generated, leather gloves, leather apron, and leather spats;

- Abrasive Blasting – respiratory protection (air-supplied hood), hearing protection, leather gloves, and leather apron;
- Spray Painting – respiratory protection (air-supplied hood for confined spaces), safety goggles (if the respirator design does not provide this protection), hearing protection where air compressors are used), chemical resistant gloves, and chemical resistant disposable coveralls.

15.36.13 Sun Protection

The contractor must ensure that all personnel are protected in sunlight through the use of long sleeve shirts, long trousers, brims to safety helmets and UV factored sunscreen. Shade structures must also be made available to all employees.

The contractor must conduct training and awareness sessions with his employees, advising on the risks associated with working in the heat (including dehydration) and the precautions to be taken (e.g. ensuring adequate fluid intake).

15.37 Fuel / Flammable Liquid Storage and Refuelling

No fuel (diesel, petrol, paraffin, etc.) or any other flammable liquid (paints, solvents, etc.) may be stored on site unless approved in writing by the nominated project management representative.

If the on-site storage of a fuel or a flammable liquid is approved, the contractor must ensure the following:

- The quantity of fuel / flammable liquid to be stored on site must be kept to the minimum that is required;
- The storage area must be located in a well-ventilated area at least 10 metres away from any building, drain, boundary or any combustible material;
- If more than 200 litres of fuel / flammable liquid is to be stored, the tank must be installed / the containers must be positioned within a bund;
- If the fuel / flammable liquid are to be stored in bulk tanks / vessels, then the minimum capacity of the bund must be 110% of the volume of the largest tank / vessel. If many small containers (e.g. 210 litre drums) are to be stored, the bund must be able to contain 25% of the total volume of the stored products;
- The bund must be impermeable. It must have a solid concrete floor and the walls must be constructed out of brick and must be plastered on the inside;
- The bund must be fitted with a lockable drain valve (for draining away rainwater), which must remain locked in the closed position. The valve may only be opened under supervision and in accordance with a written procedure;
- The fuel / flammable liquid storage area may not be used for the storage of any other materials / equipment, and must be kept completely free of all combustible materials (including rubbish, brush and long grass) at all times;
- Access to the storage area must be controlled (wire mesh fencing and gate);
- Appropriate warning signage (i.e. "Flammable Liquid", "No Smoking" and "No Naked Flames") must be prominently displayed at the storage area. The contents and volume of each tank must be indicated;
- In order to contain spillages, the offloading / refuelling bay at the fuel / flammable liquid storage area must have a solid concrete base surrounded by bund walls, ramps or humps and / or spill trenches (covered with steel grating) that lead into a sump;
- Fuel dispensing pumps must be protected against impact damage;
- All fuel / flammable liquid storage tanks and dispensing equipment must be electrically bonded and properly earthed;
- All electrical installations and fittings must be of an approved intrinsically safe type;
- Two 9kg dry chemical powder fire extinguishers must be mounted in an easily accessible position near the entrance gate to the fuel / flammable liquid storage area. Depending on the

size of the storage area, additional fire extinguishers may be required to ensure that an extinguisher is no further than 15 metres away from any point on the perimeter of the storage area;

- A fire extinguisher must be at hand wherever refuelling is carried out;
- Smoking or open flames within 10 metres of a fuel / flammable liquid storage / refuelling area is strictly prohibited;
- No petrol or diesel powered vehicle or equipment may be refuelled while the engine / motor is running;
- Cellular phones must be switched off in fuel / flammable liquid storage / refuelling areas;
- Spill clean-up kits (containing a suitable absorbent fibre product) must be provided;
- Any spillages must be cleaned up immediately and all contaminated cleaning materials must be disposed of in accordance with the applicable legislation;
- If a flammable liquid is spilt or is leaking from a container / vessel, the area must be cordoned off and appropriate warning signage must be displayed to keep unauthorised personnel away from the affected area. Every effort must be made to contain the spillage. All hot work in the vicinity must be stopped immediately. If the spilt product is volatile and the possibility exists that a vapour cloud may form, or if the leak or spillage cannot be contained or stopped, then appropriate emergency response procedures must be activated, including the evacuation of all persons in the vicinity. Suitable fire fighting equipment must be positioned ready for use should the spilt product ignite;
- The manual decanting of fuel or a flammable liquid from a large container should only be done using a stirrup pump (or similar) or a purpose-made frame which allows the container/drum to tilt for decanting and then return to the upright position;
- Drip trays must be used wherever required;
- All tanks, drums, cans, etc. containing flammable liquids must be tightly closed and properly sealed except for when a container is being filled or when a product is being decanted;
- The transport or storage of corrosive or flammable liquids in open containers is strictly prohibited;
- Daily-use quantities of fuel (up to a maximum of 20 litres) must be handled in an approved safety can with a flash arresting screen, spring closing lid and spout cover that will safely relieve internal pressure if the can is exposed to fire;
- Where safety cans may be impracticable, only approved metal containers with screw caps may be used. Each container must be clearly labelled to indicate its contents;
- Only small quantities of flammable liquids (paints, solvents, etc.) may be stored within a building. Each product must be kept either in its original container or in an approved container which must be properly sealed. Each container must be clearly labelled to indicate its contents. When not in use, all such containers must be stored in a well-ventilated steel cabinet which must be kept locked to prevent unauthorised access;
- Not even small quantities of flammable liquids may be stored or dispensed in buildings or places of public assembly, in general warehouses, or in buildings containing sources of ignition such as space heaters, cooking devices, open electric motors, motor vehicles, or where welding, cutting, or grinding activities are being carried out;
- Safe Work Procedures must be compiled for the transportation (including delivery), offloading, storage, handling and use of any fuel / flammable liquid on site;
- All personnel that will be required to work with or may come into contact with a flammable liquid must be made aware of the hazards associated with the product and must be thoroughly trained in the safe transportation, use, handling and storage thereof.

15.38 Fire Protection and Prevention

The contractor must compile a Fire Protection and Prevention Plan for the work that will be carried out on site.

The contractor must assess / survey his area of responsibility and identify locations where the risk of fire is high. Cognisance must be taken of the fact that certain locations may need to be designated as high risk due to the presence of large quantities of flammable or combustible materials / substances. For all high risk areas, the contractor must ensure that additional precautions are taken to prevent fires and strict control is exercised over any hot work (i.e. welding, cutting, grinding, etc.) that is carried out.

The contractor must supply and maintain all required fire-fighting equipment. The type, capacity, positioning, and number of fire-fighting appliances must be to the satisfaction of the nominated project management representative and must meet the requirements of the applicable legislation. Fire mains, hydrants and hose reels will rarely be available on site, so use must primarily be made of portable fire extinguishers.

Fire-fighting equipment, fixed and portable, must be strategically located with a view to being able to rapidly deploy the equipment in order to bring potentially dangerous and destructive fires under control while still in their infancy.

All fire extinguishers (and any other fire-fighting equipment) placed on site must be:

- Conspicuously numbered;
- Recorded in a register;
- Visually inspected by a competent person on a monthly basis (the results of each inspection must be recorded in the register and the competent person must sign off on the entries made); and
- Inspected and serviced by an accredited service provider every six months (the nominated project management representative may require that this frequency be increased depending on the environmental conditions (e.g. high dust levels, water, heat, etc.) to which the fire extinguishers are exposed).

Any fire extinguisher that has a broken seal, has depressurised, or shows any sign of damage must be sent to an accredited service provider for repair and / or recharging. Details must be recorded in the register.

Fire-fighting equipment may not be used for any purpose other than fighting fires. Disciplinary action must be taken against any person who misuses or wilfully damages any fire-fighting equipment.

Access to fire-fighting equipment, fixed or portable, must be kept unobstructed at all times. Approved signage must be in place to clearly indicate the location of each permanently mounted fire extinguisher, fire hose reel, etc.

The contractor must ensure that all persons working in / entering his area of responsibility are made aware of where all fire-fighting appliances and alarm points are located. The contractor must ensure that his employees (and those of any appointed sub-contractors) are trained in fire-fighting procedures and the use of fire-fighting equipment.

The contractor must compile an emergency response procedure detailing the actions that must be taken in the event of a fire or a fire / evacuation alarm. All personnel working within the contractor's

area of responsibility must be trained, and all visitors must be instructed, on this procedure. Copies of the procedure must be prominently displayed in the workplace in all languages commonly used on the site.

Used fire extinguishers must be replaced by the contractor without delay.

No hot work (i.e. welding, cutting, grinding, etc.) or any other activity that could give rise to a fire may be performed outside of a designated workshop without a Permit to Work having been issued.

Wherever hot work is being carried out, a fire extinguisher must be at hand. Where the risk assessment determines that it is necessary, a fire watch must be stationed. Supervisors must carry out workplace inspections regularly to ensure adherence to fire prevention measures and procedures.

At the end of every working period (i.e. before each tea / lunch break and at the end of every shift / day), the workplace must be thoroughly inspected to ensure that no material is left smouldering and no condition / situation exists that could give rise to a fire.

The contractor must ensure that all supervisors and all employees carrying out or assisting with any hot work or any other activity that could give rise to a fire have been trained in fire-fighting procedures and the use of fire-fighting equipment. The training must be conducted by an accredited training provider.

When using electrical equipment, all cables must be in good condition and the nearest convenient socket must be used. No power socket may be loaded beyond its rated capacity through the use of adaptors, etc. Makeshift electrical connections are not permitted under any circumstances. Water-based fire-fighting equipment must not be used on electrical equipment or burning liquids.

Each vehicle used on site for work purposes and each item of mobile equipment with a diesel or petrol engine must be fitted with a permanently mounted fire extinguisher. Smoking is only permitted in designated smoking areas. Cigarette ends / butts must be properly stubbed out in the ashtrays provided and never thrown into waste bins.

The contractor must ensure that good housekeeping practices are enforced, as this is crucial to the prevention of fires.

All combustible waste materials must be removed from the workplace on a daily basis (at the end of each shift) and placed in waste receptacles located at least 5 metres away from any structure. The accumulation of waste materials in out-of-the-way places is prohibited. Offices, desks, cabinets, etc. must always be kept tidy and uncluttered. Waste paper bins must be emptied regularly.

The storage of combustible materials under stairways or in attics is prohibited. The storage of any materials against the exterior of a building or any other structure is prohibited. All walkways, passages and stairways must be kept clear (i.e. must be unobstructed) at all times, as they may need to be used as a means of escape.

The areas around and the routes to all exits, fire escape doors, fire hydrants, fire hose reels and fire extinguishers must be kept clear (i.e. must be unobstructed) at all times. "No Smoking" signs

must be conspicuously displayed in and around all storage areas / rooms. Waste may not be burned under any circumstances.

No flammable liquid (such as petrol, acetone, alcohol, benzene, etc.) may be used for starting fires or as a solvent for cleaning clothes, tools, equipment, etc. Only solvents approved by the nominated project management representative may be used for cleaning purposes.

Whenever any work is carried out involving the use of a flammable substance / material, the area must be cordoned off and appropriate warning signage (i.e. "No Unauthorised Entry", "No Smoking" and "No Naked Flames") must be displayed.

15.39 Smoking

The contractor must not permit smoking on site except within designated smoking areas selected in accordance with the applicable legislation. Such an area must be clearly demarcated and the required signage must be displayed.

Any person found smoking or discarding a cigarette butt outside of a designated smoking area may be removed (temporarily or permanently) from site. In all designated smoking areas, adequate non-combustible commercial ashtrays and / or cigarette butt receptacles (butt cans) must be provided.

Ashtrays and other receptacles provided for the disposal of smoking materials must not be emptied into rubbish bins or any other container holding combustible materials. "No Smoking" signs must be strictly observed.

15.40 Housekeeping

The contractor must maintain all work areas in a tidy state, free of debris and rubbish. Unless directed otherwise, the contractor must dispose of all debris, rubbish, spoil and hazardous waste off site in a designated and authorised area or facility. The contractor must familiarise himself with the waste management plan for the site including collection and disposal arrangements, and must align his waste management activities accordingly.

In cases where an inadequate standard of housekeeping has developed and compromised safety and cleanliness, a nominated project management representative may instruct the contractor to cease work until the area has been tidied up and made safe. Neither additional costs nor contract deadline extensions will be allowed as a result of such a stoppage. Failure to comply will result in a clean-up being arranged through another service provider at the cost of the non-complying contractor.

The contractor must carry out housekeeping inspections on a weekly basis to ensure maintenance of satisfactory standards. The contractor must document the results of each inspection. These records must be maintained and must be made available to the nominated project management representative on request.

The contractor must implement a housekeeping plan for the duration of the contract ensuring that the site housekeeping is maintained. Furthermore, at the end of every shift, the contractor must ensure that all work areas are cleaned, all tools and equipment are properly stored, and construction rubble is removed.

Where the contractor fails to maintain housekeeping standards, the nominated project management representative may instruct the contractor to appoint a dedicated housekeeping team for the duration of the project at the contractor's expense. Littering is prohibited.

15.41 Waste Management

Waste may not be disposed of unless the disposal of that waste is authorised by law. The contractor must therefore ensure that all waste that is generated is handled, stored, transported and disposed of in accordance with the requirements of the applicable legislation / local authority.

15.42 Stacking and Storage

All irregular shaped items will be stacked at floor / ground level in designated stacking areas on a level, firm base capable of withstanding the weight of the commodities being stacked and stacked in such a manner that the items do not topple over or change position due to subsidence or weight transfer when being moved.

Where these commodities are stacked on shelves or racks, the shelves or racks must be designed to carry the weight of the commodity being stacked. All racks or shelves where heavy material or commodities are stacked will have a weight carrying limitation clearly marked on the structure and have a safety factor of at least +10% of maximum total carrying capacity.

All materials, commodities or articles, which could be damaged due to inclement weather, must be stored under cover. Waste material that is combustible must not be allowed to accumulate in sufficient quantities to create a hazard.

No commodities or equipment may be stacked or stored within 500mm of rolling stock tracks or where mobile equipment travels. The storage of material, small equipment, tools, files and general items in cupboards and on shelves must be neat and controlled at all times. Incompatible substances must not be stored in or on the same cupboard or shelf.

No equipment, tools, files or documents may be stored or stacked on top of cupboards which are higher than 1.5 metres in height.

15.43 Facilities

Sanitary conveniences must be provided and maintained at a rate of at least one shower facility for every 20 workers, at least one toilet facility for every 10 workers, separate male and female changing facilities and sheltered eating areas.

Where chemical toilets are provided, one toilet for every 10 employees must be allocated. All toilets must be cleaned daily, disinfected and provided with toilet paper. All employees making use of these facilities have the responsibility to help keep the facilities neat, clean and hygienic.

Washing facilities, including soap and towels, must be made available for use by the contractor's employees.

Drainage from all washing / toilet facilities must be properly designed and constructed to prevent employee exposure to waste water (and the associated biological hazards). Waste water may not accumulate or stand in pools at any location on the project site.

Change rooms must be provided and must be kept clean and free from odours at all times. No chemicals, except those normally used for domestic cleaning of these facilities, may be stored in the facilities.

No equipment or items (other than those normally associated with hygiene facilities) may be stored in the facilities. All entrances must be constructed in a way to afford privacy to users.

Drinking water must be provided from an approved source. A sheltered (covered) area must be set aside on site to be used as a dining facility (eating area). Adequate seating must be provided for the maximum number of employees. The facility must be kept clean and tidy.

A suitably sized, impervious receptacle (bin) must be provided for the disposal of waste food and other refuse generated at the dining facility. This bin must be emptied and cleaned regularly (i.e. promptly after meal times).

Food may only be consumed in authorised sheltered areas. Adequate refrigerated storage must be provided to the contractor's employees for the storage of food and drinks. Fridges must not be overstocked and must maintain sufficiently low temperatures.

16. Occupational Health and Hygiene

The contractor must ensure that the exposure or potential exposure of his employees to any of the following stressors is assessed and measured:

- Noise;
- Thermal stress (heat and cold);
- Particulates (dust);
- Silica (free crystalline silica);
- Asbestos;
- Gases or vapours;
- Lead;
- Chemicals;
- Ionising radiation;
- Non-ionising radiation;
- Vibration (hand / arm vibration and whole body vibration);
- Ergonomics; and
- Illumination.

If it is determined that exposure levels for a particular stressor are unacceptable, then a monitoring and control plan must be implemented to manage any risk of overexposure.

Note: Where chemical substances are to be used as part of the refurbishment process, the contractor must ensure that the chemical composition of each substance is known.

Carcinogenic (cancer-causing) ingredients must be specifically identified with due understanding that no chemical known to cause cancer will be permitted for use on site (an alternative will need to be sourced).

TRANSNET Health and Hygiene Department is required to provide the following monitoring services where relevant and required:

- Chemical agents =Gases, vapours, solids, fibres, liquids, dusts, mists, fumes, etc.
- Physical agents =Noise, Vibration, Heat, Cold, Electromagnetic fields, lighting etc.
- Biological agents =Bacteria, fungi, etc.
- Ergonomic factors =Lifting, stretching, and repetitive motion.
- Psychosocial factors =Stress, workload and work organisation

TRANSNET Health and Hygiene must provide the contractor with a project specific health risk assessment in respect of existing Occupational Health Risk on Sites.

The contractor must conduct an Occupational Health Risk Assessment in respect of their project activities. The contractor will be required to appoint an Approved Inspection Authority (AIA) for Occupational Hygiene to conduct Occupational hygiene Surveys should such a need arise.

16.1 Lighting

For all work areas and access ways, if the natural lighting available is inadequate it must be supplemented by artificial lighting to meet the minimum levels required.

A lighting survey to determine luminance must be conducted for all work areas, at least once prior to work commencing for the first time in any area.

Emergency lighting must be provided in all indoor workplaces that do not have adequate natural lighting or in which persons work at night. The emergency sources of lighting that are provided must be such that, when activated, an illuminance of not less than 0.3 lux is obtained at floor level, to enable employees to evacuate safely.

Where it is necessary to stop machinery or shut down plant or processes before evacuating the workplace, or where dangerous materials are present or dangerous processes are carried out, the illuminance must not be less than 20 lux.

Windows and translucent sheeting must be kept adequately clean and clear of obstructions as far as reasonably practicable. Light fittings, i.e. lenses and reflectors must be kept clean. If a light intensity meter is used, a valid calibration certificate must be available.

Neon lights must not be installed in areas where moving parts of machinery or equipment cannot be fully guarded, i.e. lathes, bench grinders, etc. in order to eliminate the stroboscopic effect. No person may use a portable electrical light where the operating voltage exceeds 50 volts, unless:

- It is fitted with a non-hydroscopic, non-conducting handle;
- All metal parts which may become live are protected against accidental contact;
- The lamp is protected by means of a guard firmly attached to the handle; and
- The cable can withstand rough use.

No person may use a portable electric light in damp or wet conditions or in closely confined spaces, inside metal vessels or when in contact with large masses of metal, unless:

- The lamp is connected to a source incorporating an earth leakage; and
- The operating voltage of the lamp does not exceed 50 volts.

All lighting on site must comply with the requirements of the Environmental Regulations for Work Places GNR2281 of 16 October, 1987.

16.2 Noise

A hearing conservation program must be implemented and protection against the effects of noise exposure must be provided when the noise exposures equal or exceed an 8-hour time-weighted average sound level of 85 decibels measured on the A-weighted scale of a standard sound level meter at slow response.

For the hearing conservation program to be effective it must include as a minimum:

- Monitoring of the workplace to determine the representative exposure of employees to excessive noise levels;
- An audiometric testing program for employees, which must include:
 - A baseline audiogram for all employees exposed to noise levels equal to or in excess of the standard;
 - Audiograms for each overexposed employee at a frequency determined by the OMP;
 - Analysis of audiogram results with retesting and/or referral to an otolaryngologist or qualified physician when a significant threshold shift (STS) occurs; and
 - Written employee notification of the STS.
- A training program for all employees exposed to noise;
- Provision of personal protective equipment to all affected employees when administrative or engineering controls fail to reduce sound levels to within the levels of the standards.

Monitoring of employee exposures to noise shall be conducted by an Approved inspection Authority (AIA).

The monitoring requirement may be met by either area monitoring or personal monitoring that is representative of employee exposures. Personal monitoring is preferred, and may be required based on the type(s) of noise sources.

For purposes of the hearing conservation program, employee noise exposures shall be computed in accordance with local legislation. A person-task specification shall be available for every job category and shall be submitted with an employee for audiometric testing.

Audiometric test results obtained from the pre-employment medical examination for a new employee shall be used as the baseline audiogram. Testing to establish a baseline audiogram shall be preceded by at least 14 hours without exposure to workplace noise.

Hearing protectors shall not be used as a substitute for the requirement that baseline audiograms be preceded by 14 hours without exposure to workplace noise. Employees shall be notified of the need to avoid high levels of non-occupational noise exposure during this 14-hour period.

Record-keeping for the audiogram shall include, as a minimum:

- Name and job classification of the employee;
- Date of the audiogram;
- The examiner's name;
- Date of the last acoustic or exhaustive calibration of the audiometer;
- Employee's most recent noise exposure assessment.

Audiometric test results shall be maintained in the employee's medical file. To control noise exposure, its three basic elements shall be examined, i.e. source of the sound, travel path, and effect on receiver or listener. Solution of a given noise problem might require alteration or modification of any or all of these three basic elements.

Controlling noise at the noise source can be achieved by the following:

- Select quiet equipment initially. In selecting quiet equipment the following features shall be considered:
 - Low-noise certification;
 - Advertisement of "quiet" operation, evidence of noise control design;
 - Evidence of "lower" and "slower" operating characteristics;
 - Side-by-side noise testing of equipment; and
 - "On-site" or "in operation" inspection of mechanical equipment before purchase.

- Reduce operating noise by considering the following control measures:
- Reduce impact or impulse noise by reducing weight, size, or height of fall of impacting mass;
- Reduce speed in machines and flow velocities and pressure in fluid systems;
- Balance rotating parts – to control machinery noise and vibration of fans, fly wheels, pulleys, cams, etc.
- Reduce frictional resistance between rotating, sliding or moving parts in mechanical systems: frequent lubrication, proper alignment of moving parts; static and dynamic balancing of rotating parts; correction of eccentricity or "out-of-roundness" of wheels, gears, rollers, pulley, etc.;
- Reduce resistance in air or fluid systems: use of low flow velocities, smooth boundary surfaces of duct or pipe systems, and long-radius turns and flared actions in pipes, etc., to reduce turbulence noise;
- Isolate vibration elements in machinery; install motors, pumps, etc. on most massive part of machine; use belt or roller drives in place of gear trains; use flexible hoses and wiring instead of rigid piping and stiff wiring, etc.
- Apply vibration damping materials such as liquid mastic; pads of rubber, felt, foam or fibrous blankets; or sheet metal visco-elastic laminates or composites to vibrating machine surfaces; and;
- Reduce noise leakage from the interior of machines such as compressors by sealing or covering all openings or applying acoustical materials to machine interiors.

Controlling noise in the transmission path can be achieved by the following:

- Separate the noise source and receiver as much as possible;
- Use sound-absorbing materials on ceiling, floor or wall surfaces as close to the machine as possible;
- Use sound barriers and deflectors in the noise path;
- Use acoustical lining on inside surfaces of such passageways as ducts, pipe chases, or electrical channels;
- Use mufflers, silencers or snubbers on all gasoline or diesel engines, regardless of size; and particularly on equipment when large quantities of high-pressure, high-velocity gases, liquids, steam or air are discharged into the open air; and
- Use vibration isolators and flexible couplers where the noise transmission path is structure borne in character.

Protection for the receiver – when engineering controls fail to reduce the levels to within the levels specified in local legislation, the following measures shall be implemented:

- Personal protective equipment shall be provided and replaced as necessary at no cost to employees;
- Supervisors shall ensure that hearing protective devices are worn by all employees who are exposed to a time-weighted average of 85 decibels or greater and who have experienced a significant threshold shift;
- Employees shall be given the opportunity to select their hearing protectors from a variety of suitable protectors.

Noise zones shall be indicated by means of signs at every entrance to such zones. When noise levels exceed 100 dB(A), a combination of earplugs and earmuffs may be required to achieve

protection of the worker. It is important to note that using double protection will add only 5 to 10 dB of extra attenuation above that of a single Hearing Protection Device. Where an earmuff and earplugs are used together, OSHA recommends using this simple calculation: Take the higher rating of the two devices, and add five. Hearing Protection Devices should be worn for the full noise exposure period.

Where an audiometry programme is required, it must meet the following standards:

- All testing must be by pure tone audiometry in an approved audiometry booth or quiet room, with measured noise levels less than 40 dB(A);
- The initial audiogram must be taken prior (minimum of 24 hours) to exposure to significant noise. Further audiograms must be taken periodically; annually where exposures are over 85 dB(A) Leq or where continued deterioration to hearing is occurring;
- Testing must be performed by trained and competent personnel;
- Audiometers must be calibrated according to the manufacturer's guidelines. As a minimum these will be a weekly biological calibration using an employee unexposed to noise, or a bio-acoustic simulator, and an annual quantitative check. All results must be documented; and
- Audiograms must be read by trained persons who will identify any increasing hearing loss and then determine if this is noise induced. Any employee with a significant downward shift in one or both ears (measured as an average non age-adjusted loss from baseline of 10 dB at 2, 3 or 4 kHz) must be retested following removal from noise for a minimum of 24 hours, usually after a days-off period. If the downward shift persists the employee must be reviewed by a physician and improved hearing protection considered.

16.3 Particulate and Gas / Vapour Exposure

Designated areas must be created where:

- It is likely that the 95 per cent upper confidence limit of a Specific Exposure Group's (SEG) mean exposure concentration for agents resulting in chronic effects (such as total inhalable dust, respirable dust, respirable crystalline silica, PAH, fluorides, lead, mercury, asbestos or non-asbestos fibrous materials) exceeds the relevant OEL; and
- Agents with an acute effect, such as particulate hazards, or gases (e.g. CO, SO₂, NH₃, HF, etc.), or vapours exceed 50 per cent of the relevant OEL.

Designated areas must:

- Be identified and mapped, signposted or otherwise clearly communicated to employees working in the area. Signposting, where necessary, must use appropriate wording or symbols on signs to identify the hazard;
- Have a documented respiratory protection programme based on suitable risk assessment and standards, which is applied to employees, contractors and visitors;
- Have regular monitoring of SEGs working in the area; and
- Have a formal review of the practicality of engineering controls at least every two years, or less where it is a critical control for a significant risk.

Particulate and gas / vapour monitoring must be appropriate to the exposure conditions and toxicants, and based on the use of equipment approved by local regulatory authorities, as per documented methods.

Where risk assessment indicates the possible presence of levels of gas or vapour sufficient to cause health effects in less than one shift (e.g. confined space entry), continuous monitoring is required as long as the potential for harm exists.

Employees and contractors must be covered by a medical surveillance programme when:

- Their Specific Exposure Group TWA mean exposure to respirable crystalline silica, total inhalable dust, respirable dust, lead or asbestos is greater than 50 per cent of the relevant OEL;
- The medical adviser considers that it is advisable; or
- There is a legal requirement for medical monitoring.

Where risk assessment indicates a risk of a respiratory condition, assessment programmes must include chest x-rays and / or lung function tests. The test or tests chosen must enable the earliest detection of adverse effects from the exposure of concern. Where indicated, they must meet the following standards:

- High quality chest x-rays will be taken every five years, unless local legislation requires these to be more frequent;
- All chest x-rays for pneumoconiosis surveillance will be read to International Labour Organisation (ILO) standards by an ILO B reader, wherever possible, and if not, by a competent radiologist using verifiable quality criteria;
- Any progression of more than one step on the ILO extended scheme to a reading above 1/0 will be reviewed by a physician;
- Any reading suggesting active lung disease will be reviewed by a physician; and
- All spirometry will be performed by trained staff following the American Thoracic Society guidelines or equivalent and be offered at a frequency determined by the likely rate of detectable change in lung function.

Controls must be of an adequate standard such that surfaces are adequately cleaned to avoid:

- Dust generation due to material dislodgment (e.g. windblown), where practicable; or
- Fume generation from accumulated dust during welding / heating or cutting operations.

Where risk assessment indicates the need to reduce exposures to toxic substances for employees or their families, good personal hygiene must be enforced. The programme must include:

- No smoking, eating or drinking in designated hazard areas;
- Washing of hands and face prior to drinking, eating or smoking;
- Showering at work post shift or after exposure to 'dirty' conditions; and
- Laundering of contaminated clothing by the contractor.

Abrasive blast cleaning must be conducted so as to protect worker health and minimise dust emissions. Substitutes must be used whenever practicable for abrasives containing crystalline silica. However, if such abrasives are used, workers must be aware of the hazards and exposure monitoring conducted. The hazardous properties of alternative materials must be considered before use.

Where required, training in the recognition of signs and symptoms of hazardous particulate and gas / vapour exposure, emergency procedures and preventative measures must be provided.

16.4 Respiratory Protection Devices

The selection of Respiratory Protection Devices (RPD's) must be based on:

- The potential particulate size distribution, gas / vapour types, substance toxicity and likely concentrations;
- Compatibility with the work tasks and other PPE; and
- Comfort (as it affects wear-time) and allowance for adequate communication.

Only RPD's approved by the nominated project management representative may be used. Suitable facilities must be available for cleaning and sanitary storage of RPD's.

Half-mask and full-face air-purifying respirators must NOT be used where:

- The atmosphere is oxygen deficient (< 19.5 per cent);
- The atmosphere is immediately dangerous to life or health (e.g. in areas where CO concentrations are > 1500 ppm, HF > 30 ppm or NH₄ > 300 ppm);
- Gases and vapours are more than ten times their OEL or greater than 1000 ppm for half-mask respirators, or more than 100 times their OEL for full-face respirators; or
- Particulates are more than five times their OEL for half-mask respirators, or more than 50 times their OEL for full-face respirators.

For atmospheres that are oxygen deficient, or contain unknown hazards, or have concentrations of gases and vapours that are unknown, or could potentially exceed levels that are immediately dangerous to life or health, an air-supplied type respirator must be worn.

For effective use of negative pressure RPD's (including disposable RPD's), fit testing must be qualitative and documented as a minimum, although quantitative fit testing is preferred. Fit testing must be performed by a competent person when RPD's are first issued and must be repeated periodically according to legal requirements or two-yearly as a minimum frequency. There must be a policy requiring a clean shaven face when using a negative or neutral pressure RPD for routine tasks, or the use of a positive pressure RPD will be required. A pulmonary function test and medical evaluation may be required to determine whether or not an individual is medically fit to wear a respirator.

For air-supplied RPD's, breathing air must be effectively filtered and / or isolated from plant and instrument air, and isolated from sources of potential contaminants. The quality of the breathing air must be checked for conformance with applicable standards.

The respiratory protection programme must include:

- Periodic inspection of RPD's, including before each use;
- Periodic evaluation of cleaning, sanitising, maintenance and storage practices by competent persons;
- Performance of positive and negative fit checks before each use by RPD wearers to ensure that the respirator is functioning properly; and
- Training at first issue of a RPD and regular refresher training thereafter in accordance with regulatory requirements or at least once every two years.

16.5 Hazardous Chemical Substances

No chemical substance may be brought onto site unless it has been approved for use by the nominated project management representative. The contractor must develop and maintain a hazardous chemical substance register specifying as a minimum the type and volumes of substances on site.

If the contractor wishes to make use of a chemical substance that does not appear on the register, then the contractor must provide the following minimum information to the nominated project management representative for review PRIOR to bringing the substance onto site:

- A detailed 16-point Safety Data Sheet (SDS) issued by the manufacturer / supplier of the substance;
- The reason for wanting to bring the substance onto site (i.e. the intended use of the substance);

- The proposed method of transportation;
- The proposed arrangements for the safe storage of the substance;
- The quantity to be stored on site;
- The proposed methods for handling / using the substance (including PPE);
- The proposed method of disposal of the waste;
- Proof that the contractor is able to readily provide the necessary first aid measures as specified in the SDS; and
- A risk assessment covering the transportation, use, handling, storage and disposal of the substance with specific reference to the substance's compatibility with other chemicals.

This information must be provided at least five (5) working days prior to the date on which the contractor intends to bring the substance onto site for use. Any chemical substance brought onto site without adherence to the requirements stipulated above shall be removed from site immediately.

If the nominated project management representative approves the substance for use, the contractor must ensure that all necessary precautions are taken concerning the transportation, use, handling, storage and disposal of the substance, and that all required PPE and first aid materials / equipment (as stipulated in the SDS) are readily available on site.

The contractor must ensure that a Safety Data Sheet (SDS) is obtained for each chemical substance brought onto site. A file, or files, containing all of the SDS's must be maintained and must be readily available to all personnel on site (particularly first aiders) as well as other potentially affected parties (e.g. emergency services personnel, persons from the local community, etc.). The SDS's must be in the language(s) commonly used on site.

The contractor must appoint a trained and competent Hazardous Chemical Substances Coordinator who understands and is able to evaluate the risks associated with a wide variety of substances. This person shall be responsible for:

- Assessing the hazardous properties and risks associated with all chemical substances brought onto site by the contractor and appointed sub-contractors (using the SDS's);
- Determining precautions and safe practices for transportation, use, handling, storage and disposal (including PPE requirements) (using the SDS's);
- Determining first aid and emergency response requirements / procedures (using the SDS's);
- Maintaining the SDS file;
- Managing and monitoring the consumption of inventory; and
- Providing an "as needed" service to site personnel and suppliers.

The risks associated with the transportation, use, handling, storage and disposal of all hazardous chemical substances brought onto site must be assessed and managed by the contractor through a process that incorporates risk reduction using the hierarchy of controls as described as described by this Specification. Whenever a task-based risk assessment is carried out, consideration must be given to the use of chemical substances (e.g. greases, solvents, etc.).

The contractor must provide Safe Work Procedures for the transportation, use, handling, storage and disposal of all hazardous chemical substances to be used on site.

The contractor must provide his employees with all of the Personal Protective Equipment that is necessary to prevent exposure / injury while handling / using the hazardous chemical substances that they will be required to work with. Appropriate PPE must be selected with consideration given to the potential hazards, permeability, penetration, resistance to damage and compatibility with the work tasks.

The contractor's employees must be trained in the safe transportation, use, handling, storage and disposal of the hazardous chemical substances that they will be required to work with or may come into contact with. The training must specifically address PPE requirements (including the correct selection, fitment and use thereof).

All personnel must be trained to understand the potential health effects associated with exposure to hazardous chemical substances and therefore the importance of Safe Work Procedures and PPE. All personnel must be trained on emergency response procedures and first aid measures. Behaviour-based observations and coaching must include the use / handling of hazardous chemical substances.

An appropriate occupational exposure monitoring and medical surveillance programme must be in place for all personnel potentially exposed to hazardous chemical substances which have the potential to cause immediate or long-term harm.

Emergency showers and eyewash stations must be provided where required by law, or where a risk assessment indicates a need. The emergency showers and eyewash stations must be appropriately located, signposted, and regularly tested and maintained. Employees must receive training on the location and use of the showers / eyewash stations.

An emergency response plan for incidents involving hazardous chemical substances must be in place. Regular and appropriately staged emergency drills (possibly involving external spill response and ambulance support services) must be held and lessons learnt must be incorporated into the emergency response plan.

The contractor must provide appropriate storage facilities for all hazardous chemical substances to be used on site. The storage facilities must be secure and protected from damage. They must also be designed for easy access for firefighting purposes. Where applicable, the storage facility must protect chemical containers from physical damage due to temperature extremes, moisture, corrosive mists or vapours, and vehicles.

The inventory of hazardous chemical substances stored on site must be kept to a minimum. The quantity of each chemical stored must be justifiable.

Storage and segregation requirements for all hazardous chemical substances to be used on site must be based on:

- The quantities of the substances stored;
- The physical state of the substances (solid, liquid or gas);
- The degree of incompatibility; and
- The known behaviour of the substances.

Access to areas where hazardous chemical substances are stored and handled must be limited and controlled.

Every chemical substance container must be adequately and clearly labelled to identify its contents, to indicate precautionary requirements for the substance, and to indicate the date of expiry (if applicable). Pipes used to transfer / convey / distribute chemical substances must be clearly identified (e.g. colour coding). Directional flow must be indicated where practical.

Before any item, equipment or empty container containing a chemical residue is disposed of as general waste, it must be properly decontaminated (where applicable). Before being disposed of, empty chemical containers must also be rendered unusable for carrying water (by puncturing, cutting or crushing them).

Hazardous chemical substance waste (i.e. redundant / expired hazardous chemical substances, containers containing residues, contaminated items / materials, etc.) must be disposed of in accordance with the applicable legislation.

Maintenance, inspection and testing schedules and procedures must be in place for critical equipment associated with hazardous chemical substances. A system must be in place to ensure that the risks are assessed before any changes are made to equipment and / or processes for the transportation, storage, handling, use or disposal of a hazardous chemical substance.

A programme must be in place to continually investigate possibilities / opportunities for replacing hazardous substances with safer alternatives.

16.6 Thermal Stress

Hot areas or activities where employees have experienced or could experience excessive fatigue, muscle cramp, dehydration, dizziness and other symptoms of heat stress must be identified and described.

Where a risk of thermal stress is determined, a competent person must conduct monitoring surveys on site, in consultation with workers.

For defined extreme thermal conditions and job activities, medical examinations must include information about the operator's physiological and biomedical aspects, and an assessment of fitness for the working conditions.

Cold areas or activities where employees have experienced or could experience pain or loss of feeling in extremities, frostbite, severe shivering, excessive fatigue and other symptoms of cold stress must be identified and described.

Workplace thermal stress levels (temperature, air movement, humidity, etc.), activities (work level, etc.) and conditions (clothing, health, etc.) that have the potential to exacerbate thermal stress effects must be adequately characterised and described. Workplace exposure assessment must be repeated according to regulatory requirements or whenever there is a change in production, work organisation, process or equipment which may impact thermal stress levels.

Detailed heat stress assessment of identified tasks or jobs must be tiered to:

- Commence with the use of a simple heat stress index as a screening tool; then, if necessary;
- Use rational heat stress indices in an iterative manner to determine the 'best' control methods for alleviating potential heat stress; and

- Undertake physiological monitoring when exposure times are calculated to be less than 30 minutes, or where high level PPE that limits heat loss must be worn.

Detailed cold stress assessment of identified tasks or jobs must be conducted according to current appropriate guidelines that incorporate a cold stress index, to determine the 'best' control methods for alleviating potential cold stress.

When a risk of thermal stress is identified, the following exposure controls must be implemented:

- An acclimatisation period for new workers and those returning from extended leave or sickness;
- Training in the recognition of signs and symptoms of heat or cold stress, emergency procedures and preventative measures;
- Protective observation (buddy system or supervision); and
- A requirement for self-paced working.

The following exposure controls must be considered by a competent person:

- Work / rest regimes and job rotation based on measurements conducted;
- Suitable rest areas with a provision of cool drinking water and cool conditions for high temperatures, or provision of warm drinks and warm conditions for cold temperatures;
- Selection of appropriate clothing or other PPE for extreme temperature conditions;
- The use of engineering controls; and
- Undertake hot / cold tasks during a cooler/warmer time of the day.

Where thermal stress is assessed to be a risk, the operation must develop a suitable emergency response plan.

16.7 Fitness for Work

The contractor must develop and implement a programme to manage employee fitness for work. All employees working on site for whom the contractor is responsible (i.e. direct employees of the contractor as well as the employees of any appointed sub-contractors) must be subject to this programme.

All safety critical jobs (i.e. roles where fatigue or other causes of reduced fitness for work could lead to serious injury, illness or death to employees, significant equipment / plant damage, or significant environmental impact) must be identified and the risks associated with reduced fitness for work in these roles must be assessed.

A programme to manage these risks must be implemented, and it must include:

- Mechanisms for managing fatigue, stress and lack of fitness;
- An alcohol and other (including prescription, pharmaceutical or illicit) drugs policy that includes testing;
- An Employee Assistance Programme providing confidential access to resources and counsellors; and
- Training and awareness programmes.

Each employee has an obligation to present himself fit for work at the start of the day / shift, and to remain fit for work throughout the work period. Reporting for work under the influence of alcohol or any other intoxicating substance will not be tolerated. Any transgression concerning the alcohol and other drugs policy applicable to the project may result in the offending employee's access to the project premises being temporarily or permanently withdrawn.

Alcohol and drug testing on the project premises will be carried out randomly (as employees report for duty and during the course of the day / shift), following any incidents (all persons involved), and whenever there is reasonable suspicion. Alcohol and drug testing must also be carried out as part of a Pre-Employment Medical Examination.

Sleep deprivation during shift work or from excessive working hours is a known cause of fatigue. Fatigued employees are at increased risk of accidents. Shift system design must consider:

- The effect on worker fatigue;
- The effects of activities carried out during scheduled and overtime hours;
- The impact on sleep cycles of activities such as commuting to and from site; and
- The monitoring and control of working hours.

The contractor is responsible for the administration of the working hours of his employees as well as the employees of any appointed sub-contractors. The maximum working hours per day and the minimum rest times between shifts must be specified in the contractor's Health and Safety Management Plan and must comply with all applicable legislation.

All employees are required to undergo fitness assessments (medical examinations) which must be carried out prior to the commencement of employment on the project, prior to a change in role, periodically based on an employee's individual risk profile, and on termination of employment on the project:

- Pre-Employment Medical Examination – to assess the physical suitability of the person for the role and environment in which he will work (carried out prior to the commencement of employment on the project and prior to induction). The contractor must take note that employee medicals for this project must include a drug test;
- Periodic (Surveillance) Medical Examination – to assess the on-going physical condition of an employee to determine if his role is impacting on his health and whether the employee's fitness level is still adequate for the role he holds (these medical examinations are "risk driven" – the specific protocol followed and the frequency of the examinations will depend on the applicable legal requirements and the employee's individual risk profile as determined by his personal fitness, the nature of his role / duties, and the environment in which he works / occupational health hazards to which he is exposed).
- The periodic medical assessment programme must include:
 - ◆ The identification of modifiable risk factors that may impact fitness for work;
 - ◆ Education and support to maintain health or address identified risk factors; and
 - ◆ Education and support to help employees regain their fitness for work.
- Role Change Medical Examination – to assess an employee's physical suitability for a different role and work environment (carried out prior to a change in role / duties);
- Exit (Post-Employment) Medical Examination – to determine the total physical impact of the work the employee performed (carried out on termination of employment on the project).

Note: The results of an Exit Medical Examination from previous employment will not be accepted as a Pre-Employment Medical Examination.

Note: The medical examinations described above may only be carried out by an Occupational Medical Practitioner (i.e. a medical doctor who holds a qualification in occupational medicine).

A detailed job (role) description and an exposure profile (noise, dust, heat, fumes, vapours, etc.) must be provided for each employee or group of employees. The medical examinations that an employee undergoes must be based on (i.e. the employee's fitness must be assessed against) the information contained in these documents as well as the baseline risk assessment for the work. This information must be made available to the occupational medical practitioner performing the medical examination.

For each role, the medical criteria for fitness must be documented and these must be based on an evaluation of the physical and medical requirements for the role. Depending on the circumstances, certain vaccinations may need to be provided to employees.

The medical examinations carried out for all drivers and operators must include testing / assessment for medical conditions that could affect the safe operation of vehicles or equipment.

Specific testing / questioning must be carried out to determine if an individual:

- Suffers from epilepsy or any other medical condition deemed to be a risk by the occupational medical practitioner;
- Makes use of chronic medication that could affect performance;
- Is colour-blind; or
- Has poor day or night vision.

The medical examinations carried out for employees that are required to work at height must include testing / questioning to determine if an individual suffers from epilepsy, hypertension (high blood pressure) or any other medical condition deemed to be a risk (with regard to working at height) by the occupational medical practitioner. Electricians must be tested for colour-blindness.

With regard to the placement of new employees:

- Prospective employees must be referred to a suitable occupational medical practitioner (doctor) for a "Pre-Employment Medical Examination";
- If an individual is found to be medically "unfit for placement", the doctor will indicate which work activities cannot be performed by the person;
- The individual may still be employed on the project if his medical restrictions can be accommodated and provided that no legislation is transgressed.

A process must be established to manage medical restrictions that may be placed on an employee. For every employee with a medical restriction, regular follow up visits with the occupational medical practitioner must be arranged to ensure that each case is proactively managed.

An employee in a safety critical job must report (to his supervisor) any condition that might impair his ability to safely perform the duties associated with his role. A mechanism must be in place for such reports to be referred to an occupational medical practitioner to determine if the employee is fit to continue with his work.

Proof of all medical examinations (i.e. certificates of fitness signed by an occupational medical practitioner) must be kept on site and these records must be readily available for inspection by the nominated project management representative.

An employee's certificates of fitness must be included in his Personal Profile (dossier). If an Employee Personal Profile (dossier) hasn't already been compiled for a particular employee, then this must be done without delay following the employee's Pre-Employment Medical Examination. No employee may commence work on site without proof that he has undergone a Pre-Employment

Medical Examination.

Occupational medical examinations and data interpretation may only be carried out by medical practitioners that are appropriately qualified and certified to do so. Occupational medical data contained in reports to management must be grouped and summarised to ensure that the confidentiality rights of each individual employee are maintained. All occupational medical data and records must be retained for at least 40 years.

16.8 HIV / Aids

The contractor must assess the risks posed by HIV. Appropriate mitigation strategies must be implemented as required. Discrimination towards employees on the basis of actual or perceived HIV status is forbidden. All information on the HIV status and condition of employees including that relating to counselling, care and treatment and receipt of benefits, must be maintained in medical confidence.

HIV / AIDS screening may not be a requirement for recruitment or a condition of employment.

16.9 COVID-19 Management

The Contractor must ensure compliance to COVID-19 management protocols as stated in the Hazardous Biological Agents Regulations.

16.10 Measuring and Monitoring

The workplace exposure (or potential exposure) of persons to hazardous substances or agents must be measured and monitored to determine the effectiveness of control measures as well as compliance with legal and other requirements, particularly Occupational Exposure Limits. All such measuring and monitoring must be carried out by an Approved Inspection Authority (i.e. a specialist service provider that is appropriately registered with a governing authority).

A plan for measuring and monitoring occupational exposure must be developed and it must include, as a minimum:

- Detail of what must be measured and monitored, based on a risk assessment and / or identified legal or other requirements;
- The frequency of measurement and monitoring;
- A description of the necessary equipment;
- Data quality requirements and controls (including details on the sample size for statistical validation and any rejection criteria);
- The sampling and analysis method(s) including any laboratory certification requirements; and
- The competency requirements for persons carrying out workplace monitoring.

Each instrument and item of equipment used for occupational exposure measurement and / or monitoring must be:

- Properly maintained to ensure compliance with legislative requirements;
- Controlled and safeguarded from unintentional adjustments;
- Suitably stored and protected from damage; and
- Calibrated or verified against a traceable standard at specific intervals (calibration records must be retained).

Each analytical laboratory service that is used must have implemented a credible quality assurance or quality control programme.

All monitoring results obtained must be analysed on a regular basis to:

- Identify trends and potential exceedances of legal or other requirements (such as Occupational Exposure Limits);
- Identify inconsistent or unusual results;
- Evaluate the effectiveness of existing control measures;
- Measure performance against stated objectives; and
- Identify continual improvement opportunities.

Each exceedance of a specified requirement or limit must be recorded, investigated and reported. Appropriate corrective actions must be identified and implemented.

17. Emergency Preparedness and Response

The contractor must develop, implement, test and maintain an Emergency Response Plan (incorporating emergency evacuation procedures) that focuses specifically on the contractor's team and work activities. The plan must be risk-based and must detail the procedures that must be followed when responding to all potential emergency scenarios such as a medical emergency (including first aid response), a fire, an explosion, a hazardous substance spill, flooding, rescue from height, rescue from a confined space, etc.

Potential off-site emergency scenarios must be included (e.g. emergency scenarios related to the transport of personnel, the transport of hazardous materials, and personnel performing work in remote locations).

Consideration must be given to surrounding Port users and tenants, and to the availability and capability of local emergency services. Details of any arrangements with external emergency response service providers must be included.

The Emergency Response Plan must satisfy and comply with all applicable legal requirements. The plan must be adequately resourced to ensure effective implementation. These resources must include appropriate personnel, external emergency response service providers, emergency response equipment, and warning devices. All equipment and warning devices must be identified, maintained and tested to ensure availability at all times.

Accountability for the Emergency Response Plan must be clearly defined. An Emergency Response Team (ERT) responsible for the implementation, management and execution of the Emergency Response Plan must be established. The roles and responsibilities of each team member must be clearly defined in the plan. Each team member must receive appropriate training to ensure that each role is performed competently.

The process for managing incident communication, notification, and reporting must be incorporated into the Emergency Response Plan. The responsible person(s) must be clearly identified, and the protocols for communicating with internal and external stakeholders must be defined.

Emergency evacuation procedures must be developed and included in the Emergency Response Plan. A copy of the plan must be provided to the nominated project management representative for approval prior to site establishment. The Emergency Response Plan must be formally reviewed (and amended if necessary) when project needs require, and following any emergency situation, to ensure that it remains appropriate and effective.

At each project work site, as a minimum:

- A suitable evacuation alarm (siren) must be provided. All persons working in an area where an evacuation alarm is sounded must respond to it immediately.
- Suitable fire-fighting equipment must be provided and maintained, and personnel must be trained in fire-fighting procedures and the use of fire-fighting equipment.
- Suitable first aid equipment and supplies must be provided and maintained, and an adequate number of appropriately trained First Aiders must be in place.
- Emergency assembly points positioned in safe locations away from buildings, plant and equipment must be designated (and conspicuously signposted). In the event of an evacuation, all persons (i.e. personnel and visitors) must assemble and be accounted for at these emergency assembly points.
- All personnel must receive awareness training on the applicable emergency response procedures, and all visitors entering the site must be properly instructed in these procedures.
- The emergency response procedures must be displayed on each notice board.
- A diagram (site plan) indicating evacuation routes, emergency assembly point locations, and the positioning of emergency equipment (fire extinguishers, first aid boxes, etc.) must be prominently displayed in all buildings and plants, in all offices, on all notice boards, and in other locations on the site as may be required.
- An up-to-date list of emergency telephone numbers must be compiled and maintained. A copy of this list must be posted at each site entrance, in each office, near each telephone, and on every notice board.
- Emergency response drills must be conducted to test the effectiveness of the emergency procedures and equipment, as well as the knowledge and proficiency of the response personnel. Where appropriate, drills must include liaison with and the involvement of external emergency response service providers. A variety of emergency scenarios must be tested including, but not limited to, medical emergencies, fires, rescues, and hazardous substance spills. A drill must be carried out one month after site establishment and then again six months thereafter.

Each drill must be monitored and the outcomes (highlights and shortcomings) must be documented. Corrective actions must be identified and implemented to address the shortcomings, and the Emergency Response Plan and associated procedures must be amended as required.

17.1 Fire Fighting

The contractor must ensure that Fire Fighting requirements are complied with.

17.2 First Aid and First Aid Kits

The contractor must ensure that First Aiders are trained and appointed as described in this Specification and in accordance with relevant legislative requirements.

A suitable first aid kit (i.e. appropriate to the level of training) must be readily available to each First Aider. All kits must be provided and maintained by the contractor.

Taking into account the type of injuries that are likely to occur in the workplace, each first aid kit must contain suitable equipment and supplies. First aid equipment and supplies required by applicable legislation must be provided as a minimum.

The contents of each first aid kit must be kept clean and dry. Each kit must be contained in either a portable weather-proof case / bag or a steel box mounted to a fixed structure. Access to first aid equipment / supplies must be limited to train First Aiders only. Access to portable kit bags must be controlled and steel first aid boxes mounted in the workplace must be kept locked. Approved signage must be in place to indicate the locations of the first aid boxes / bags. A record of each treatment administered must be kept in a suitable register.

No tablets or medication are to be stored in the first aid box.

No tablets or medication to be administered by first aiders or other personnel to employees who are not feeling well or have been injured.

Additional items / supplies may need to be provided depending on the nature of the workplace (specific hazards) and the level of training of the first aider in position of the kit.

18. Management Review

A review of the contractor's Health and Safety Management System must be undertaken as required within the project timeframe to ensure that the system continues to be effective in managing health and safety performance and meeting project requirements.

The review must evaluate if there is any need for change and must identify actions to improve the system.

The review must be led by senior management and the following must be considered:

- The suitability of the policy adopted for the project;
- The impact of changing legislation;
- The management of risk;
- Health and safety objectives and performance indicators;
- Changing expectations and requirements of relevant stakeholders;
- Changes to the contractor's scope, schedule, designs, etc.;
- Changes to the contractor's organisational structure;
- Communication and feedback (particularly from employees, Project representatives, and client representatives);
- The effectiveness of the management of change process;
- Workplace exposure monitoring and medical surveillance;
- The status of corrective actions;
- Performance statistics, including an annual summary of safety statistics, and occupational hygiene monitoring and medical surveillance results;
- Non-conformances (findings) from completed audits;
- Follow up on actions from previous management reviews; and
- Recommendations and opportunities for improving the effectiveness of the management system.

A record of each completed management review must be retained and it must include all decisions and identified actions concerning alterations, modifications or improvements to the management system that demonstrate a commitment to continual improvement.

19. Management of Change

To ensure that proposed changes do not give rise to unacceptable health or safety risk, the contractor must develop and implement a process for identifying and managing change in the workplace (e.g. changes to scope, schedule, procedures, work methods, site conditions, designs, plans, plant and equipment, materials, processes, etc.) that may impact on health or safety performance.

The management of change process must take into consideration that changes may be planned or unplanned, sudden or gradual, temporary or permanent.

The process must aim to ensure that:

- Changes are identified and assessed before they are implemented;
- Careful consideration is given to managing the risks associated with any change;
- Due diligence can be shown to have taken place;
- The number of unsatisfactory or unnecessary changes is minimised;
- The right people are involved in the change process; and
- All statutory requirements are met.

All risks associated with a proposed change must be evaluated and ranked. The risks that are ranked as moderate or higher must be managed to prevent serious injury or illness.

It must not simply be assumed that a change will not result in significant risks. All proposed changes must be formally evaluated. The evaluation or review must include:

- An appropriate level of technical expertise;
- The involvement of the workforce potentially affected by the proposed change; and
- Approval of the change by a person with at least the same level of authority as those who control the existing process or item being changed.

20. Contractor / Sub-contractor Alignment

Processes must be in place to ensure that the health and safety risks associated with the procurement of materials, equipment, services and labour are identified, evaluated and effectively managed.

A process for evaluating a sub-contractor's (or supplier's) ability to provide materials, equipment, services and labour that meet defined specifications must be in place. A prospective sub-contractor's health and safety management expertise, experience and capability (including previous health and safety performance) must be formally assessed prior to any contract or purchase order being awarded.

Each appointed sub-contractor must develop and implement a detailed Health and Safety Management Plan based on the requirements of the contractor's Health and Safety Management Plan and the Health and Safety Specification for the project. This plan must be reviewed and approved by the contractor prior to the commencement of any work.

The properties of all materials provided to the project must be adequately understood, documented and integrated into operating procedures where exposure to these materials presents a significant health or safety risk.

Procedures, commensurate with the evaluated risk, must be in place for the receiving, storing, dispatching and transporting of all equipment and materials.

Before work commences on any contract, all sub-contractor personnel must receive comprehensive orientation and induction training as required by this Specification. All work carried out by a sub-contractor must be managed (activity supervised) throughout the contract period and performance must be reviewed (audited) on a regular basis.

21. Incident (Occurrence) Management

The contractor must establish a procedure for the management of all health and safety incidents. This procedure must define the responsibilities, methodologies and processes that must be followed for:

- Reporting an incident;
- Investigating an incident;
- Analysing an incident to determine the root cause;
- Identifying and implementing corrective actions to prevent a recurrence; and
- Communicating information concerning an incident to relevant persons and / or groups.

Please Note: Arrangements must be in place to ensure that proper medical care is provided to any contractor (or sub-contractor) employee that suffers an occupational injury or illness. These arrangements must be described briefly in the contractor's Health and Safety Management Plan and in detail in the Incident Management Procedure.

An incident may have multiple impacts. For each impact, the Actual Consequence and the Maximum Reasonable Outcome must be evaluated. Each impact must be evaluated independently, with the most significant classification forming the primary rating of the incident.

A near-miss is an incident. All near-miss incidents must be reported.

An incident must be reported immediately via telephone or email and preliminary details must be recorded and a TRANSNET Incident Occurrence Flash Report must be completed and submitted within 12 hours to the relevant TRANSNET representative. Depending on the Actual Consequence, the relevant internal and external parties must be notified in accordance with specified protocols and timeframes, and legislative requirements.

In the event of a significant incident (i.e. an incident with an Actual Consequence of Moderate, Major or Catastrophic), work must cease and must only resume once the necessary actions (including the re-evaluation of any relevant risk assessments) have been taken to eliminate or reduce the risk of recurrence. Work must only be permitted to recommence once formal authorisation has been granted by the Project Construction Manager. In the case of incidents with an Actual Consequence of Major or Catastrophic, work must not be permitted to recommence until authorisation has been granted by the relevant government authorities (i.e. the South African Police, the Department of Labour or the Department of Mineral Resources).

The Project Construction Manager must ensure that an investigation is completed for each incident that occurs, and that appropriately senior personnel participate in, and authorise the outcomes of, each investigation. Incident investigations must be facilitated by competent and experienced persons who have been trained in the appropriate methodology.

All significant incidents must be investigated using the approved Transnet investigation methodology. Such an investigation must be facilitated by a trained project representative within 7 calendar days.

For all other incidents other methodologies approved by the Project Health and Safety Manager may be used.

Each incident (including near-miss incidents) must be investigated.

Each incident must be analysed to determine the root cause, and corrective actions must be identified and prioritised for implementation to eliminate or reduce the risk(s) in order to prevent recurrence of the incident.

For each corrective action, a responsible person must be designated and an appropriate timeframe (target date) for completion of the corrective action must be specified. Progress on implementing corrective actions (i.e. closing incidents) must be monitored and reported on. The implementation of corrective actions must be verified during monthly audits by the TRANSNET Project Health and Safety Practitioners but also no later than 30 calendar days after the conclusion of the incident investigation. The contractor must document the results of each investigation and a report must be submitted to the nominated project management representative within a stipulated time frame as determined by the nominated project management representative.

As a minimum, each incident report must include:

- The date, time and location of the incident;
- A detailed description of the incident, including photographs;
- The names of any injured persons;
- Injury details (if applicable);
- A summary of the first aid and / or medical treatment provided (if applicable);
- The current status of any injured persons;
- The root causes of the incident; and
- Detailed corrective actions, including responsible persons and target dates for implementation.

Each significant incident must be summarised for its lessons learnt following the investigation. This information must be reviewed by the contractor's Project Manager to assure completeness, accuracy and relevance before it is shared with (communicated to) all project personnel.

22. Non-conformance

Non-conformance Reports (NCR) will be issued to Contractors upon the identification of non-compliances to this specification. NCR's will be issued to Contractors for their response and implementation of corrective actions. NCR's must be closed out within a 48hour period depending on the severity of the non-conformance.

The contractor must establish a process for identifying and recording corrective actions arising from:

- Non-compliances;
- Incident investigations;
- Hazard identification and risk assessment;
- Measurement and monitoring;
- Improvement plans and suggestions;
- Managing change;
- Audits and inspections; and
- Safety observations and coaching (safety interactions).

The contractor must establish a procedure for managing actions that addresses:

- Identification, categorisation and prioritisation of actions;
- Formal evaluation and approval of actions (management of change process);
- Assignment of responsibilities, resources and schedules for implementation;
- Implementation of actions;
- Tracking and reporting on implementation status; and
- Monitoring and verifying the effectiveness of the actions.

23. Performance Assessment and Auditing

The contractor must establish and maintain programmes for measuring and monitoring health and safety performance on a regular basis. Metrics must include leading and lagging indicators, and be based on qualitative and quantitative data.

23.1 Reporting on Performance

Reports summarising the contractor's health and safety performance on the project must be compiled on a weekly and a monthly basis.

The contractor must be prepared to discuss the content of these reports at scheduled health and safety meetings.

The reports must contain the following minimum information:

- Number of contractor and sub-contractor employees on site;
- Total hours worked on site by contractor and sub-contractor employees (by company);
- Number of incidents by category (i.e. Near-miss, FAI, MTI and LTI);
- Lost Time Injury Frequency Rate (LTIFR) (project to date and 12-month rolling);
- Details of all new incidents for the reporting period and the corrective actions taken or to be taken;
- Feedback (progress updates) on all open incidents and outstanding corrective actions;
- Status and feedback on any employee that may have been injured and has not yet returned to work;
- Details of all health and safety training carried out during the reporting period;
- Number of SOCs (Safety Observations and Coaching) carried out during the reporting period;
- SOC trends identified and proposed action for the coming week or month to maintain positive trends and / or address negative trends;
- Details of all audits, inspections and site visits carried out during the reporting period, and the corrective actions taken (or to be taken) to address all non-conformances;
- Feedback (progress updates) on all open non-conformances and outstanding corrective actions;
- Number of Toolbox Talks conducted during the reporting period (monthly);
- Number of Planned Task Observations (PTOs) carried out during the reporting period (monthly);
- Details of all active risk assessments and Safe Work Procedures highlighting those that are due for review in the coming month (monthly);
- A look ahead (to the coming week, month or quarter) to ensure that appropriate health and safety planning and preparation is done for upcoming work;
- Challenges faced with regard to health and safety; and
- Any other health and safety related information specific to the project that may be required.

Leading indicators (e.g. audit findings, observations, etc.) must be analysed, and any negative trends identified with regard to unsafe behaviour or conditions must be appropriately addressed to prevent incidents.

Lagging indicators (e.g. injuries, illnesses, near-miss, etc.) must be investigated in detail to determine the root causes. Corrective actions must be identified, implemented and integrated into Safe Work Procedures to prevent recurrences.

23.2 Audits and Inspections

On a monthly basis, the health and safety management system and workplace activities of the contractor will be audited by a Project Health and Safety Practitioner as well as the project PrCHSA to assess compliance with the project health and safety requirements. Any deviation from these

requirements (i.e. non-conformance) that places the health or safety of any person in immediate danger will result in the specific activity being stopped until the non-conformance is corrected.

For each non-conformance determined during any audit, the contractor must identify and implement appropriate corrective actions.

For each corrective action, a responsible person must be designated and an appropriate timeframe (target date) for completion of the corrective action must be specified. Progress on implementing corrective actions (i.e. closing non-conformances) must be monitored and reported on. The implementation of corrective actions will be verified during the monthly audits.

Should it be determined that the contractor's level of compliance is unsatisfactory, all work being performed by the contractor on the project site may be stopped (at the contractor's expense) until an investigation into the reasons for the poor performance has been carried out, a corrective action plan has been developed, and corrective actions have been implemented.

In addition to the audit carried out by the Project Health and Safety Manager/Practitioner and the Agent, the contractor must carry out an internal audit on a monthly basis to assess compliance with the project health and safety requirements (including the requirements of this specification and the contractor's Health and Safety Management Plan). Furthermore, the contractor must ensure that each appointed sub-contractor is audited and measured to the same standard. Copies of these audit reports must be submitted to the Project Health and Safety Practitioner on a monthly basis.

The contractor must carry out internal health and safety inspections as follows:

- General site health and safety inspections on a daily basis; and
- Inspections of plant, tools and equipment prior to establishment or use on site, and at least monthly thereafter.

All audits and inspections must be carried out by competent persons who have been appointed in writing.

A schedule of planned audits and inspections must be compiled and maintained ensuring that:

- All work areas and all activities are covered at regular intervals;
- All applicable legal requirements are complied with; and
- Areas or activities with significant associated hazards or risks receive greater attention.

24. Reference Documents

1. Occupational Health and Safety act, No 85 of 1993 and Regulations
2. Compensation for Occupational Injuries and Diseases Act, No 130 of 1993
3. TIMS – Contractor Management Procedure 014