

Transnet National Ports Authority

an Operating Division **TRANSNET SOC LTD**

[Registration Number 1990/000900/30]

REQUEST FOR PROPOSAL (RFP) TNPA/2022/09/1080/12302/RFP

THE PARTITIONING OF THE EMENDI ADMINISTRATION BUILDING, PORT OF NGQURA.

RFP NUMBER	: TNPA/2022/09/1080/12302/RFP
ISSUE DATE	: 19 Oct 2022
COMPULSORY BRIEFING (PORT OF NGQURA)	: 28 Oct 2022
CLOSING DATE	: 17 Nov 2022
CLOSING TIME	: 16:00
TENDER VALIDITY PERIOD	: 12 Weeks after closing date

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C4.1 Site Information

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T1.1 TENDER NOTICE AND INVITATION TO TENDER

SECTION 1: NOTICE TO TENDERERS

1. INVITATION TO TENDER

Responses to this Tender [hereinafter referred to as a **Tender**] are requested from persons, companies, close corporations or enterprises [hereinafter referred to as a Tenderer].

DESCRIPTION	THE PARTITIONING OF THE EMENDI ADMINISTRATION BUILDING, PORT OF NGQURA.
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).

COMPULSORY TENDER CLARIFICATION MEETING	<p>A Compulsory Tender Clarification Meeting will be conducted at eLwandle Boardroom, Ground Floor, Admin Building (eMendi), N2 Neptune Road Off Klub Road, Port of Ngqura, Port Elizabeth on 28 October 2022 at 10:00am.</p> <p>Tenders who wish to attend are to send their email address to: Mpho.Mohapi@transnet.net / Azola.Gxamza@transnet.net.</p> <p>The Compulsory Tender Clarification Meeting will start punctually and information will not be repeated for the benefit of Tenderers arriving late.</p>
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	<p>A Site visit/walk will take place, tenderers are to note:</p> <ul style="list-style-type: none"> • Tenderers are required to wear safety shoes, goggles, long sleeve shirts, high visibility vests and hard hats. • Tenderers without the recommended PPE will not be allowed on the site walk. • Tenderers and their employees, visitors, clients and customers entering Transnet Offices, Depots, Workshops and Stores will have to undergo breathalyser testing. • All forms of firearms are prohibited on Transnet properties and premises. • The relevant persons attending the meeting must ensure that their identity documents, passports or drivers licences are on them for inspection at the access control gates. <p>Certificate of Attendance in the form set out in the Returnable Schedule T2.2-01 hereto must be completed and submitted with your Tender as proof of attendance is required for a compulsory site meeting and/or tender briefing.</p> <p>Tenderers are required to bring the Returnable Schedule T2.2-01 to the Compulsory Tender Clarification Meeting to be signed by the <i>Employer's</i> Representative.</p> <p>Tenderers failing to attend the compulsory tender briefing will be disqualified.</p>
CLOSING DATE	<p>16:00 on 17 November 2022</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.**

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. Award the business to the highest scoring Tenderer/s unless objective criteria justify the award to another tenderer.
- 4.2. Not necessarily accept the lowest priced tender or an alternative Tender;
- 4.3. Go to the open market if the quoted rates (for award of work) are deemed unreasonable;
- 4.4. 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;
- 4.5. Request audited financial statements or other documentation for the purposes of a due diligence exercise;
- 4.6. Not accept any changes or purported changes by the Tenderer to the tender rates after the closing date;
- 4.7. 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;
- 4.8. 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);
- 4.9. 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.
- 4.10. 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.

4.11. 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 [clause 12 on T2.2-24], [**Breach of Law**] whether or not they have been found guilty of a serious breach of law during the past 5 [five] years.

4.12. 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..... and Unique registration reference number.....(**Tender Data**)

**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**

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. The Standard for Uniformity in Construction Procurement was first published in Board Notice 62 of 2004 in Government Gazette No 26427 of 9 June 2004. It was subsequently amended in Board Notice 67 of 2005 in Government Gazette No 28127 of 14 October 2005, Board Notice 93 of 2006 in Government Gazette No 29138 of 18 August 2006, Board Notice No 9 of 2008 in Government Gazette No 31823 of 30 January 2009, Board Notice 86 of 2010 in Government Gazette No 33239 of 28 May 2010, Board Notice 136 of 2015 in Government Gazette 38960 of 10 July 2015 and Board Notice 423 of 2019 in Government Gazette No 42622 of 8 August 2019.

This edition incorporates the amendments made in Board Notice 423 of 2019 in Government Gazette 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 The <i>Employer</i> is	Transnet SOC Ltd (Reg No. 1990/000900/30)
C.1.2 The tender documents issued by the <i>Employer</i> comprise:	
Part T: The Tender	
Part T1: Tendering procedures	T1.1 Tender notice and invitation to tender T1.2 Tender data
Part T2: Returnable documents	T2.1 List of returnable documents T2.2 Returnable schedules
Part C: The contract	
Part C1: Agreements and contract data	C1.1 Form of offer and acceptance C1.2 Contract data (Part 1 & 2) C1.3 Form of Securities
Part C2: Pricing data	C2.1 Pricing instructions C2.2 Activity Schedule

	Part C3: Scope of work	C3.1 Works Information
	Part C4: Site information	C4.1 Site information
C.1.4	The Employer's agent is:	Procurement Officer
	Name:	Mpho Mohapi/Azola Gxamza
	Address:	N2 Neptune Road TNPA Admin Building Port of Ngqura
	Tel No.	066 293 2210/078 167 4661
	E – mail	Mpho.Mohapi@transnet.net / Azola.Gxamza@transnet.net
C.2.1	Only those tenderers who satisfy the following eligibility criteria are eligible to submit tenders:	
	1. Stage One - Eligibility with regards to attendance at the compulsory clarification meeting:	
	Certificate of attendance at Compulsory Tender Clarification Meeting	
	An authorised representative of the tendering entity or a representative of a tendering entity that intends to form a Joint Venture (JV) must attend the compulsory clarification meeting in terms C2.7	
	2. Stage Two as per CIDB: Eligibility Criteria Schedule - CIDB Registration	
	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 25 (1B) or 25(7A) of the Construction Industry Development Regulations, designation of 4GB or higher class of construction work, are eligible to have their tenders evaluated.	
	b) Joint Venture (JV) Joint ventures are eligible to submit tenders subject to the following: <ol style="list-style-type: none"> every member of the joint venture is registered with the CIDB; the lead partner has a contractor grading designation of 3GB of class of construction work; and 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 4GB or higher class of construction work or a value determined in accordance with Regulation 25(1B) or 25(7A) of the Construction Industry Development Regulations

4. The tenderer shall provide a certified copy of its signed joint venture agreement.

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

3. Stage Three - Pre-qualification criteria for preferential procurement in terms of the Preferential Procurement Regulations, 2017

A tenderer having stipulated minimum B-BBEE status level of contributor of 2

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

4. Stage Four - Local Production and Content in terms of the Preferential Procurement Regulations, 2017:

3.1 COMPULSORY LOCAL CONTENT THRESHOLD

In terms of section 8(1) of the Preferential Procurement Regulations, 2017, and the Instruction Note issued by National Treasury on the "Invitation and Evaluation of Bids based on a stipulated minimum threshold for local content and production for the **Steel Products and Components, Plastic Pipes and Valves Products and Actuators** Sector", Transnet is required to set a stipulated minimum threshold be set for this RFP.

3.1.1 Local Content Threshold

A Local Content threshold of **Steel Products and Components 100%, Plastic Pipes 100% and Valves Products and Actuators 70%** will be required for the goods specified in SBD 6.2, to be manufactured by a successful Respondent **For 4 months of the contract period** for the remainder of the contract term.

Tenderers must properly complete, duly sign and submit returnable schedule T2.2-04, entitled "Declaration Certificate for Local Production and Content (SBD 6.2 and Annexures C, D & E)", committing to meet the

following stipulated minimum thresholds for local production and content for the following designated sectors as determined by the Department of Trade, Industry and Competition (DTIC):

Steel Products and Components 100%

•Joining / Connecting Components	100%
• Fasteners (bolts, nuts, rivets & nails)	100%
• Ducting & Structural Pipework	100%
• Downpipes	100%

Plastic Pipes 100%

Valves Products and Actuators 70%

Only locally produced or locally manufactured products with a minimum threshold for local production and content will be considered. If the quantity of materials and/or products required cannot be wholly sourced from South African based manufacturers and/or at the designated local content threshold at any particular time, a bidders should obtain written approval from the DTIC to supply the remaining portion at a lower local content threshold. Such approval application should be submitted and obtained prior to the closing of the bid. The DTIC, in consultation with Transnet, will grant such approval on a case-by-case basis and will consider the following:

- required volumes in the particular bid;
- available collective South African industry manufacturing capacity at that time;
- delivery times;
- availability of input materials and components;
- technical considerations including operating conditions;
- materials of construction; and
- Security of supply and emergencies.

3.2 LOCAL CONTENT NOTES

- 3.2.1 The exchange rate to be used for the calculation of local production and content must be the exchange rate published by the South African Reserve Bank (SARB) on the date of the advertisement of the tender;
- 3.2.2 Only the South African Bureau of Standards (SABS) approved technical specification number SATS 1286:2011 must be used to calculate local content;
- 3.2.3 The local content (LC) expressed as a percentage of the bid price must be calculated in accordance with the following formula which must be disclosed in the bid documentation:

$$LC = [1 - x/y] * 100$$

Where

x is the imported content in Rand

y is the bid price in Rand excluding value added tax (VAT)

Prices referred to in the determination of x must be converted to Rand (ZAR) by using the exchange rate published by the SARB at 12:00 on the date of advertisement of the bid.

- 3.2.4 The SABS approved technical specification number SATS 1286:2011 and the Guidance on the Calculation of Local Content together with the Local Content Declaration Templates [Annex C (Local Content Declaration: Summary Schedule), D (Imported Content Declaration: Supporting Schedule to Annex C) and E (Local Content Declaration: Supporting Schedule to Annex C)] are accessible to all potential tenderers on the DTI's official website; http://www.the dti.gov.za/industrial_development/ip.jsp at no cost.
- 3.2.5 The rates of exchange quoted by the tenderer in paragraph 4.1 of Returnable Schedule (the Declaration Certificate for Local Production and Content for Designated Sectors) will be verified for accuracy.
- 3.2.6 Declaration Certificate for Local Production and Content (SBD 6.2) together with the Annex C (Local Content Declaration: Summary

Schedule) must be completed, duly signed and submitted a the closing date and time of the bid;

3.2.7 Tenderers must familiarise themselves with all the information provided in the Local Content instruction notes with particular reference to paragraph 4 of the instruction notes.

3.2.8 Respondents are to ensure that they complete the local content annexures in line with the provisions made in the Guidance Document for the calculation of Local Content. Failure to comply will lead to disqualification.

3.3 Mandatory RFP Annexures

The regulatory and mandatory RFP Annexures, which must be completed by all Respondents in order to declare Local Content, are as follows:

Annexure B – Declaration Certificate for Local Production and Content [SBD 6.2]

Annexure C – Local Content Declaration: Summary Schedule

Annexure B and C must be completed and submitted even if a complete Local Content exemption letter from DTIC has been obtained.

To the extent that an exemption from Local Content has been granted by the DTIC, the exemption letter from DTIC will be a mandatory returnable document.

Annexures D and E are Supporting Schedules to Annexure C. They are named as follows:

3.3.1 T2.2-06 Annexure D – Imported Content Declaration: Supporting Schedule to Annexure C

3.3.2 T2.2-07 Annexure E – Local Content Declaration: Supporting Schedule to Annexure C

Annexure F - Guidance Document for the calculation of Local Content

After completing Declaration D, bidders should complete Declaration E and then consolidate the information on Declaration C. Declaration C should be submitted with the bid documentation at the closing date and time of the bid. Declarations D and E should be kept by Respondents for verification purposes for a period of at least 5 years. The successful

Respondent is required to continuously update Declarations C, D and E with the actual values for the duration of the contract. In addition to what is stated above regarding Annexures D and E, please note that these declarations are to be submitted as part of the Essential Returnable Documents.

Although Annexure D and Annexure E need not be submitted with Proposals, Transnet reserves the right to call for these Supporting Schedules if required.

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

5. Stage Five - Functionality:

Only those tenderers who obtain the minimum qualifying score for functionality will be evaluated further in terms of price and the applicable preference point system. The minimum qualifying for score for functionality is 60 points.

The evaluation criteria for measuring functionality and the points for each criteria and, if any, each sub-criterion are as stated in C.3.11.3 below.

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

C.2.7 The arrangements for a compulsory clarification meeting are as stated in the Tender Notice and Invitation to Tender. **Tenderers must complete and sign the attendance register.** Addenda will be issued to and tenders will only be received from those tendering entities including those entities that intends forming a joint venture appearing on the attendance register.

Tenderers are also **required to bring their RFP document to the briefing session and have their returnable document T2.2-01 certificate of attendance** signed off by the Employer's authorised representative.

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

- Identification details:
- The tender documents must be uploaded with:
- Name of Tenderer:
.....
(insert company name)
 - Contact person and details:
.....
.....
(insert details)
 - The Tender Number: TNPA/2022/09/1080/12302/RFP
 - The Tender Description: FOR THE PARTITIONING OF THE EMENDI ADMINISTRATION BUILDING, PORT OF NGQURA.

Documents must be marked for the attention of:
Employer's Agent: Mpho Mohapi

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: 16:00 on the 17 November 2022

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.
Tenderers also to provide Transnet with a TCS PIN to verify Tenderers compliance status.
2. A **valid B-BBEE Certificate** from a Verification Agency accredited by the South African Accreditation System [**SANAS**], 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 together with the tender;
3. A valid CIDB certificate in the correct designated grading;
4. Proof of registration on the Central Supplier Database;
5. Letter of Good Standing with the Workmen's compensation fund by the tendering entity or separate Letters of Good Standing from all members of a newly constituted

JV.

Note: Refer to Section T2.1 for List of Returnable Documents

C3.11 The minimum number of evaluation points for functionality is: **60**

The procedure for the evaluation of responsive tenders is Functionality, Price and Preference:

Only those tenderers who attain the minimum number of evaluation points for Functionality will be eligible for further evaluation, failure to meet the minimum threshold 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:

(Please see CIDB Compiler guidance note T1.2 – Tender Data).

Functionality criteria	Sub-criteria	Sub-criteria points	Maximum number of points
T2.2-08 Programme	<p>Programme Submission of work organization programme and schedule listing.</p> <p>Tenderers should propose the main activities for the implementation of the project indicating/describing their contents, durations, major resources utilised (personnel, plant & equipment) and critical path milestones demonstrating that the project can be delivered within a period of 4 months:</p> <ol style="list-style-type: none"> 1. Detailed resource loaded schedule with key activities and compatible to the Price Schedule. 2. Listing all construction activities (including not limited to subcontracted works; procurement activities, time risk allowance 		5

	<p>and indicate ordering of long lead items);</p> <p>3. All activities should be linked with no open end tasks, Critical Path Method to be used;</p> <p>4. Provisions for quality, environment, health and safety requirements</p> <p>5. Use one unit of measure (days, weeks);</p> <p>6. Column to be shown, start, finish, duration, float; and</p> <p>7. The program to be submitted on Microsoft Project or Primavera software (can be attached as PDF).</p>		
T2.2-09 Management & CV's of Key Persons	Project Manager/Lead	10	35
	Construction Manager (registered with SACPCMP)	5	
	Mechanical Engineer (Pr. Eng or Pr. Eng Tech)	5	
	Electrical Engineer (Pr. Eng or Pr. Eng Tech)	5	
	Electrician	5	
	SHE Officer (registered with SACPCMP)	5	
T2.2-10 Quality Management	<p>Quality Management</p> <p>Tenderer has indicated all of the following:</p> <p>1. Quality Assurance Officer with ISO 9001:2015 quality understanding and implementation certificate and 3 years experience as a quality officer in urban roads construction projects.</p> <p>2. Project Quality Plan specific to the works.</p> <p>3. QMS Accreditation (e.g. ISO 9001:2015 certificate of the company) or a QMS manual index of the tenderer.</p> <p>4. Quality Data Pack index.</p>	5	5

	5. Project specific Quality Control Plan showing all tests and inspections		
T2.2-11 Previous experience	Value of Projects undertaken in the Past 5 Years	5	20
	Experience Variety and Variability of Partitioning, Mechanical, Electrical and Plumbing (MEP) or Building services and Interior finishes types of Projects as in the Scope of Service	10	
	References from Clients (or Clients' Representative/s) of Previously Completed Similar Projects (i.e. for Design, and Supervision, and Construction - individual categories or combined submission)	5	
T2.2-12 Environmental	<p>The Tenderer must review the following documents for context to meet the environmental requirements, namely:</p> <ul style="list-style-type: none"> • Transnet SOC Limited – Environmental Risk Management Policy (refer to annexure ...); • Project Environmental Specification (PES) which comprises of the following as a minimum: <ul style="list-style-type: none"> - Standard Operating Procedure for Construction Environmental Management - Minimum Standards for Construction Environmental Management <p>Where applicable, the following may also apply:</p> <ul style="list-style-type: none"> - Environmental Approvals (e.g. Environmental Authorisation, Licences and Permits etc.) - Environmental Management Programme 		5

	(EMPr) as approved by the Competent Authority (in instances where this applies it will supersede the Minimum Standards for Construction Environmental Management) - Any other operational/maintenance environmental plans or specifications		
T2.2-13 Method Statement	The Tender must submit a detail Work methodology for the resourcing and execution of the technical work. Furthermore, the Tender must provide a detailed Partitioning, Mechanical, Electrical and Plumbing (MEP) or Building services and Interior finishes Work methodology procedure covering the below items: 1. Contract Details - Details of the nature of the Partitioning, Mechanical, Electrical and Plumbing (MEP) or Building services and Interior finishes services that is to be undertaken. 2. Method of Work - A description of how the works are to be carried out in relation to the design stages, scope, drawing deliverables at each stage, site conditions (fully occupied office building). 3. Risk Assessments - The inclusion of any risk assessments, project specific health and safety issues which will assist in the identification and management of task specific hazards 4. Operative Competence - Skills available, including		20

	certification, accreditation and training 5. Monitoring and review - Details of how the scope of the works will be monitored supervised and evaluated 6. Implementation Methodology is aligned to project scope 7. Methodology shows execution, handover and close-out stages 8. Foreseeable construction-related risks are identified on method statement 9. All stakeholders have been identified The table below indicate the method of scoring that will be followed to evaluate the method statement submitted by the Tenderer:		
T2.2-14 Health and Safety	Compliance to Health and Safety Submit the following documents as a minimum with your tender:		10

	<p>1. The Tenderer must provide their Contract specific health and safety plan addressing the requirements of TNPA health and safety specification and include the following documents:</p> <p>Safety, Health & Environmental Company Policy signed by the accounting officer. List the five elements -</p> <p>1. Commitment to Safety, prevention of pollution,</p> <p>2.Continual improvement,</p> <p>3.Compliance to legal requirements, appropriate to the nature of contractor's activities,</p> <p>4.Hold management accountable for development of the safety systems</p> <p>5.Include objectives and targets.</p>	1	
	<p>2. Roles and responsibilities of legal appointees</p> <p>a) In terms of OHSA 85 of 1993 and its Regulations.</p> <p>I. S16.1 CEO,</p> <p>II. S16.2 Assistant to CEO,</p> <p>III. CR8.2 Assistant Construction manager,</p> <p>IV. CR8.7 Construction Supervisor,</p> <p>V. CR8.8 Construction assistant supervisor,</p>	2	

	<p>VI. CR9.1 Risk Assessor</p> <p>b) In terms of Project and Construction Management Professional Act 48 of 2000</p> <p>I. Construction Manager (8(1) CV and proof of registration with SACPCMP)</p> <p>c) In terms of Construction Regulations 2014</p> <p>I. Construction HS Officer (8(5) CV and proof of registration with SACPCMP)</p>		
	3. List of job categories for project and competencies required per category and develop a training Matrix for all employees who will be working on the project. This matrix must include Management and be signed off by Accounting officer.	1	
	4. Overview of the tenderer's Risk Assessment methodology, and submission of risk assessments specific to the project.	2	
	5. Two years synopsis of SHE incidents, description, type and action taken to prevent re-occurrence	1	
	6. Submission of completed cost breakdown sheet	1	
	7. Complete and return with tender documentation the Contractor Safety Questionnaire with supporting documentation included as an Annexure.	2	

Maximum possible score for Functionality		100
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Functionality shall be scored independently by not less than 3 (three) evaluators and averaged in accordance with the following schedules:

- T2.2-08 Work Plan or Schedule or Programme
- T2.2-09 Project Organogram, Management & CV's
- T2.2-10 Quality Management
- T2.2-11 Previous Experience
- T2.2-12 Environment
- T2.2-13 Method Statement
- T2.2-14 Health and Safety

Each evaluation criteria will be assessed in terms of scores of 0, 20, 40, 60, 80 or 100 (linear scale, more suitable for NEC3, ECC (construction related procurement))

The scores of each of the evaluators will be averaged, weighted and then totalled 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. Only tenders that achieve the minimum qualifying score for functionality will be evaluated further in accordance with the 80/20 preference points systems as described in Preferential Procurement Regulations 6 and 7.

80 where the financial value of one or more responsive tenders received have a value equal to or below R50 million, inclusive of all applicable taxes,

Up to 100 minus W_1 tender evaluation points will be awarded to tenderers who complete the preferencing schedule and who are found to be eligible for the preference claimed. **Should the BBBEE rating not be provided, tenderers with no verification will score zero points for preferencing.**

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.

- C.3.13 Tender offers will only be accepted if:

1. 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;
2. the tenderer does not appear on Transnet's list for restricted tenderers and National Treasury's list of Tender Defaulters;
3. 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.
4. 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:
 - 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, 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,
 - e) complies with the legal requirements, if any, stated in the tender data and
 - f) is able, in the option of the employer to perform the contract free of conflicts of interest.

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



T2.1 List of Returnable Documents

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

- T2.2-01 **Stage One as per CIDB: Eligibility Criteria Schedule** - Certificate of attendance at Compulsory Tender Clarification Meeting
- T2.2-02 **Stage Two as per CIDB: Eligibility Criteria Schedule** - CIDB Registration
- T2.2-03 **Stage Three as per PPPFA: Pre-qualification Criteria Schedule**
Minimum B-BBEE Status level 2
- T2.2-04 **Stage Four as per PPPFA: Local Production and Content Criteria Schedule- Declaration Certificate of Local Production and Content (SBD 6.2) - Compulsory**
- T2.2-05 Annex C - Local Content Declaration - Summary Schedule - Compulsory
- T2.2-06 Annex D - Imported Content Declaration - Supporting Schedule to Annex C - Essential
- T2.2-07 Annex E - Local Content Declaration - Supporting Schedule to Annex C – Essential

2.1.2 Stage Five as per CIDB: these schedules will be utilised for evaluation purposes:

- T2.2-08 **Evaluation Schedule:** Programme
- T2.2-09 **Evaluation Schedule:** Project Organogram, Management & CV's
- T2.2-10 **Evaluation Schedule:** Quality Management
- T2.2-11 **Evaluation Schedule:** Previous experience
- T2.2-12 **Evaluation Schedule:** Environment
- T2.2-13 **Evaluation Schedule:** Method Statement
- T2.2-14 **Evaluation Schedule:** Health and Safety
- T2.2-14a **Questionnaire Schedule:** Health and Safety

2.1.3 Returnable Schedules:

General:

- T2.2-15 Authority to submit tender
- T2.2-16 Record of addenda to tender documents
- T2.2-17 Letter of Good Standing
- T2.2-18 Risk Elements
- T2.2-19 Availability of equipment and other resources
- T2.2-20 Schedule of proposed Subcontractors

**Agreement and Commitment by Tenderer:**

- T2.2-21 Compulsory Enterprise Questionnaire
- T2.2-22 Non-Disclosure Agreement
- T2.2-23 RFP Declaration Form
- T2.2-24 RFP – Breach of Law
- T2.2-25 Certificate of Acquaintance with Tender Document
- T2.2-26 Service Provider Integrity Pact
- T2.2-27 Supplier Code of Conduct

Bonds/Guarantees/Financial/Insurance:

- T2.2-28 Insurance provided by the Contractor
- T2.2-29 Forecast Rate of Invoicing
- T2.2-30 Three (3) years audited financial statements
- T2.2-31 Agreement in terms of Protection of Personal Information Act, 4 of 2013 ("POPIA")

2.2 C1.1 Offer portion of Form of Offer & Acceptance**2.3 C1.2 Contract Data****2.4 C1.3 Forms of Securities****2.5 C2.1 Pricing Instructions****2.6 C2.2 Price Schedule**

T2.2-01: Eligibility Criteria Schedule:

Certificate of Attendance at Tender Clarification Meeting

This is to certify that

(Company Name)

Represented
by:

(Name and
Surname)

Was represented at the compulsory tender clarification meeting

Held at:		
On (date)		Starting time:

Particulars of person(s) attending the meeting:

Name

Signature

Capacity

Attendance of the above company at the meeting was confirmed:

Name

Signature

**For and on Behalf of the
Employers Agent.**

Date

T2.2-02: 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 25 (1B) or 25(7A) of the Construction Industry Development Regulations, designation of **4GB** 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:

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 grading designation in the class of construction works under consideration and possesses the required recognition status (**3GB**); 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 4GB or higher class of construction work or a value determined in accordance with Regulation 25(1B) or 25(7A) of the Construction Industry Development Regulations
4. the Contractor shall provide the employer with a certified copy of its signed joint venture agreement;
5. 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.

T2.2-03 Pre-qualification Criteria Schedule:

A tenderer having a stipulated minimum B-BBEE status level 2 contributor.

The Tenderer is to submit the following documents or copies thereof:

-A Valid B-BBEE Sworn Affidavit or B-BBEE Certificate.

Failure to provide the valid B-BBEE Sworn Affidavit or B-BBEE certificate at the closing date and time of the tender may result in the tender being deemed non-responsive

The undersigned, who warrants that he / she is duly authorised to do so on behalf of the enterprise, confirms that the contents of this schedule are within my personal knowledge and are to the best of my belief both true and correct.

Signed

Date

Name

Position

Tenderer



T2.2-04: Pre-qualification Criteria Schedule: Declaration of Certificate for Local Production and Content for Designated Sectors

SBD 6.2

This Standard Bidding Document (SBD) must form part of all bids invited. It contains general information and serves as a declaration form for local content (local production and local content are used interchangeably).

Before completing this declaration, bidders must study the General Conditions, Definitions, Directives applicable in respect of Local Content as prescribed in the Preferential Procurement Regulations, 2017, the South African Bureau of Standards (SABS) approved technical specification number SATS 1286:2011 (Edition 1) and the Guidance on the Calculation of Local Content together with the Local Content Declaration Templates [Annex C (Local Content Declaration: Summary Schedule), D (Imported Content Declaration: Supporting Schedule to Annex C) and E (Local Content Declaration: Supporting Schedule to Annex C)].

1. General Conditions

- 1.1. Preferential Procurement Regulations, 2017 (Regulation 8) makes provision for the promotion of local production and content.
- 1.2. Regulation 8.(1) prescribes that in the case of designated sectors, where in the award of bids local production and content is of critical importance, such bids must be advertised with the specific bidding condition that only locally produced goods, services or works or locally manufactured goods, with a stipulated minimum threshold for local production and content will be considered.
- 1.3. Where necessary, for bids referred to in paragraph 1.2 above, a two stage bidding process may be followed, where the first stage involves a minimum threshold for local production and content and the second stage price and B-BBEE.
- 1.4. A person awarded a contract in relation to a designated sector, may not sub-contract in such a manner that the local production and content of the overall value of the contract is reduced to below the stipulated minimum threshold.
- 1.5. The local content (LC) expressed as a percentage of the bid price must be calculated in accordance with the SABS approved technical specification number SATS 1286: 2011 as follows:

$$LC = [1 - x / y] * 100$$

Where

x is the imported content in Rand

y is the bid price in Rand excluding value added tax (VAT)

Prices referred to in the determination of x must be converted to Rand (ZAR) by using the exchange rate published by South African Reserve Bank (SARB) at 12:00 on the date of advertisement of the bid as indicated in paragraph 4.1 below.

The SABS approved technical specification number SATS 1286:2011 is accessible on <http://www.thedti.gov.za/industrial development/ip.jsp> at no cost.

- 1.6. A bid may be disqualified if this Declaration Certificate and the Annex C (Local Content Declaration: Summary Schedule) are not submitted as part of the bid documentation;

2. Definitions

- 2.1. **"bid"** includes written price quotations, advertised competitive bids or proposals;
- 2.2. **"bid price"** price offered by the bidder, excluding value added tax (VAT);
- 2.3. **"contract"** means the agreement that results from the acceptance of a bid by an organ of state;

"designated sector" means a sector, sub-sector or industry that has been designated by the Department of Trade and Industry in line with national development and industrial policies for local production, where only



- 2.4. locally produced services, works or goods or locally manufactured goods meet the stipulated minimum threshold for local production and content;
- 2.5. **"duly sign"** means a Declaration Certificate for Local Content that has been signed by the Chief Financial Officer or other legally responsible person nominated in writing by the Chief Executive, or senior member / person with management responsibility(close corporation, partnership or individual).
- 2.6. **"imported content"** means that portion of the bid price represented by the cost of components, parts or materials which have been or are still to be imported (whether by the supplier or its subcontractors) and which costs are inclusive of the costs abroad (this includes labour or intellectual property costs), plus freight and other direct importation costs, such as landing costs, dock duties, import duty, sales duty or other similar tax or duty at the South African port of entry;
- 2.7. **"local content"** means that portion of the bid price which is not included in the imported content, provided that local manufacture does take place;
- 2.8. **"stipulated minimum threshold"** means that portion of local production and content as determined by the Department of Trade and Industry; and
- 2.9. **"sub-contract"** means the primary contractor's assigning, leasing, making out work to, or employing another person to support such primary contractor in the execution of part of a project in terms of the contract.
3. **The stipulated minimum threshold(s) for local production and content (refer to Annex A of SATS 1286:2011) for this bid is/are as follows:**

Description of services, works or goods

Stipulated minimum threshold

Steel Products and Components 100%

• Joining / Connecting Components	100%
• Fasteners (bolts, nuts, rivets & nails)	100%
• Ducting & Structural Pipework	100%
• Downpipes	100%

Plastic Pipes 100%

Valves Products and Actuators 70%

4. Does any portion of the services, works or goods offered have any imported content?

(***Tick applicable box***)

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

- 4.1. If yes, the rate(s) of exchange to be used in this bid to calculate the local content as prescribed in paragraph 1.5 of the general conditions must be the rate(s) published by SARB for the specific currency at 12:00 on the date of advertisement of the bid.

The relevant rates of exchange information is accessible on www.reservebank.co.za

Indicate the rate(s) of exchange against the appropriate currency in the table below (refer to Annex A of SATS 1286:2011):

Currency	Rates of exchange
US Dollar	
Pound Sterling	
Euro	
Yen	
Other	



NB: Bidders must submit proof of the SARB rate (s) of exchange used.

5. Where, after the award of a bid, challenges are experienced in meeting the stipulated minimum threshold for local content the dti must be informed accordingly in order for the dti to verify and in consultation with the AO/AA provide directives in this regard.



LOCAL CONTENT DECLARATION
(REFER TO ANNEX B OF SATS 1286:2011)

LOCAL CONTENT DECLARATION BY CHIEF FINANCIAL OFFICER OR OTHER LEGALLY RESPONSIBLE PERSON NOMINATED IN WRITING BY THE CHIEF EXECUTIVE OR SENIOR MEMBER/PERSON WITH MANAGEMENT RESPONSIBILITY (CLOSE CORPORATION, PARTNERSHIP OR INDIVIDUAL)

IN RESPECT OF BID NO.

ISSUED BY: TRANSNET NATIONAL PORTS AUTHORITY ON BEHALF OF TRANSNET SOC LTD

NB

- 1 The obligation to complete, duly sign and submit this declaration cannot be transferred to an external authorized representative, auditor or any other third party acting on behalf of the bidder.
- 2 Guidance on the Calculation of Local Content together with Local Content Declaration Templates (Annex C, D and E) is accessible on http://www.thdti.gov.za/industrial_development/ip.jsp. Bidders should first complete Declaration D. After completing Declaration D, bidders should complete Declaration E and then consolidate the information on Declaration C. **Declaration C should be submitted with the bid documentation at the closing date and time of the bid in order to substantiate the declaration made in paragraph (c) below.** Declarations D and E should be kept by the bidders for verification purposes for a period of at least 5 years. The successful bidder is required to continuously update Declarations C, D and E with the actual values for the duration of the contract.

I, the undersigned, (full names), do hereby declare, in my capacity asof.....(name of bidder entity), the following:

- (a) The facts contained herein are within my own personal knowledge.
- (b) I have satisfied myself that:
 - (i) the goods/services/works to be delivered in terms of the above-specified bid comply with the minimum local content requirements as specified in the bid, and as measured in terms of SATS 1286:2011; and
- (c) The local content percentage (%) indicated below has been calculated using the formula given in clause 3 of SATS 1286:2011, the rates of exchange indicated in paragraph 4.1 above and the information contained in Declaration D and E which has been consolidated in Declaration C:

Price of the Designated commodity Steel Products and Components for Construction Ex VAT	R
Imported content (x), as calculated in terms of SATS 1286:2011	R
Stipulated minimum threshold for local content (paragraph 3 above)	100%
Local content %, as calculated in terms of SATS 1286:2011	

Price of the Designated commodity Plastic Pipes Ex Vat	R
Imported content (x), as calculated in terms of SATS 1286:2011	R
Stipulated minimum threshold for local content (paragraph 3 above)	100%
Local content %, as calculated in terms of SATS 1286:2011	

Price of the Designated commodity Valves Products and Actuators Ex Vat	R
Imported content (x), as calculated in terms of SATS 1286:2011	R
Stipulated minimum threshold for local content (paragraph 3 above)	70%
Local content %, as calculated in terms of SATS 1286:2011	



<p>If the bid is for more than one product, the local content percentages for each product contained in Declaration C shall be used instead of the table above. The local content percentages for each product has been calculated using the formula given in clause 3 of SATS 1286:2011, the rates of exchange indicated in paragraph 4.1 above and the information contained in Declaration D and E.</p> <p>(d) I accept that the Procurement Authority / Institution has the right to request that the local content be verified in terms of the requirements of SATS 1286:2011.</p> <p>(e) I understand that the awarding of the bid is dependent on the accuracy of the information furnished in this application. I also understand that the submission of incorrect data, or data that are not verifiable as described in SATS 1286:2011, may result in the Procurement Authority / Institution imposing any or all of the remedies as provided for in Regulation 13 of the Preferential Procurement Regulations, 2017 promulgated under the Preferential Policy Framework Act (PPPFA), 2000 (Act No. 5 of 2000).</p> <p>SIGNATURE: _____ DATE: _____</p> <p>WITNESS No. 1 _____ DATE: _____</p> <p>WITNESS No. 2 _____ DATE: _____</p>	

NOTE TO TENDERERS: Failure to fully complete, declare, sign & date this SBD6.2 Declaration as well as the accompanying Annexure C “local content declaration - summary schedule” may result in the tender submission being non-responsive and disqualified from any further evaluation.



Schedule A – Non-compliance for Local Content

Non-compliance Penalties for Local Content:

- a) If for any reason the *Contractor* is unable to achieve the local content undertaking, the *Contractor* must approach the Department of Trade and Industry ("DTI") to obtain exemption in order to supply the goods at a lower local content threshold. The *Contractor* is obliged to approach DTI for exemption within 10 (ten) days of determining that it is unable to achieve any milestone target or local content threshold.
- b) Should the DTI provide exemption, the *Contractor* shall be entitled to provide the goods at the lower local content threshold set by DTI. In such event, the Parties shall in good faith renegotiate the milestone targets or local content undertaking to ensure that the lowered local content thresholds are achieved.
- c) Should DTI not provide the necessary exemption, the *Contractor* shall be obliged to meet each milestone target as stated in the Local Content Plan or the local content undertaking.
- d) Should the *Contractor* fail to meet any milestone target or the local content undertaking, the following remedies shall apply without limiting any of the *Employer's* other rights in law:
 - i. The *Employer* shall afford the *Contractor* a period of thirty (30) days to remedy its non-compliance.
 - ii. Should the *Contractor* fail to meet its obligations within the further 30 day period, the *Contractor* shall pay a Non-Compliance penalty ("Non-compliance Penalty") to the *Employer* in respect of such Non-compliance as set out in clause iv below. The penalties shall be imposed per milestone measurement for non-delivery of committed values in the case of a Local Content Plan or shall be imposed against the non-delivery of committed values where local content undertakings must be met immediately.
 - iii. To the extent that the Actual Local Content Spend¹ is lower than the Required Local Content Spend² (or the Adjusted Required Local Content Spend³, as the case may be), the *Contractor* shall be liable for Penalties which is the difference in value between the Actual Local Content Spend and the Required Local Content Spend (or the Adjusted Required Local Content Spend, as the case may be) plus an additional percentage of such difference. Such Non-compliance Penalties shall be calculated and levied at the relevant milestones as stipulated in the Local Content Plan or shall be imposed against the non-delivery of committed values where local content undertakings must be met immediately, in accordance with clause iv below.
 - iv. Non-compliance penalties shall apply at the following rate: the difference in value between the Required Local Content Spend and the Actual Local Content Spend, plus 5% of such difference.
 - v. In order to guarantee that the *Contractor* meets its obligations in terms of the Local Content Plan or its committed local content undertaking, the *Employer* shall be entitled to retain a Non-compliance Penalty at the rate of 1% of every monthly payment due by the *Employer* to the *Contractor* over the contract period ("the Local Content Retention Amount"). The Local Content Retention Amount shall be set off against any penalties payable by the *Contractor* at any milestone assessment.
- e) Should no penalties be imposed during the duration of the contract, the *Employer* shall refund the full value of the Local Content Retention Amount to the *Contractor* at the end of the contract period.
- f) Should any unpaid penalties remain at the end of the contract period, then without limiting other rights that the *Employer* may have in law, the *Contractor* shall forfeit the Local Content Retention Amount and shall have no further claim against the *Employer* for the repayment of such amount.

Non-compliance Penalty Certificate:

- a) If any Non-compliance Penalty arises, the *Employer* shall issue a Non-compliance Penalty Certificate on the last day of each month during such Non-compliance indicating the Non-compliance Penalties which have accrued during that period.
- b) A Non-compliance Penalty Certificate shall be prima facie proof of the matters to which it relates. If the *Contractor* disputes any of the amounts set out in a Non-compliance Penalty Certificate:

¹ Actual Local Content Spend means the monetary value of local content initiatives actually delivered by the Supplier during the period under review.

² Required Local Content Spend means the monetary value of local content obligations that the Supplier has agreed to deliver during the period under review.

³ Adjusted Required Local Content Spend means any adjustment to the Required Local Content Spend as prescribed by DTI through the process of exemption referred to in clause c) above and as agreed to between the parties, reduced to writing and signed by the parties.




- the dispute shall be resolved in accordance with the provisions of the Contract; and
- if pursuant to that referral, it is determined that the *Contractor* owes any amount to the *Employer* pursuant to the Non-compliance Penalty Certificate, then the *Contractor* shall pay such amount to the *Employer* within 10 (ten) Business Days of the determination made pursuant to such determination and an accompanying valid Tax Invoice.

Payment of Non-compliance Penalties:

- c) Subject to Clause i) above, the *Contractor* shall pay the Non-compliance Penalty indicated in the Non-compliance Penalty Certificate within 10 (ten) Business Days of the *Employer* issuing a valid Tax Invoice to the *Contractor* for the amount set out in that certificate. If the *Employer* does not issue a valid Tax Invoice to the *Contractor* for Non-compliance Penalties accrued during any relevant period, those Non-compliance Penalties shall be carried forward to the next period.
- d) The *Contractor* shall pay the amount due within 10 (ten) days after receipt of a valid Tax Invoice from the *Employer*, failing which Transnet shall, without prejudice to any other rights of the *Employer* under this Agreement, be entitled to call for payment which may be in any form the *Employer* deems reasonable and appropriate.
- e) It is agreed that the *Employer*, the DTI, the South African Bureau of Standards and/or any of their appointed agents shall be entitled to monitor, evaluate and audit the *Contractor's* compliance with its obligations under the Local Content Plan. To this end, the *Contractor* shall provide its full cooperation to the respective bodies referred to in this clause to ensure that effective monitoring, evaluation and auditing takes place.

The Non Compliance Penalties set forth in this Clause are stated exclusive of VAT. Any VAT payable on Non Compliance Penalties will be for the account of the *Contractor*.

TRANSNET NATIONAL PORTS AUTHORITY
Tender Number: TNPA/2022/09/1080/12302/RFP
Description of the Works: THE PARTITIONING OF EMENDI ADMINISTRATION BUILDING

TRANSNET


SATS 1286.2011

Annex C Steel Products and Components

Local Content Declaration - Summary Schedule

(C1)	Tender No.	TNPA/2022/09/1080/12302/RFP		
(C2)	Tender description:	THE PARTITIONING OF EMENDI ADMINISTRATION BUILDING		
(C3)	Designated product(s)	Steel Products and Components		
(C4)	Tender Authority:	TRANSNET NATIONAL PORTS AUTHORITY		
(C5)	Tendering Entity name:			
(C6)	Tender Exchange Rate:	Pula <input type="text"/>	EU <input type="text"/>	GBP <input type="text"/>
(C7)	Specified local content %	100%		

Note: VAT to be excluded from all calculations

Tender item no's	List of items	Calculation of local content						Tender summary			
		Tender price - each (excl VAT)	Exempted imported value	Tender value net of exempted imported content	Imported value	Local value	Local content % (per item)	Commodity Qty	Total Commodity value	Total exempted imported content	Total Imported content
(C8)	(C9)	(C10)	(C11)	(C12)	(C13)	(C14)	(C15)	(C16)	(C17)	(C18)	(C19)
	Joining / Connecting Components										
	Fasteners (bolts, nuts, rivets & nails)										
	Ducting & Structural Pipework										
	Downpipes										

(C20) Total tender value

(C21) Total Exempt imported content

(C22) Total Tender value net of exempt imported content

(C23) Total Imported content

(C24) Total local content

(C25) Average local content % of tender

Date:

Annex D Steel Products and Components for Construction

Imported Content Declaration - Supporting Schedule to Annex C

(D1) Tender No. TNPA/2022/09/1080/12302/RFP
 (D2) Tender description: THE PARTITIONING OF EMENDI ADMINIST
 (D3) Designated Products Steel Products and Components for Const
 (D4) Tender Authority: TRANSNET NATIONAL PORTS AUTHORITY
 (D5) Tendering Entity name:
 (D6) Tender Exchange Rate Pula EU GBP

Note: VAT to be excluded from all calculations

A. Exempted imported content

Calculation of imported content

Summary

Tender item no's	Description of imported content	Local supplier	Overseas Supplier	Foreign currency value as per Commercial Invoice	Tender Exchange Rate	Local value of imports	Freight costs to port of entry	All locally incurred landing costs & duties	Total landed cost excl VAT	Tender Qty	Exempted imported value
(D7)	(D8)	(D9)	(D10)	(D11)	(D12)	(D13)	(D14)	(D15)	(D16)	(D17)	(D18)

(D19) Total exempt imported value R 0

This total must correspond with Annex C - C 21

B. Imported directly by the Tenderer

Calculation of imported content

Summary

Tender item no's	Description of imported content	Unit of measure	Overseas Supplier	Foreign currency value as per Commercial Invoice	Tender Rate of Exchange	Local value of imports	Freight costs to port of entry	All locally incurred landing costs & duties	Total landed cost excl VAT	Tender Qty	Total imported value
(D20)	(D21)	(D22)	(D23)	(D24)	(D25)	(D26)	(D27)	(D28)	(D29)	(D30)	(D31)

(D32) Total imported value by tenderer R 0

C. Imported by a 3rd party and

Calculation of imported content

Summary

Description of imported content	Unit of measure	Local supplier	Overseas Supplier	Foreign currency value as per Commercial Invoice	Tender Rate of Exchange	Local value of imports	Freight costs to port of entry	All locally incurred landing costs & duties	Total landed cost excl VAT	Quantity imported	Total imported value
(D33)	(D34)	(D35)	(D36)	(D37)	(D38)	(D39)	(D40)	(D41)	(D42)	(D43)	(D44)

(D45) Total imported value by 3rd party R 0

D. Other foreign currency payments

Calculation of foreign currency payments

Summary of payments

Type of payment	Local supplier making the payment	Overseas beneficiary	Foreign currency value paid	Tender Rate of Exchange	Local value of payments
(D46)	(D47)	(D48)	(D49)	(D50)	(D51)

(D52) Total of foreign currency payments declared by tenderer and/or 3rd party

Signature of tenderer from Annex B

(D53) Total of imported content & foreign currency payments - (D32), (D45) & (D52) above

R 0

This total must correspond with Annex C - C 23

Date:

Part T2: Returnable Documents

T2.2: Returnable Schedules

TRANSNET NATIONAL PORTS AUTHORITY														
Tender Number: TNPA/2022/09/1080/12302/RFP														
Description of the Works: THE PARTITIONING OF EMENDI ADMINISTRATION BUILDING												SATS 1286.2011		
Annex C Plastic Pipes														
Local Content Declaration - Summary Schedule														
(C1)	Tender No.	TNPA/2022/09/1080/12302/RFP										Note: VAT to be excluded from all calculations		
(C2)	Tender description:	THE PARTITIONING OF EMENDI ADMINISTRATION B												
(C3)	Designated product(s)	Plastic Pipes												
(C4)	Tender Authority:	TRANSNET NATIONAL PORTS AUTHORITY												
(C5)	Tendering Entity name:													
(C6)	Tender Exchange Rate:	Pula		EU		GBP								
(C7)	Specified local content %	100%												
Calculation of local content								Tender summary						
Tender item no's	List of items	Tender price - each (excl VAT)	Exempted imported value	Tender value net of exempted imported content	Imported value	Local value	Local content % (per item)	Commodity Qty	Total Commodity value	Total exempted imported content	Total Imported content			
(C8)	(C9)	(C10)	(C11)	(C12)	(C13)	(C14)	(C15)	(C16)	(C17)	(C18)	(C19)			
(C20) Total tender value														
Signature of tenderer from Annex B								(C21) Total Exempt imported content						
								(C22) Total Tender value net of exempt imported content						
								(C23) Total Imported content						
								(C24) Total local content						
Date:								(C25) Average local content % of tender						



TRANSNET NATIONAL PORTS AUTHORITY

TENDER NUMBER: TNPA/2022/09/1080/12302/RFP

DESCRIPTION OF THE WORKS: FOR THE PARTITIONING OF THE EMENDI ADMINISTRATION BUILDING, PORT OF NGQURA

T2.2-06 Annex D – Imported Content Declaration – Supporting Schedule to Annex C Essential. See attached

TRANSNET NATIONAL PORTS AUTHORITY Tender Number: TNPA/2022/09/1080/12302/RFP Description of the Works: THE PARTITIONING OF EMENDI ADMINISTRATION BUILDING												TRANSNET		
Annex D Plastic Pipes														
Imported Content Declaration - Supporting Schedule to Annex C														
(D1)	Tender No.		TNPA/2022/09/1080/12302/RFP											
(D2)	Tender description:		THE PARTITIONING OF EMENDI ADMINISTRATION BUILDING										Note: VAT to be excluded from all calculations	
(D3)	Designated Products:		Plastic Pipes											
(D4)	Tender Authority:		TRANSNET NATIONAL PORTS AUTHORITY											
(D5)	Tendering Entity name:													
(D6)	Tender Exchange Rate:		Pula		EU		GBP							
A. Exempted imported content					Calculation of imported content					Summary				
	Tender item no's	Description of imported content	Local supplier	Overseas Supplier	Foreign currency value as per Commercial Invoice	Tender Exchange Rate	Local value of imports	Freight costs to port of entry	All locally incurred landing costs & duties	Total landed cost excl VAT	Tender Qty	Exempted imported value		
(D7)	(D8)	(D9)	(D10)	(D11)	(D12)	(D13)	(D14)	(D15)	(D16)	(D17)	(D18)			
										(D19) Total exempt imported value	R 0			
										This total must correspond with Annex C - C 21				
B. Imported directly by the Tenderer					Calculation of imported content					Summary				
	Tender item no's	Description of imported content	Unit of measure	Overseas Supplier	Foreign currency value as per Commercial Invoice	Tender Rate of Exchange	Local value of imports	Freight costs to port of entry	All locally incurred landing costs & duties	Total landed cost excl VAT	Tender Qty	Total imported value		
(D20)	(D21)	(D22)	(D23)	(D24)	(D25)	(D26)	(D27)	(D28)	(D29)	(D30)	(D31)			
										(D32) Total imported value by tenderer	R 0			
C. Imported by a 3rd party and supplied to the Tenderer					Calculation of imported content					Summary				
	Description of imported content	Unit of measure	Local supplier	Overseas Supplier	Foreign currency value as per Commercial Invoice	Tender Rate of Exchange	Local value of imports	Freight costs to port of entry	All locally incurred landing costs & duties	Total landed cost excl VAT	Quantity imported	Total imported value		
(D33)	(D34)	(D35)	(D36)	(D37)	(D38)	(D39)	(D40)	(D41)	(D42)	(D43)	(D44)			
										(D45) Total imported value by 3rd party	R 0			
D. Other foreign currency payments					Calculation of foreign currency payments					Summary of payments				
	Type of payment	Local supplier making the payment	Overseas beneficiary	Foreign currency value paid	Tender Rate of Exchange						Local value of payments			
(D46)	(D47)	(D48)	(D49)	(D50)						(D51)				
										(D52) Total of foreign currency payments declared by tenderer and/or 3rd party				
Signature of tenderer from Annex B										(D53) Total of imported content & foreign currency payments - (D32), (D45) & (D52) above				
										R 0				
Date:										This total must correspond with Annex C - C 23				



[illegible]





T2.2-07 Annex E – Imported Content Declaration – Supporting Schedule to Annex C Essential. See attached

TRANSNET NATIONAL PORTS AUTHORITY Tender Number: TNPA/2022/09/1080/12302/RFP Description of the Works: THE PARTITIONING OF EMENDI ADMINISTRATION BUILDING						TRANSNET
Annex C Valves Products and Actuators						
Local Content Declaration - Supporting Schedule to Annex C						
(E1)	Tender No.	TNPA/2022/09/1080/1202/RFP		Note: VAT to be excluded from all calculations		
(E2)	Tender description:	THE PARTITIONING OF EMENDI ADMINISTRATION				
(E3)	Designated products:	Valves Products and Actuators				
(E4)	Tender Authority:	TRANSNET NATIONAL PORTS AUTHORITY				
(E5)	Tendering Entity name:					
	Local Products (Goods, Services and Works)	Description Raw Material items purchased	Local Supplier Name	Manufacturer Contact Details	Value	
		(E6)	(E7)		(E8)	
		(E9) TotalRaw Materials (Goods, Services and Works)				R 0
(E10)	Manpower costs	(Tenderer's manpower cost)				R 0
(E11)	Factory overheads	(Rental, depreciation & amortisation, utility costs, consumables etc.)				R 0
(E12)	Administration overheads and mark-up	(Marketing, insurance, financing, interest etc.)				R 0
		(E13) Total local content				R 0
This total must correspond with Annex C - C24						
Signature of tenderer from Annex B						
Date:						



T2.2-08: Evaluation Schedule: Programme

Work Plan or Schedule or Programme:

Submission of work organization programme and schedule listing.

Tenderers should propose the main activities for the implementation of the project indicating/describing their contents, durations, major resources utilised (personnel, plant & equipment) and critical path milestones demonstrating that the project can be delivered within a period of 4 months:

The aspects should include the following:

1. Detailed resource loaded schedule with key activities and compatible to the Price Schedule.
2. Listing all construction activities (including not limited to subcontracted works; procurement activities, time risk allowance and indicate ordering of long lead items);
3. All activities should be linked with no open end tasks, Critical Path Method to be used;
4. Provisions for quality, environment, health and safety requirements
5. Use one unit of measure (days, weeks);
6. Column to be shown, start, finish, duration, float; and
7. The program to be submitted on Microsoft Project or Primavera software (can be attached as PDF).

The table below indicate the method of scoring that will be followed to evaluate the programme submitted by the Tenderer:

Score 0	Two (2) or less aspects submitted/ tenderer has not submitted the required information/ cannot be rated
Score 20	Three (3) aspects of the work plan have been covered within 4 months
Score 40	Four (4) aspects of the work plan have been covered within 4 months
Score 60	Five (5) aspects of the work plan have been covered within 4 months (including point number 7)
Score 80	Six (6) aspects of the work plan have been covered within 4 months (including point number 7)
Score 100	Seven (7) aspects of the work plan have been covered within 4 months

The undersigned, who warrants that he / she is duly authorised to do so on behalf of the enterprise, confirms that the contents of this schedule are within my personal knowledge and are to the best of my belief both true and correct.

Signed _____ Date _____
Name _____ Position _____
Tenderer _____



T2.2-09: Evaluation Schedule: Management & CV's of Key Persons.

The tender must be able to demonstrate that the project personnel have sufficient knowledge, experience and qualifications to provide the required service.

Submit the following documents as a minimum with your tender document:

1. Organizational structure to include a clear indication of roles and responsibilities and specific function of each team member.
2. The experience of assigned key persons in relation to the scope of work will be evaluated from two different points of view, namely:
 - a. Relevant experience.
 - b. The education, training, and skills. (Proof of education and training must be attached. Copies of all qualifications must be certified by a Commissioner of Oaths).
 - c. Key personnel should include at least, amongst others but not limited to:
 - Project Manager/Lead
 - Construction Manager (registered with SACPCMP)
 - Mechanical Engineer (Pr. Eng or Pr. Eng Tech).
 - Electrical Engineer (Pr. Eng or Pr. Eng Tech)
 - Electrician
 - SHE Officer (registered with SACPCMP)

No.	Key Persons	Name and Surname	CV attached (Yes/No)	Registered (Yes/No)
1.	Project Manager/Lead			
2.	Construction Manager			
3.	Mechanical Engineer			
4.	Electrical Engineer			
5.	Electrician			
6.	SHE Officer			

Note: CV's and profiles should show experience, background and track record in similar types of projects

The table below will be used as guidelines for scoring / evaluating the management and CV's of key persons submitted by the Tenderer:

	Project Manager/Lead	Construction Manager	Mechanical Engineer	Electrical Engineer	Electrician	SHE Representative
	10	5	5	5	5	5
Criteria	<p>Capability and capacity of the Key Personnel to support the execution of the works based on their detailed CV's on the previous similar project experience. All personnel to be in employ of the bidder, proof submitted in the form of payslip or appointment letter or employment contract. A letter of intent for personnel outside the employ of the bidder to be included with CV.</p> <p>Bidder submitted valid qualification NQF 7 certificates from a recognised Higher learning institute with at least 5 years' experience post professional registration in similar projects</p>	<p>Capability and capacity of the Key Personnel to support the execution of the works based on their detailed CV's on the previous similar project experience. All personnel to be in employ of the bidder, proof submitted in the form of payslip or appointment letter or employment contract. A letter of intent for personnel outside the employ of the bidder to be included with CV.</p> <p>Bidder submitted valid qualification NQF 7 certificates from a recognised Higher learning institute with at least 5 years experience post professional registration in similar projects</p>	<p>Capability and capacity of the Key Personnel to support the execution of the works based on their detailed CV's on the previous similar project experience. All personnel to be in employ of the bidder, proof submitted in the form of payslip or appointment letter or employment contract. A letter of intent for personnel outside the employ of the bidder to be included with CV.</p> <p>Mechanical Engineer Pr Eng or Pr Tech ECSA registration with 5 years experience in similar projects.</p>	<p>Capability and capacity of the Key Personnel to support the execution of the works based on their detailed CV's on the previous similar project experience. All personnel to be in employ of the bidder, proof submitted in the form of payslip or appointment letter or employment contract. A letter of intent for personnel outside the employ of the bidder to be included with CV.</p> <p>Electrical Engineer Pr Eng or Pr Tech ECSA registration with 5 years in similar projects.</p>	<p>Capability and capacity of the Key Personnel to support the execution of the works based on their detailed CV's on the previous similar project experience. All personnel to be in employ of the bidder, proof submitted in the form of payslip or appointment letter or employment contract. A letter of intent for personnel outside the employ of the bidder to be included with CV.</p> <p>Registered Electrician with Wireman's Licence and with 5 years' experience</p>	<p>Capability and capacity of the Key Personnel to support the execution of the works based on their detailed CV's on the previous similar project experience. All personnel to be in employ of the bidder, proof submitted in the form of payslip or appointment letter or employment contract. A letter of intent for personnel outside the employ of the bidder to be included with CV.</p> <p>SACPCMP registered Health & Safety Officer with Five (5) years' experience</p>



Score 0	No NQF certificate from a recognized Higher Learning Institute with less than 5 years experience as a Project Manager on similar projects /no response.	No NQF certificate from a recognized Higher Learning Institute with less than 5 years experience as a Construction Manager registered with SACPCMP on similar projects /no response	No Pr.Eng Mechanical/Pr.Eng Tech / no response	No Pr.Eng Electrical/Pr.Eng Tech / no response	No wireman licence / no response	Not registered with SACPCMP/no response
Score 20	No NQF certificate from a recognized Higher Learning Institute with 5 years or more experience as a Project Manager on similar projects.	No NQF certificate from a recognized Higher Learning Institute with 5 years or more experience as a Construction Manager registered with SACPCMP on similar projects	Pr.Eng Mechanical/Pr.Eng Tech with less than 1 years experience post registration in relevant similar projects	Pr.Eng Electrical/Pr.Eng Tech with less than 1 years experience in relevant similar projects	Registered Electrician with less than 1 year experience in relevant similar projects	Registered with SACPCMP with less than 1 year experience in relevant similar projects
Score 40	NQF 4 or less certificate from a recognized Higher Learning Institute with 5 years or more experience as a Project Manager on similar projects	NQF 4 or less certificate from a recognized Higher Learning Institute with 5 years or more experience as a Construction Manager registered with SACPCMP on similar projects	Pr.Eng Mechanical/Pr.Eng Tech with 2-3 years experience post registration in relevant similar projects	Pr.Eng Electrical Pr.Eng Tech with 2 years' experience in relevant similar projects	Registered Electrician with 1 to 2 years' experience in relevant similar projects	Registered with SACPCMP with 1 to 2 years' experience in relevant similar projects
Score 60	NQF 5 certificate from a recognized Higher Learning Institute with 5 years or more experience as a Project Manager on similar projects	NQF 5 certificate from a recognized Higher Learning Institute with 5 years or more experience as a Construction Manager registered with SACPCMP on similar projects	Pr.Eng Mechanical/Pr.Eng Tech with 4-5 years experience post registration in relevant similar projects	Pr.Eng Electrical/Pr.Eng Tech with 3 years' experience in relevant similar projects	Registered Electrician with 3 years' experience in relevant similar projects	Registered with SACPCMP with 3 years' experience in relevant similar projects



Score 80	NQF 6 certificate from a recognized Higher Learning Institute with 5 years or more experience as a Project Manager on similar projects	NQF 6 certificate from a recognized Higher Learning Institute with 5 years or more experience as a Construction Manager registered with SACPCMP on similar projects	Pr.Eng Mechanical/Pr.Eng Tech between 5 -6 years experience post registration in relevant similar projects	Pr.Eng Electrical/Pr.Eng Tech with 4 years' experience in relevant similar projects	Registered Electrician with 4 years' experience in relevant similar projects	Registered with SACPCMP with 4 years' experience in relevant similar projects
Score 100	NQF 7 certificate from a recognized Higher Learning Institute with 5 years or more experience as a Project Manager on similar projects	NQF 7 certificate from a recognized Higher Learning Institute with 5 years or more experience as a Construction Manager registered with SACPCMP on similar projects	Pr.Eng Mechanical/Pr.Eng Tech with more than 6 years experience post registration in relevant similar projects	Pr.Eng Electrical/Pr.Eng Tech with equal or greater than 5 years experience in relevant similar projects	Registered Electrician with equal or greater than 5 years experience in relevant similar projects	Registered with SACPCMP with equal or greater than 5 years' experience in relevant similar projects

Note: CV's and profiles should show experience, background and track record in similar types of projects



Attached submissions to this schedule:

.....

.....

.....

.....

.....

The undersigned, who warrants that he / she is duly authorised to do so on behalf of the enterprise, confirms that the contents of this schedule are within my personal knowledge and are to the best of my belief both true and correct.

Signed	Date
Name	Position
Tenderer		

T2.2-10: Quality Management

Quality Management and inspection tests.

Tenderer has indicated all of the following:

1. Quality Assurance Officer with ISO 9001:2015 quality understanding and implementation certificate and 3 years experience as a quality officer in urban roads construction projects.
2. Project Quality Plan specific to the works.
3. QMS Accreditation (e.g. ISO 9001:2015 certificate of the company) or a QMS manual index of the tenderer.
4. Quality Data Pack index.
5. Project specific Quality Control Plan showing all tests and inspections.

Score 0	Tenderer has not submitted the required information
Score 20	One (1) aspect of the quality management requirement have been covered
Score 40	Two (2) aspects of the quality management requirement have been covered
Score 60	Three (3) aspects of the quality management requirement have been covered (number 1, 2 and 5).
Score 80	Four (4) aspects of the quality management requirement have been covered (including number 1, 2 and 5).
Score 100	All five (5) and more aspects of the quality management requirement have been covered

The undersigned, who warrants that he / she is duly authorised to do so on behalf of the enterprise, confirms that the contents of this schedule are within my personal knowledge and are to the best of my belief both true and correct.

Signed _____ Date _____

Name _____ Position _____

Tenderer _____

T2.2-11 Previous experience

Note to tenderers:

Tenderers to demonstrate their overall experience in the delivery of similar works. The tenderer must demonstrate their relevant experience with regards

The table below indicate the method of scoring that will be followed to evaluate the previous experience submitted by the Tenderer:

	Value of Projects undertaken in the Past 5 Years	Experience Variety and Variability of Partitioning, Mechanical, Electrical and Plumbing (MEP) or Building services and Interior finishes types of Projects as in the Scope of Service:	References from Clients (or Clients' Representative/s) of Previously Completed Similar Projects (i.e. for Design, and Supervision, and Construction - individual categories or combined submission)
Criteria	5	10	5
	<p>Bidder must show Average Value of previously completed similar projects undertaken in the Past 5 Years.</p> <p>All tenderers to submit detail portfolio of projects detailing the value of project and the associated professional fee.</p> <p>This will be assessed as a number of services counted as per the key area/s mentioned.</p> <ol style="list-style-type: none"> Office Alteration and Interior /Finishes. MEP Design Coordination of MEP installations with space layout. 	<p>Tenders to submit detail portfolio of projects demonstrating competency in the Key area of speciality as mentioned in the scope of service for:</p> <ul style="list-style-type: none"> Design Site Supervision Building Alteration Material and Equipment Testing Hand-over and Close-out <p>This will be assessed as a number of services counted as per the key area/s mentioned.</p> <ol style="list-style-type: none"> Office Alteration and Interior /Finishes. MEP Design 	<p>Written References to be submitted from clients (or Clients' Representative/s) of previously completed projects</p>

	4. Building Management System and Instrumentation 5. EPCM Project which include sound proofing partitioning	3. Coordination of MEP installations with space layout. 4. Building Management System and Instrumentation 5. EPCM Project which include sound proofing partitioning	
Score 0	No response	No response	No response
Score 20	Covers 1 service	Covers 1 service	less than 4 reference letters and/or contracts and/or letters of appointment (with good reviews) submitted
Score 40	Covers 2 services	Covers 2 services	4 to 5 reference letters and/or contracts and/or letters of appointment (with good reviews) submitted
Score 60	Covers 3 services	Covers 3 services	6 to 7 reference letters and/or contracts and/or letters of appointment (with good reviews) submitted
Score 80	Covers 4 services	Covers 4 services	8 to 9 reference letters and/or contracts and/or letters of appointment (with good reviews) submitted
Score 100	Covers All 5 or more services	Covers All 5 or more services	10 or more reference letters and/or contracts and/or letters of appointment (with good reviews) submitted

<p>Index of documentation attached to this schedule:</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p>

The undersigned, who warrants that he / she is duly authorised to do so on behalf of the enterprise, confirms that the contents of this schedule are within my personal knowledge and are to the best of my belief both true and correct.

Signed _____ Date _____

Name _____ Position _____

Tenderer _____

T2.2-12: Evaluation Schedule: Environmental Management

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

- Transnet SOC Limited – Environmental Risk Management Policy (refer to Annexure H);
- Project Environmental Specification (PES) which comprises of the following as a minimum:
 - Standard Operating Procedure for Construction Environmental Management
 - Minimum Standards for Construction Environmental Management

Where applicable, the following may also apply:

- Environmental Approvals (e.g. Environmental Authorisation, Licences and Permits etc.)
 - Environmental Management Programme (EMPr) as approved by the Competent Authority (in instances where this applies it will supersede the Minimum Standards for Construction Environmental Management)
 - Any other operational/maintenance environmental plans or specifications
1. The tenderer must provide their environmental management policy, detailing their commitment to the protection of the environment.
 2. The tenderer must explain their internal environmental management system (EMS) approach and attach the EMS manual/guidance document, as part of the overall quality management system. In accordance with section 6.2 of the CEMP.
 3. The tenderer must submit a Project Environmental Management Plan (EMP). The EMP must comply with the requirements of section 6.2 of the CEMP, and must demonstrate how the tenderer will ensure that the requirements of the CEMP are implemented.
 4. The tenderer must include organisational charts and the CV of the Environmental Officer that is on Site on a daily basis. The CV must show that the Environmental Officer has sufficient experience and/or qualifications in environmental management.
 5. The tenderer must demonstrate the required level of expertise and experience for the overall management of the construction environmental management process. A minimum of three examples of construction projects within environmentally sensitive areas must be provided with a brief synopsis of the environmental management measures implemented and the success of these measures.
 6. The tenderer is to sign the declaration of understanding (refer to T2.2–12) acknowledging understanding thereof and the budget provision for the implementation of environmental management requirements.

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.

The scoring of the Tenderer's Environmental Management submission will be as follows: *

Score 0	Bidder has not submitted the required information
Score 20	One (1) to Two (2) aspect/s of the environmental management criteria have been covered
Score 40	Three (3) aspects of the environmental management criteria have been covered
Score 60	Four (4) aspects of the environmental management criteria have been covered
Score 80	Five (5) aspects of the environmental management criteria have been covered
Score 100	All Six (6) aspects of the environmental management criteria have been covered

The undersigned, who warrants that he / she is duly authorised to do so on behalf of the enterprise, confirms that the contents of this schedule are within my personal knowledge and are to the best of my belief both true and correct

Signed	Date
_____	_____
Name	Position
_____	_____
Tenderer	

DECLARATION OF UNDERSTANDING

PROJECT NAME:		DOCUMENT NO:	
PROJECT NO:		DATE:	
CONTRACTOR:		CONTRACT NO:	

I,

(Name)

(Designation)

(Representing)

Declare that I have read and understood the contents of the Construction Environmental Management Plan (ENV-STD-001) and associated documents for the above mentioned Project and Contract.

I also declare that I understand my responsibilities in terms of enforcing and implementing the Environmental Specifications for the aforementioned Contract.

Signed	Signature	Date
Place		
Witness 1:	Signature	Date
Witness 2:		

APPOINTMENT OF CONTRACTOR ENVIRONMENTAL OFFICER & DECLARATION OF UNDERSTANDING

APPOINTMENT OF CONTRACTOR ENVIRONMENTAL OFFICER AND DECLARATION OF UNDERSTANDING			REFERENCE		
<p>We, _____ (Contractor), hereby confirm that</p> <p>_____ has been appointed as Environmental Officer for the duration of Contract</p> <p>_____, the scope of which entails _____</p> <p>_____ (Description of scope of works)</p> <p>_____</p> <p>I, _____ (Appointed Environmental Officer) declare that I have read and understand the contents of:</p> <ul style="list-style-type: none"> The Transnet Group Capital (TGC) Construction Environmental Management Plan (CEMP) and Standard Environmental Specification (SES), documentation issued for Contract _____ <p>I, (Appointed Environmental Officer) also declare that I understand my responsibilities in terms of enforcing and implementing the requirements of the Construction Environmental Management Plan, Standard Environmental Specification (SES) and any Project Environmental Specifications (PES) that may be relevant or required for this project.</p>					
Environmental Officer CV attached	Y	N	Environmental Officer Job Description attached	Y	N
Signed (Contractors Environmental Officer)	Signature		Date		
Received By (TGC Environmental Officer)	Signature		Date		

CONTENTS FOR CONTRACTOR'S ENVIRONMENTAL FILE

PROJECT NAME:		DOCUMENT NO:	
PROJECT NO:		DATE:	
CONTRACTOR:		CONTRACT NO:	

The following documents must be incorporated into the Contractors Environmental File

No	Item Description	Document No	Tick
1.1	Transnet Safety, Health, Environmental and Quality – Risk Management Policy Statement dated 10 June 2016.		
1.2	TGC Safety, Health, Environmental Management and Quality Policy dated 01 June 2016.		
1.3	Transnet Construction Environmental Management Plan (CEMP) as supplied to Contractor by Transnet Group Capital	ENV-STD-001 Rev03	
1.4	Transnet Standard Environmental Specification (SES) as supplied to Contractor by Transnet Group Capital	ENV-STD-002 Rev03	
2	Project Environmental Specification (PES) as supplied to Contractor by Transnet Group Capital	ENV-FAT-0001	
3	Declaration of Understanding (Signed)	ENV-FAT-0002	
4.1	Contractor's Information	ENV-FAT-0003	
4.2	Contractor's Environmental Policy		
4.3	Contractor's Organogram		
4.4	Contractor's Environmental Management Plan		
4.5	Appointment of Contractors EO and Declaration of Understanding (Including CV and Job Profile)	ENV-FAT-0004	
5	Schedule of Contractor's Construction Plant and Equipment	ENV-FAT-0005	
6	Hazardous Substances Register	ENV-FAT-0006	
7	Emergency Contacts Register	ENV-FAT-0007	

8	Energy Consumption Register	ENV-FAT-0032	
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9	Water Usage Register	ENV-FAT-0033	
10	List of Interested and Affected Parties	ENV-FAT-0008	
11	Induction Attendance Register	Rev 00-01	
12	Project Start-Up Checklist	ENV-FAT-0022	
13	Site Access Certificate	ENV-FAT-0010	
14	Method Statement Register	ENV-FAT-0011	
15	Method Statements	ENV-FAT-0026	
16	Waste Disposal Register	ENV-FAT-0012	
17	Daily Inspection Checklist	ENV-FAT-0023	
18	Weekly Inspection Checklist	ENV-FAT-0024	
19	Monthly Compliance Audits	ENV-FAT-0025	
20	Public Complaints Register	ENV-FAT-0013	
21	Record of Formal External Communications	ENV-FAT-0014	
22	Incident Register	ENV-FAT-0015	
23	Incident Reports	ENV-FAT-0016	
24	Non Conformance Register	ENV-FAT-0017	
25	Non Conformance Reports	ENV-FAT-0018	
26	Awareness/Toolbox Attendance Register (Including Awareness Material)	ENV-FAT-0019	
27	Minutes of Monthly SHE Meetings		
28.1	Environmental Site Rules for Visitors	ENV-GL-0002	
28.2	Environmental Site Rules for Contractors	ENV-GL-0003	
29	Basic Site Procedures	ENV-GL-0001	

30	TGC Environmental Induction		
31	Contractor's Environmental Management File Handover	ENV-FAT-0020	
32	Site Closure Inspection Form	ENV-FAT-0021	
33	Site Closure Certificate	ENV-FAT-0021	
34	Application for Exemption	ENV-FAT-0034	

T2.2-13 Method Statement

Note to tenderers:

The Tender must submit a detailed Work methodology for the resourcing and execution of the technical work.

Furthermore, the Tender must provide a detailed Partitioning, Mechanical, Electrical and Plumbing (MEP) or Building services and Interior finishes Work methodology procedure covering the below items:

1. Contract Details - Details of the nature of the Partitioning, Mechanical, Electrical and Plumbing (MEP) or Building services and Interior finishes services that is to be undertaken.
2. Method of Work - A description of how the works are to be carried out in relation to the design stages, scope, drawing deliverables at each stage, site conditions (fully occupied office building).
3. Risk Assessments - The inclusion of any risk assessments, project specific health and safety issues which will assist in the identification and management of task specific hazards
4. Operative Competence - Skills available, including certification, accreditation and training
5. Monitoring and review - Details of how the scope of the works will be monitored supervised and evaluated
6. Implementation Methodology is aligned to project scope
7. Methodology shows execution, handover and close-out stages
8. Foreseeable construction-related risks are identified on method statement
9. All stakeholders have been identified.

The table below indicate the method of scoring that will be followed to evaluate the method statement submitted by the Tenderer:

Score 0	No response (or None of the items covered)
Score 20	Bidder covers 1 – 2 of items required
Score 40	Bidder covers 3 - 4 of the items required
Score 60	Bidder covers 5 - 6 of the items required

Score 80	Bidder covers 7 - 8 items of the items required
Score 100	Bidder covers all 9 of the items required

The undersigned, who warrants that he / she is duly authorised to do so on behalf of the enterprise, confirms that the contents of this schedule are within my personal knowledge and are to the best of my belief both true and correct

Signed

Date

Name

Position

Tenderer

T2.2-14: Compliance to Health and Safety

Submit the following documents as a minimum with your tender:

1. The Tenderer must provide their Contract specific health and safety plan addressing the requirements of TNPA health and safety specification and include the following documents:
 - Safety, Health & Environmental Company Policy signed by the accounting officer. List the five elements -
 1. Commitment to Safety, prevention of pollution,
 2. Continual improvement,
 3. Compliance to legal requirements, appropriate to the nature of contractor's activities,
 4. Hold management accountable for development of the safety systems
 5. Include objectives and targets.
2. Roles and responsibilities of legal appointees
 - a) In terms of OHSA 85 of 1993 and its Regulations.
 - I. S16.1 CEO,
 - II. S16.2 Assistant to CEO,
 - III. CR8.2 Assistant Construction manager,
 - IV. CR8.7 Construction Supervisor,
 - V. CR8.8 Construction assistant supervisor,
 - VI. CR9.1 Risk Assessor
 - b) In terms of Project and Construction Management Professional Act 48 of 2000
 - I. Construction Manager (8(1) CV and proof of registration with SACPCMP)
 - c) In terms of Construction Regulations 2014
 - I Construction HS Officer (8(5) CV and proof of registration with SACPCMP)
3. List of job categories for project and competencies required per category and develop a training Matrix for all employees who will be working on the project. This matrix must include Management and be signed off by Accounting officer.
4. Overview of the tenderer's Risk Assessment methodology, and submission of risk assessments specific to the project.
5. Two years synopsis of SHE incidents, description, type and action taken to prevent re-occurrence
6. Submission of completed cost breakdown sheet
7. Complete and return with tender documentation the Contractor Safety Questionnaire with supporting documentation included as an Annexure.

Attached submissions to this schedule:

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

.....
.....

The scoring of the Tenderer's Health and safety requirements will be as follows:

	Policy (State points allocated) 1. Commitment to Safety, prevention of pollution, 2. Continual improvement, 3. Compliance to legal requirements, appropriate to the nature of contractor's activities, 4. Hold management accountable for development of the safety systems,	Roles & Responsibilities, such as a) S16.1 CEO, S16.2 Assistant CEO, 8.2 Assistant Construction Manager, 8.7 Construction Supervisor, 8.8 Construction assistant supervisor, 9.1 Risk Assessor, etc. as per the Occupational health and safety Act 85 of 1993. b) In terms of Project and Construction Management	List of job categories for project and competencies required per category and develop a training Matrix for all employees who will be working on the project. This matrix must include Management and be signed off by Accounting Officer.	Overview of the tenderer's Risk Assessment methodology, and submission of risk assessments specific to the project.	Two years synopsis of SHE incidents, description, type and action taken to prevent re-occurrence.	Submission of completed cost breakdown sheet.	Complete and return with tender documentation the Contractor Safety Questionnaire with required supporting documentation included as an Annexure.
--	---	--	---	--	--	--	--

	5. Include objectives and targets.	Professional Act 48 of 2000 i) Construction Manager (CV and proof of registration with SACPCMP) c) In terms of Construction Regulations 2014: i) Construction Health and Safety Officer (CV and proof of registration)					
Points	1	1	1	2	1	1	3
score 0		The Tenderer has submitted no information or inadequate information to determine a score.					
score 20	1 of the 5 key policy components are recognized and meet the <i>Employer's</i> requirement.	Roles and responsibilities do not meet the Occupational health and safety Act as per construction	Key responsible persons are not included on training matrix as per proposed	Information supplied is totally insignificant/inadequate to achieve the required standard of service.	Information supplied is totally insignificant/inadequate to achieve the required	Health and safety Budget submitted is totally insignificant/inadequate to achieve the required standard of	Information supplied is totally insignificant/inadequate to achieve the required standard of service.

		regulations and TNPA health and safety specification. No proof of registration with SACPCMP	organogram structure.		standard of service.	service, 0 to 1% allocated.	
score 40	2 of the 5 key policy components are recognized and meet the <i>Employer's</i> requirement.	Roles and responsibilities are unlikely to ensure compliance as per the Works information and not in line with OHS Act and TNPA health and safety specification. Proof of Registration with SACPCMP is attached but has expired.	Not all key responsible persons are included in the training matrix. Training matrix submitted does not cover all SHE training listed on Health and Safety specification. Training matrix not signed by responsible personnel.	Poor response/answer/solution lacks convincing evidence, medium risk that stated <i>employer's</i> requirements will not be met.	Poor response/answer/solution lacks convincing evidence, medium risk that stated <i>Employer's</i> requirements will not be met.	Health and safety Budget submitted is insignificant/inadequate /answer/solution to the returnable, <i>Employer's</i> health and safety requirements will not be met, 1.1 – 2% allocated.	Poor response/answer/solution lacks convincing evidence, medium risk that stated <i>Employer's</i> requirements will not be met.
score 60	3 of the 5 key policy components	Satisfactory response on roles	Satisfactory response on the list of job	Satisfactory response/answer/solution	Satisfactory response/answer	Health and safety Budget submitted is	Satisfactory response/answer/s

	are recognized and meet the <i>Employer's</i> requirements.	and responsibilities as per Employer's requirements. Proof of CV and registration with SACPCMP is attached and valid	categories and trainings as per proposed project organogram structure. Training matrix covers most of the trainings listed on TNPA Health and safety specification.	n to the particular aspect of the requirement, evidence given that the stated <i>Employer's</i> requirements will be met.	r/solution to the particular aspect of the requirement, evidence given that the stated <i>Employer's</i> requirements will be met.	Satisfactory response/answer/solution to the returnable, Employer's health and safety requirements will be met, 2.1 – 3% allocated.	olution to the particular aspect of the requirement, evidence given that the stated <i>Employer's</i> requirements will be met.
score 80	4 of the five key policy components are recognized and meets the <i>Employer's</i> requirements.	Roles and responsibilities are likely to ensure compliance as per Works Information, OHS Act and TNPA health and safety specification. Proof of CV and registration with SACPCMP is attached and valid	Most of key persons listed on the training matrix as per proposed project organogram structure. Trainings specified on the matrix are in line with TNPA health and safety specification.	Good response/answer/solution which demonstrates real understanding and evidence of ability to meet stated <i>Employer's</i> requirements.	Good response/answer/solution which demonstrates real understanding and evidence of ability to meet stated <i>Employer's</i> requirements.	Health and safety Budget submitted is Good response/answer/solution to the returnable, Employer's health and safety requirements will be met, 3% - above allocated.	Good response/answer/solution which demonstrates real understanding and evidence of ability to meet stated <i>Employer's</i> requirements.

score 100	All 5 key policy components are recognized and meets the <i>Employer's</i> requirements	Roles and Responsibilities most likely to ensure compliance as per requirements of OHS Act and TNPA Health and Safety Specification. CV and proof of registration with SACPCMP submitted.	Training matrix include Management and all employees /personnel in the project. Training matrix had been signed by responsible personnel.	Very good response/answer/solution gives real confidence that the tenderer is most likely to ensure compliance with stated <i>Employer's</i> requirements.	Very good response/answer/solution gives real confidence that the tenderer is most likely to ensure compliance with stated <i>Employer's</i> requirements.	Health and safety Budget submitted is Very good response/answer/solution to the returnable, Employer's health and safety requirements will be met, 4% - above allocated.	Very good response/answer/solution gives real confidence that the tenderer is most likely to ensure compliance with stated <i>Employer's</i> requirements.
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The undersigned, who warrants that he / she is duly authorised to do so on behalf of the enterprise, confirms that the contents of this schedule are within my personal knowledge and are to the best of my belief both true and correct

Signed

Date

Name

Position

Tenderer

T2.2-14a: Health and Safety Questionnaire

1. SAFE WORK PERFORMANCE			
1A. Injury Experience / Historical Performance - Alberta			
Use the previous three years injury and illness records to complete the following:			
Year			
Number of medical treatment cases			
Number of restricted work day cases			
Number of lost time injury cases			
Number of fatal injuries			
Total recordable frequency			
Lost time injury frequency			
Number of worker manhours			
1 - Medical Treatment Case	Any occupational injury or illness requiring treatment provided by a physician or treatment provided under the direction of a physician		
2 – Restricted Work Day Case	Any occupational injury or illness that prevents a worker from performing any of his/her craft jurisdiction duties		
3 – Lost Time injury Cases	Any occupational injury that prevents the worker from performing any work for at least one day		
4 – Total Recordable Frequency	Total number of Medical Treatment, Restricted Work and Lost Time Injury cases multiplied by 200,000 then divided by total manhours		
5- Lost Time Injury Frequency	Total number of Lost Time Injury cases multiplied by 200,000 then divide by total manhours		
1B. Workers' Compensation Experience			
Use the previous three years injury and illness records to complete the following (if applicable):			
Industry Code:		Industry Classification:	
Year			
Industry Rate			
Contractor Rate			
% Discount or Surcharge			
Is your Workers' Compensation account in good standing? (Please provide letter of confirmation)		<input type="checkbox"/> Yes <input type="checkbox"/> No	
2. CITATIONS			
2A.	Has your company been cited, charged or prosecuted under Health, Safety and/or Environmental Legislation in the last 5 years? <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, provide details:		

2B.	Has your company been cited, charged or prosecuted under the above Legislation in another Country, Region or State? <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, provide details:
3. CERTIFICATE OF RECOGNITION	
Does your company have a Certificate of Recognition? <input type="checkbox"/> Yes <input type="checkbox"/> No If Yes, what is the Certificate No. _____ Issue Date _____	

4. SAFETY PROGRAM					
Do you have a written safety program manual?				<input type="checkbox"/> Yes	<input type="checkbox"/> No
If Yes, provide a copy for review					
Do you have a pocket safety booklet for field distribution?				<input type="checkbox"/> Yes	<input type="checkbox"/> No
If Yes, provide a copy for review					
Does your safety program contain the following elements:					
	YES	NO		YES	NO
CORPORATE SAFETY POLICY	<input type="checkbox"/>	<input type="checkbox"/>	EQUIPMENT MAINTENANCE	<input type="checkbox"/>	<input type="checkbox"/>
INCIDENT NOTIFICATION POLICY	<input type="checkbox"/>	<input type="checkbox"/>	EMERGENCY RESPONSE	<input type="checkbox"/>	<input type="checkbox"/>
RECORDKEEPING & STATISTICS	<input type="checkbox"/>	<input type="checkbox"/>	HAZARD ASSESSMENT	<input type="checkbox"/>	<input type="checkbox"/>
REFERENCE TO LEGISLATION	<input type="checkbox"/>	<input type="checkbox"/>	SAFE WORK PRACTICES	<input type="checkbox"/>	<input type="checkbox"/>
GENERAL RULES & REGULATIONS	<input type="checkbox"/>	<input type="checkbox"/>	SAFE WORK PROCEDURES	<input type="checkbox"/>	<input type="checkbox"/>
PROGRESSIVE DISCIPLINE POLICY	<input type="checkbox"/>	<input type="checkbox"/>	WORKPLACE INSPECTIONS	<input type="checkbox"/>	<input type="checkbox"/>
RESPONSIBILITIES	<input type="checkbox"/>	<input type="checkbox"/>	INVESTIGATION PROCESS	<input type="checkbox"/>	<input type="checkbox"/>
PPE STANDARDS	<input type="checkbox"/>	<input type="checkbox"/>	TRAINING POLICY & PROGRAM	<input type="checkbox"/>	<input type="checkbox"/>
ENVIRONMENTAL STANDARDS	<input type="checkbox"/>	<input type="checkbox"/>	COMMUNICATION PROCESSES	<input type="checkbox"/>	<input type="checkbox"/>
MODIFIED WORK PROGRAM	<input type="checkbox"/>	<input type="checkbox"/>			
5. TRAINING PROGRAM					
5A.	Do you have an orientation program for new hire employees?			<input type="checkbox"/> Yes	<input type="checkbox"/> No
If Yes, include a course outline. Does it include any of the following:					
	YES	NO		YES	NO
GENERAL RULES & REGULATIONS	<input type="checkbox"/>	<input type="checkbox"/>	CONFINED SPACE ENTRY	<input type="checkbox"/>	<input type="checkbox"/>



EMERGENCY REPORTING	<input type="checkbox"/>	<input type="checkbox"/>	TRENCHING & EXCAVATION	<input type="checkbox"/>	<input type="checkbox"/>
INJURY REPORTING	<input type="checkbox"/>	<input type="checkbox"/>	SIGNS & BARRICADES	<input type="checkbox"/>	<input type="checkbox"/>
LEGISLATION	<input type="checkbox"/>	<input type="checkbox"/>	DANGEROUS HOLES & OPENINGS	<input type="checkbox"/>	<input type="checkbox"/>
RIGHT TO REFUSE WORK	<input type="checkbox"/>	<input type="checkbox"/>	RIGGING & CRANES	<input type="checkbox"/>	<input type="checkbox"/>
PERSONAL PROTECTIVE EQUIPMENT	<input type="checkbox"/>	<input type="checkbox"/>	MOBILE VEHICLES	<input type="checkbox"/>	<input type="checkbox"/>
EMERGENCY PROCEDURES	<input type="checkbox"/>	<input type="checkbox"/>	PREVENTATIVE MAINTENANCE	<input type="checkbox"/>	<input type="checkbox"/>
PROJECT SAFETY COMMITTEE	<input type="checkbox"/>	<input type="checkbox"/>	HAND & POWER TOOLS	<input type="checkbox"/>	<input type="checkbox"/>
HOUSEKEEPING	<input type="checkbox"/>	<input type="checkbox"/>	FIRE PREVENTION & PROTECTION	<input type="checkbox"/>	<input type="checkbox"/>
LADDERS & SCAFFOLDS	<input type="checkbox"/>	<input type="checkbox"/>	ELECTRICAL SAFETY	<input type="checkbox"/>	<input type="checkbox"/>
FALL ARREST STANDARDS	<input type="checkbox"/>	<input type="checkbox"/>	COMPRESSED GAS CYLINDERS	<input type="checkbox"/>	<input type="checkbox"/>
AERIAL WORK PLATFORMS	<input type="checkbox"/>	<input type="checkbox"/>	WEATHER EXTREMES	<input type="checkbox"/>	<input type="checkbox"/>



5B. Do you have a program for training newly hired or promoted supervisors? <input type="checkbox"/> Yes <input type="checkbox"/> No (If Yes, submit an outline for evaluation. Does it include instruction on the following:					
	Yes	No		Yes	No
EMPLOYER RESPONSIBILITIES	<input type="checkbox"/>	<input type="checkbox"/>	SAFETY COMMUNICATION	<input type="checkbox"/>	<input type="checkbox"/>
EMPLOYEE RESPONSIBILITIES	<input type="checkbox"/>	<input type="checkbox"/>	FIRST AID/MEDICAL PROCEDURES	<input type="checkbox"/>	<input type="checkbox"/>
DUE DILIGENCE	<input type="checkbox"/>	<input type="checkbox"/>	NEW WORKER TRAINING	<input type="checkbox"/>	<input type="checkbox"/>
SAFETY LEADERSHIP	<input type="checkbox"/>	<input type="checkbox"/>	ENVIRONMENTAL REQUIREMENTS	<input type="checkbox"/>	<input type="checkbox"/>
WORK REFUSALS	<input type="checkbox"/>	<input type="checkbox"/>	HAZARD ASSESSMENT	<input type="checkbox"/>	<input type="checkbox"/>
INSPECTION PROCESSES	<input type="checkbox"/>	<input type="checkbox"/>	PRE-JOB SAFETY INSTRUCTION	<input type="checkbox"/>	<input type="checkbox"/>
EMERGENCY PROCEDURES	<input type="checkbox"/>	<input type="checkbox"/>	DRUG & ALCOHOL POLICY	<input type="checkbox"/>	<input type="checkbox"/>
INCIDENT INVESTIGATION	<input type="checkbox"/>	<input type="checkbox"/>	PROGRESSIVE DISCIPLINARY POLICY	<input type="checkbox"/>	<input type="checkbox"/>
SAFE WORK PROCEDURES	<input type="checkbox"/>	<input type="checkbox"/>	SAFE WORK PRACTICES	<input type="checkbox"/>	<input type="checkbox"/>
SAFETY MEETINGS	<input type="checkbox"/>	<input type="checkbox"/>	NOTIFICATION REQUIREMENTS	<input type="checkbox"/>	<input type="checkbox"/>

6. SAFETY ACTIVITIES
 Do you conduct safety inspections? Yes No Weekly Monthly Quarterly

☐ ☐ ☐ ☐ ☐

Describe your safety inspection process (include participation, documentation requirements, follow-up, report distribution).

Who follows up on inspection action items? _____

Do you hold site safety meetings for field employees? If Yes, how often?

Yes No Daily Weekly Biweekly

☐ ☐ ☐ ☐ ☐

Do you hold site meetings where safety is addressed with management and field supervisors?

Yes No Weekly Biweekly Monthly

☐ ☐ ☐ ☐ ☐

Is pre-job safety instruction provided before to each new task? ☐ Yes ☐ No

Is the process documented? ☐ Yes ☐ No

Who leads the discussion? _____

Do you have a hazard assessment process? ☐ Yes ☐ No

- Are hazard assessments documented? If yes, how are hazard assessments communicated and implemented on each project? Who is responsible for leading the hazard assessment process?

Does your company have policies and procedures for environmental protection, spill clean-up, reporting, waste disposal, and recycling as part of the Health & Safety Program?



TRANSNET NATIONAL PORTS AUTHORITY

TENDER NUMBER: TNPA/2022/09/1080/12302/RFP

DESCRIPTION OF THE WORKS: FOR THE PARTITIONING OF THE EMENDI ADMINISTRATION BUILDING,
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☐ Yes ☐ No

How does your company measure its H&S success?

- Attach separate sheet to explain

7. SAFETY STEWARDSHIP						
7A	Are incident reports and report summaries sent to the following and how often?					
		Yes	No	Monthly	Quarterly	Annually
	Project/Site Manager	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Managing Director	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Safety Director/Manager	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	/Chief Executive Officer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7B	How are incident records and summaries kept? How often are they reported internally?					
		Yes	No	Monthly	Quarterly	Annually
	Incidents totaled for the entire company	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Incidents totaled by project	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	• Subtotaled by superintendent	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	• Subtotaled by foreman	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7C	How are the costs of individual incidents kept? How often are they reported internally?					
		Yes	No	Monthly	Quarterly	Annually
	Costs totaled for the entire company	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Costs totaled by project	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	• Subtotaled by superintendent	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	• Subtotaled by foreman/general foreman	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7D	Does your company track non-injury incidents?					
		Yes	No	Monthly	Quarterly	Annually
	Near Miss	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Property Damage	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Fire	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Security	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Environmental	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8 PERSONNEL						
List key health and safety officers planned for this project. Attach resume.						
Name		Position/Title			Designation	
Supply name, address and phone number of your company's corporate health and safety representative. Does this individual have responsibilities other than health, safety and environment?						
Name		Address			Telephone Number	
Other responsibilities:						
9 REFERENCES						
List the last three company's your form has worked for that could verify the quality and management commitment to your occupational Health & Safety program						

Name and Company	Address	Phone Number

T2.2-14b Health and Safety Cost Breakdown

The Health and Safety Cost Breakdown must be added on the Activity Schedule.

Tenderer (Company)	Responsible Person	Designation	Date
Project/Tender Title	Project/Tender No.	Project Location / Description	

#	Cost element	Unit Cost (R)	# of Units	Total Cost (R)
1.	Human Resources			
2.	Systems Documentation			
3.	Meetings & Administration			
4.	H&S Training			
5.	PPE & Safety Equipment			
6.	Signage & Barricading			
7.	Workplace Facilities			
8.	Emergency & Rescue Measures			
9.	Hygiene Surveys & Monitoring			
10.	Medical Surveillance			
11.	Safe Transport of Workers			
12.	HazMat Management (e.g. asbestos /silica)			

13.	Substance Abuse Testing			
14.	H&S Reward & Recognition			
15.				
16.				
		Total Health and Safety Cost (R)		
		Total Tender Value (R)		
		H&S Cost as % of Tender value		%

T2.2-15: 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 organisation or alternatively attach a certified copy of a company / organisation 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 authorised 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 in connection with the tender offer
for Contract _____ and any contract 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 necessary to 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

D. Certificate for Sole Proprietor

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

Signed	Date		
Name	_____	Position	_____
	_____		Sole Proprietor
	_____		_____

T2.2-16: 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.

T2.2-17 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:

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

T2.2-18: 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.

Tenderers are also to evaluate any risk/s stated by the *Employer* in Contract Data Part C1, and provide possible mitigation thereof.

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.

T2.2-19: 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.

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

T2.2-20: Schedule of Proposed Subcontractors

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

Note to tenderers:

- In terms of PPPFA Regulation 6 (5), A tenderer may not be awarded points for B-BBEE status level of contributor if the tender documents indicate that the tenderer intends subcontracting more than 25% of the value of the contract to any other person not qualifying for at least the points that the tenderer qualifies for, unless the intended subcontractor is an EME that has the capability to execute the subcontract.
- In terms of PPPFA Regulation 12 (3), A person awarded a contract may not subcontract more than 25% of the value of the contract to any other enterprise that does not have an equal or higher B-BBBEE status level of contributor that the person concerned, unless the contract is subcontracted to an EME that has the capability and ability to execute the contract.

2) **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			Address		Nature of work		Amount of Worked	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"/>

3)

Name of Proposed Subcontractor			Address		Nature of work		Amount of Worked	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"/>



TRANSNET NATIONAL PORTS AUTHORITY

TENDER NUMBER: TNPA/2022/09/1080/12302/RFP

DESCRIPTION OF THE WORKS: FOR THE PARTITIONING OF THE EMENDI ADMINISTRATION BUILDING,
PORT OF NGQURA

T2.2-21 : 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.

1. **Section 1: Name of enterprise:** _____
2. **Section 2: VAT registration number, if any:** _____
3. **Section 3: CIDB registration number:** _____
4. **Section 4: CSD number:** _____
5. **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

6. 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 Broad-Based Black Economic Empowerment [**B-BBEE**] Status Level of Contribution.

Transnet will award preference points to companies who provide valid proof of their B-BBEE status using either the latest version of the generic Codes of Good Practice or Sector Specific Codes (if applicable).

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).
- 1.2 The value of this bid is estimated to not exceed 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; and
 - (b) B-BBEE Status Level of Contribution.
- 1.4 The maximum points for this bid are allocated as follows:

	POINTS
PRICE	80
B-BBEE STATUS LEVEL OF CONTRIBUTION	20

Total points for Price and B-BBEE must not exceed

100

- 1.5 Failure on the part of a bidder to submit proof of B-BBEE status level of contributor together with the bid will be interpreted to mean that preference points for B-BBEE status level of contribution 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 defines 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-BBBEE 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 defines 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.

3. POINTS AWARDED FOR PRICE

3.1 THE 80/20 PREFERENCE POINT SYSTEMS

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

80/20

$$P_s = 80 \left(1 - \frac{P_t - P_{\min}}{P_{\min}} \right)$$

Where

P_s = Points scored for comparative price of bid under consideration

P_t = Comparative price of bid under consideration

P_{\min} = Comparative price of lowest acceptable bid

4. POINTS AWARDED FOR B-BBEE STATUS LEVEL OF CONTRIBUTION

- 4.1 preference points must be awarded to a bidder for attaining the B-BBEE status level of contribution in accordance with the table below:

B-BBEE Status Level of Contributor	Number of points (80/20 system)
1	20
2	18
3	14
4	12

5	8
6	6
7	4
8	2
Non-compliant contributor	0

- 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	<p>Certificate issued by SANAS accredited verification agency</p> <p>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)</p> <p>[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.]</p>

EME⁴	<p>Sworn Affidavit signed by the authorised EME representative and attested by a Commissioner of Oaths confirming annual turnover and black ownership</p> <p>Certificate issued by CIPC (formerly CIPRO) confirming annual turnover and black ownership</p> <p>Certificate issued by SANAS accredited verification agency only if the EME is being measured on the QSE scorecard</p>
------------------------	--

- 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 In terms of the Implementation Guide: Preferential Procurement Regulations, 2017, Version 2, paragraph 11.11 provides that in the Transport Sector, EMEs can provide a letter from accounting officer or get verified and be issued with a B-BBEE certificate by SANAS accredited professional or agency as the Transport Sector Code has not been aligned to the generic Codes. EMEs in the Transport Sector are not allowed to provide a sworn affidavit as the generic codes are not applicable to them.

- 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 A person will not be awarded points for B-BBEE status level if it is indicated in the bid documents that such a bidder intends sub-contracting more than 25% of the value of the contract to any other enterprise that does not qualify for at least the points that such a bidder qualifies for, unless the intended sub-contractor is an EME that has the capability and ability to execute the sub-contract.
- 4.6 A person awarded a contract may not sub-contract more than 25% of the value of the contract to any other enterprise that does not have an equal or higher B-BBEE status level than the person concerned, unless the contract is sub-contracted to an EME that has the capability and ability to execute the sub-contract.
- 4.7 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: . =(maximum of 20 points)
- (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		NO	
-----	--	----	--

- 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		NO	
-----	--	----	--

Designated Group: An EME or QSE which is at last 51% owned by:	EME v	QSE v
Black people		
Black people who are youth		
Black people who are women		
Black people with disabilities		
Black people living in rural or underdeveloped areas or townships		
Cooperative owned by black people		
Black people who are military veterans		
OR		
Any EME		
Any QSE		

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

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

8.6 COMPANY CLASSIFICATION

- ☐ Manufacturer
- ☐ Supplier
- ☐ Professional Supplier/Service provider
- ☐ Other Suppliers/Service providers, e.g. transporter, etc.

[TICK APPLICABLE BOX]

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

8.8 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 result of that person's conduct;
 - (c) 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;
 - (d) 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;
 - (e) 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
 - (f) forward the matter for criminal prosecution.

WITNESSES

1.

2.

.....

SIGNATURE(S) OF BIDDERS(S)

DATE:

ADDRESS

SBD4

BIDDER'S DISCLOSURE

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 interest⁵ 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

⁵ 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.

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:

.....

.....

2.3 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)..... in 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 consortium⁶ 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.

3.6 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
.....

⁶ 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.



TRANSNET NATIONAL PORTS AUTHORITY

TENDER NUMBER: TNPA/2022/09/1080/12302/RFP

DESCRIPTION OF THE WORKS: FOR THE PARTITIONING OF THE EMENDI ADMINISTRATION BUILDING,
PORT OF NGQURA

T2.2-22: NON-DISCLOSURE AGREEMENT [2020]

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 20..... 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;

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,

- 1.3 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 **Error! Reference source not found.** 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 Section 14 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 against accidental 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 waiver of 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 behalf of 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	_____
	_____		_____

T2.2-23: 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 this tender 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 procedures adopted by Transnet in issuing this tender and the requirements requested from tenderers in 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 our company 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 a Respondent from doing future business with Transnet]

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.

6. 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).
7. 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.
8. We have acquainted ourselves and agree with the content of T2.2-26 "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 an 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.

T2.2-24: 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 _____ 20____

SIGNATURE OF TENDER

T2.2-25 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 _____ 20____



TRANSNET NATIONAL PORTS AUTHORITY

TENDER NUMBER: TNPA/2022/09/1080/12302/RFP

DESCRIPTION OF THE WORKS: FOR THE PARTITIONING OF THE EMENDI ADMINISTRATION BUILDING,
PORT OF NGQURA

SIGNATURE OF TENDERER

T2.2-26 Service Provider Integrity Pact

Important Note: All potential tenderers must read this document and certify in the RFP Declaration Form that that 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/Contractor's 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 third party 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.

3.2 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:

- a) 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
- b) 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.

3.3 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.

3.4 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.

3.5 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.

3.6 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.

3.7 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.

3.8 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.

3.9 The Tenderer/Service Provider/Contractor will not instigate third persons to commit offences outlined above or be an accessory to such offences.

3.10 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:

a) 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.

b) Labour

- 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.

c) 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.

d) 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 /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.

- 5.3 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 business, Transnet may decide to terminate some or all existing contracts with the company/person as well.
- 6.6 A Service Provider or Contractor to Transnet may not subcontract any portion of the contract to a blacklisted company.
- 6.7 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:
 - (i) he made the statement in good faith honestly believing it to be correct; and
 - (ii) before making such statement he took all reasonable steps to satisfy himself of its correctness;
 - g) caused Transnet damage, or to incur costs in order to meet the contractor's requirements and which could not be recovered from the contractor;
 - h) has litigated against Transnet in bad faith.
- 6.8 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.
- 6.9 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.



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DESCRIPTION OF THE WORKS: FOR THE PARTITIONING OF THE EMENDI ADMINISTRATION BUILDING,
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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

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

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.

A Transnet employee uses his / her position, or privileges or information obtained while acting in the capacity as an employee for:

- a) Private gain or advancement; or
- b) The expectation of private gain, or advancement, or any other advantage accruing to the employee must be declared in a prescribed form.

Thus, conflicts of interest of any Tender committee member or any person involved in the sourcing process must be declared in a prescribed form.



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- 9.1 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.
- 9.2 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 0 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.



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- 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

T2.2-27: 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 _____ at _____

Signature



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T2.2-28: 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 <i>Contractor</i> 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 R5 000 000.			
Insurance in respect of loss of or damage to own property and equipment.			
Marine Craft Hull 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 20,000,000			
(Other)			



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DESCRIPTION OF THE WORKS: FOR THE PARTITIONING OF THE EMENDI ADMINISTRATION BUILDING,
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T2.2-29: 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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T2.2-30: 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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T2.2-31 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 knowledge as 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 information as contained in this Agreement and the Operator is required to comply with all prescripts as detailed in the POPIA relating to all information concerning Transnet.

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- 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 risks 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	
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- 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 _____ 2021

Name: _____

Title: _____

Signature: _____

.....(Pty) Ltd

(Operator)

Authorised signatory for and on behalf of (Pty) Ltd who warrants that he/she is
duly authorised to sign this Agreement.

AS WITNESSES:

1.	Name: _____	Signature: _____
2.	Name: _____	Signature: _____

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:

THE PARTITIONING OF THE EMENDI ADMINISTRATION BUILDING, PORT OF NGQURA.

The tenderer, identified in the Offer signature block, has

<i>either</i>	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.
<i>or</i>	examined the draft contract as listed in the Acceptance section and agreed to provide this Offer.

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 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
(in words)	

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)

Date

Name &
signature of
witness

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. In consideration thereof, the *Employer* shall pay the *Contractor* the amount due in accordance with the *conditions of contract* identified in the Contract Data. Acceptance of the tenderer's Offer shall form an agreement between the *Employer* and the tenderer upon the terms and conditions contained in this agreement and in the contract that is the subject of this agreement.

The terms of the 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 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 agreement, this agreement shall constitute a binding 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.
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		
4		
5		

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	_____	_____

C1.2 Contract Data

PART ONE - DATA PROVIDED BY THE *EMPLOYER*

Clause	Statement	Data
1	<p>General</p> <p>The <i>conditions of contract</i> are the core clauses and the clauses for main Option</p>	<p>A: Priced contract with activity schedule</p> <hr/> <p>W1: Dispute resolution procedure</p> <hr/> <p>dispute resolution Option and secondary Options</p>
		<p>X2 Changes in the law</p> <p>X7: Delay damages</p> <p>X16: Retention</p> <p>X18: Limitation of liability</p> <p>Z: <i>Additional conditions of contract</i></p>
	of the NEC3 Engineering and Construction Contract June 2005 (amended June 2006 and April 2013)	
10.1	The <i>Employer</i> is:	<p>Transnet SOC Ltd (Registration No. 1990/000900/30)</p>



	Address	Registered address: Transnet SOC Ltd Transnet National Ports Authority N2 Neptune Road, Entrance Foyer, TNPA Admin Building (eMendi Building) Port of Ngqura
	Having elected its Contractual Address for the purposes of this contract as:	Transnet SOC Ltd Transnet National Ports Authority N2 Neptune Road, Entrance Foyer, TNPA Admin Building (eMendi Building) Port of Ngqura
10.1	The <i>Project Manager</i> is: (Name)	Sindiswa Tunzi
	Address	Transnet SOC Ltd Transnet National Ports Authority N2 Neptune Road, Entrance Foyer, TNPA Admin Building (eMendi Building) Port of Ngqura
	Tel	067 429 0388
	e-mail	sindiswa.tunzi@transnet.net
10.1	The <i>Supervisor</i> is: (Name)	Yandisa Siralarala
	Address	Transnet SOC Ltd Transnet National Ports Authority N2 Neptune Road, Entrance Foyer, TNPA Admin Building (eMendi Building) Port of Ngqura
	Tel No.	060 569 4491
	e-mail	Yandisa.Siralarala@transnet.net
11.2(13)	The <i>works</i> are	The partitioning of the eMendi Administration Building, Port of Ngqura
11.2(14)	The following matters will be included in the Risk Register	Working in an operational area Integration of existing and new systems

11.2(15)	The <i>boundaries of the site</i> are	As stated in Part C4.1."Description of the Site and it surroundings"
11.2(16)	The Site Information is in	Part C4
11.2(19)	The Works Information is in	Part C3
12.2	The <i>law of the contract</i> is the law of	the Republic of South Africa subject to the jurisdiction of the Courts of South Africa.
13.1	The <i>language of this contract</i> is	English
13.3	The <i>period for reply</i> is	2 weeks
2	The <i>Contractor's</i> main responsibilities	No additional data is required for this section of the <i>conditions of contract</i>.
3	Time	
11.2(3)	The <i>completion date</i> for the whole of the <i>works</i> is	31 May 2023
31.1	The <i>Contractor</i> is to submit a first programme for acceptance within	2 weeks of the Contract Date.
31.2	The <i>starting date</i> is	01 February 2023
32.2	The <i>Contractor</i> submits revised programmes at intervals no longer than	2 weeks
35.1	The <i>Employer</i> is not willing to take over the <i>works</i> before the Completion Date.	No
4	Testing and Defects	
42.2	The <i>defects date</i> is	52 (fifty two) weeks after Completion of the whole of the <i>works</i>.
43.2	The <i>defect correction period</i> is	2 weeks
5	Payment	



50.1	The <i>assessment interval</i> is 18th (Eighteen) day of each successive monthly on the month.
51.1	The <i>currency of this contract</i> is South African Rand.
51.2	The period within which payments are made is Payment will be effected on or before the last day of the month following the month during which a valid Tax Invoice and Statement were received.
51.4	The <i>interest rate</i> is the prime lending rate of Standard Bank of South Africa.

6 Compensation events

60.1(13)	The <i>weather measurements</i> to be recorded for each calendar month are,	<p>the cumulative rainfall (mm)</p> <p>the number of days with rainfall more than 10 mm</p> <p>the number of days with minimum air temperature less than 0 degrees Celsius</p> <p>the number of days with snow lying at 08:00 hours South African Time</p> <p>and these measurements:</p> <p>The place where weather is to be recorded (on the Site) is: The <i>Contractor's</i> Site establishment area</p> <p>The <i>weather data</i> are the records of past <i>weather measurements</i> for each calendar month which were recorded at: Port Elizabeth</p> <p>and which are available from: South African Weather Service 012 367 6023 or info3@weathersa.co.za.</p>
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7	Title	No additional data is required for this section of the <i>conditions of contract</i>.
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8 Risks and insurance

80.1 These are additional *Employer's* risks

None

84.1 The *Employer* provides these insurances from the Insurance Table

1	Insurance against:	Loss of or damage to the <i>works</i>, Plant and Materials is as stated in the Insurance policy for Contract Works/ Public Liability.
	Cover / indemnity:	to the extent as stated in the insurance policy for Contract Works / Public Liability
	The deductibles are:	as stated in the insurance policy for Contract Works / Public Liability
2	Insurance against:	Loss of or damage to property (except the <i>works</i>, Plant and Materials & Equipment) and liability for bodily injury to or death of a person (not an employee of the <i>Contractor</i>) arising out of or in connection with the performance of the Contract as stated in the insurance policy for Contract Works / Public Liability
	Cover / indemnity	Is to the extent as stated in the insurance policy for Contract Works / Public Liability
	The deductibles are	as stated in the insurance policy for Contract Works / Public Liability
3	Insurance against:	Loss of or damage to Equipment (Temporary Works only) as stated in the insurance policy for contract Works and Public Liability
	Cover / indemnity	Is to the extent as stated in the insurance policy for Contract Works / Public Liability
	The deductibles are:	As stated in the insurance policy for Contract Works / Public Liability



4	Insurance against:	Contract Works SASRIA insurance subject to the terms, exceptions and conditions of the SASRIA coupon
	Cover / indemnity	Cover / indemnity is to the extent provided by the SASRIA coupon
	The deductibles are	The deductibles are, in respect of each and every theft claim, 0,1% of the contract value subject to a minimum of R2,500 and a maximum of R25,000.
	Note:	The deductibles for the insurance as stated above are listed in the document titled "Certificate of Insurance: Transnet (SOC) Limited Principal Controlled Insurance."
84.1	The minimum limit of indemnity for insurance in respect of death of or bodily injury to employees of the <i>Contractor</i> arising out of and in the course of their employment in connection with this contract for any one event is	The <i>Contractor</i> must comply at a minimum with the provisions of the Compensation for Occupational Injuries and Diseases Act No. 130 of 1993 as amended.
	The <i>Contractor</i> provides these additional Insurances	1 Where the contract requires that the design of any part of the <i>works</i> shall be provided by the <i>Contractor</i> the <i>Contractor</i> shall satisfy the <i>Employer</i> that professional indemnity insurance cover in connection therewith has been affected



- 2 Where the contract involves manufacture, and/or fabrication of Plant & Materials, components or other goods to be incorporated into the *works* at premises other than the site, the *Contractor* shall satisfy the *Employer* that such plant & materials, components or other goods for incorporation in the *works* are adequately insured during manufacture and/or fabrication and transportation to the site.**
- 3 Should the *Employer* have an insurable interest in such items during manufacture, and/or fabrication, such interest shall be noted by endorsement to the *Contractor's* policies of insurance as well as those of any sub-contractor**
- 4 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 R 5 000 000.**
- 5 Marine Craft Hull insurance in respect of all marine craft or vessels utilised in performance of the Works for a sum sufficient to provide for their replacement**
- 6 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 20,000,000**



7 The insurance coverage referred to in 1, 2, 3, 4, 5 and 6 above shall be obtained from an insurer(s) in terms of an insurance policy approved by the Employer. The Contractor shall arrange with the insurer to submit to the Project Manager the original and the duplicate original of the policy or policies of insurance and the receipts for payment of current premiums, together with a certificate from the insurer or insurance broker concerned, confirming that the policy or policies provide the full coverage as required. The original policy will be returned to the Contractor.

84.2 The minimum limit of indemnity for insurance in respect of loss of or damage to property (except the works, Plant, Materials and Equipment) and liability for bodily injury to or death of a person (not an employee of the Contractor) caused by activity in connection with this contract for any one event is

Whatever the Contractor requires in addition to the amount of insurance taken out by the Employer for the same risk.

84.2 The insurance against loss of or damage to the works, Plant and Materials as stated in the insurance policy for contract works and public liability selected from:

Principal Controlled Insurance policy for Contract OR Project Specific Insurance for the contract

9 Termination

There is no additional Contract Data required for this section of the conditions of contract.

10 Data for main Option clause



A	Priced contract with Activity Schedule	No additional data is required for this Option.
60.6	The <i>method of measurement</i> is	The Activity Schedule has been measured in accordance with SANS 1200 unless indicated otherwise.
11	Data for Option W1	
W1.1	The <i>Adjudicator</i> is	Both parties will agree as and when a dispute arises. If the parties cannot reach an agreement on the <i>Adjudicator</i>, the Chairman of the Association of Arbitrators will appoint an <i>Adjudicator</i>.
W1.2(3)	The <i>Adjudicator nominating body</i> is: If no <i>Adjudicator nominating body</i> is entered, it is:	The Chairman of the Association of Arbitrators (Southern Africa) the Association of Arbitrators (Southern Africa)
W1.4(2)	The <i>tribunal</i> is:	Arbitration
W1.4(5)	The <i>arbitration procedure</i> is	The Rules for the Conduct of Arbitrations of the Association of Arbitrators (Southern Africa)
	The place where arbitration is to be held is	Port Elizabeth, Gqeberha, South Africa
	The person or organisation who will choose an arbitrator	
	<ul style="list-style-type: none"> - if the Parties cannot agree a choice or - if the arbitration procedure does not state who selects an arbitrator, is 	The Chairman of the Association of Arbitrators (Southern Africa)
12	Data for secondary Option clauses	

X2	Changes in the law	No additional data is required for this Option
X7	Delay damages	
X7.1	Delay damages for Completion of the whole of the <i>works</i> are	R2500.00 per day
X16	Retention	
X16.1	The retention free amount is	Nil
	The retention percentage is	5% on all payments certified.
X18	Limitation of liability	
X18.1	The <i>Contractor's</i> liability to the <i>Employer</i> for indirect or consequential loss is limited to:	Nil (this is the default position depending on a risk assessment, therefore this can go up to Total of the Prices)
X18.2	For any one event, the <i>Contractor's</i> liability to the <i>Employer</i> for loss of or damage to the <i>Employer's</i> property is limited to:	The deductible of the relevant insurance policy
X18.3	The <i>Contractor's</i> liability for Defects due to his design which are not listed on the Defects Certificate is limited to:	The cost of correcting the Defect
X18.4	The <i>Contractor's</i> total liability to the <i>Employer</i> for all matters arising under or in connection with this contract, other than excluded matters, is limited to:	The Total of the Prices
X18.5	The <i>end of liability date</i> is	5 years after Completion of the whole of the <i>works</i>



Z Additional conditions of contract are:

Z1 Local Production and Content Obligations

Z1.1 In terms of Local Production and Content (SBD 6.2), Annexure A and Annexure C of the Returnable Schedule T2.2-04 Eligibility Criteria Schedule: Declaration Certificate of Local Production and Content, the *Contractor* has undertaken to fulfil its obligations of the Local Production and Content for the following designated sectors: 1 Electrical Cable Products: 90%; 2 Steel Products and Component for Construction: 100%; and 3 Steel Lattice Towers and Masts: 100%

Z1.2 The *Contractor* is required to note that the *Employer*, the Department of Trade, Industry and Competition [DTIC] and/or the body appointed by the DTIC as the verification authority for local content may conduct compliance audits with regard to the Local Production and Content requirements as prescribed in Regulation 8 of the Preferential Procurement Regulations, 2017 issued in terms of the Preferential Procurement Policy Framework Act no. 5 of 2000.

**Z1.3**

The *Contractor* is required to continuously update Declarations C, D and E of the Local Production and Content Declaration commitments with the actual local content values for the duration of the contract.

The *Contractor* shall report to the *Employer* on a monthly basis during the term of the Contract, the amounts spend on Local Production and Content for the designated sectors for the duration of the contract.

Z1.4

The *Contractor* must refer to Schedule A attached to the Returnable Schedule T2.2-04 Eligibility Criteria Schedule: Declaration Certificate of Local Production and Content concerning non-compliance penalties applicable to Local Production and Content.

Z1.5

Breach of Local Production and Content commitments provides the *Employer* cause to terminate the contract.



Z2 Additional clauses relating to Joint Venture

Z2.1

Insert the additional core clause 27.5

27.5. In the instance that the *Contractor* is a joint venture, the *Contractor* shall provide the *Employer* with a certified copy of its signed joint venture agreement, and in the instance that the joint venture is an 'Incorporated Joint Venture,' the Memorandum of Incorporation, within 4 (four) weeks of the Contract Date. The Joint Venture agreement shall contain but not be limited to the following:

- **A brief description of the Contract and the Deliverables;**
- **The name, physical address, communications addresses and domicilium citandi et executandi of each of the constituents and of the Joint Venture;**
- **The constituent's interests;**
- **A schedule of the insurance policies, sureties, indemnities and guarantees which must be taken out by the Joint Venture and by the individual constituents;**
- **Details of an internal dispute resolution procedure;**
- **Written confirmation by all of the constituents:**
 - i. **of their joint and several liabilities to the *Employer* to Provide the Works;**
 - ii. **identification of the lead partner in the joint venture confirming the authority of the lead partner to bind the joint venture through the *Contractor's representative*;**
 - iii. **Identification of the roles and responsibilities of the constituents to provide the Works.**
- **Financial requirements for the Joint Venture:**



Z2.2		Insert additional core clause 27.6
		27.6. The <i>Contractor</i> shall not alter its composition or legal status of the Joint Venture without the prior approval of the <i>Employer</i>.
Z3	Additional obligations in respect of Termination	
Z3.1		<p>The following will be included under core clause 91.1:</p> <p>In the second main bullet, after the word 'partnership' add 'joint venture whether incorporate or otherwise (including any constituent of the joint venture)' and</p> <p>Under the second main bullet, insert the following additional bullets after the last sub-bullet:</p> <ul style="list-style-type: none"> • commenced business rescue proceedings (R22) • repudiated this Contract (R23)
Z3.2	Termination Table	<p>The following will be included under core clause 90.2 Termination Table as follows:</p> <p>Amend "A reason other than R1 – R21" to "A reason other than R1 – R23"</p>
Z3.3		Amend "R1 – R15 or R18" to "R1 – R15, R18, R22 or R23."
Z4	Right Reserved by the <i>Employer</i> to Conduct Vetting through SSA	



Z4.1

The *Employer* reserves the right to conduct vetting through State Security Agency (SSA) for security clearances of any *Contractor* who has access to National Key Points for the following without limitations:

1. Confidential – this clearance is based on any information which may be used by malicious, opposing or hostile elements to harm the objectives and functions of an organ of state.
2. Secret – clearance is based on any information which may be used by malicious, opposing or hostile elements to disrupt the objectives and functions of an organ of state.
3. Top Secret – this clearance is based on information which may be used by malicious, opposing or hostile elements to neutralise the objectives and functions of an organ of state.

Z5 Additional Clause Relating to Collusion in the Construction Industry

Z5.1

The contract award is made without prejudice to any rights the *Employer* may have to take appropriate action later with regard to any declared tender rigging including blacklisting.

The *Employer* and the *Contractor* are required to process information obtained for the duration of the Agreement in a manner that is aligned to the Protection of Personal Information Act.

27.7.1 The *Employer* encourages its *Contractors* to constantly strive to improve their B-BBEE Contributor Status Levels.

C1.2 Contract Data

PART TWO - DATA PROVIDED BY THE *CONTRACTOR*

The tendering *Contractor* is advised to read both the NEC3 Engineering and Construction Contract - June 2005 (with amendments June 2006 and April 2013) and the relevant parts of its Guidance Notes (ECC3-GN) in order to understand the implications of this Data which the tenderer is required to complete. An example of the completed Data is provided on pages 156 to 158 of the ECC3 Guidance Notes.

Completion of the data in full, according to Options chosen, is essential to create a complete contract.

Clause	Statement	Data
10.1	The <i>Contractor</i> is (Name):	
	Address	
	Tel No.	
	Fax No.	
11.2(8)	The <i>direct fee percentage</i> is	%
	The <i>subcontracted fee percentage</i> is	%
11.2(18)	The <i>working areas</i> are the Site and	
24.1	The <i>Contractor's</i> key persons are:	
	1 Name:	
	Job:	
	Responsibilities:	
	Qualifications:	
	Experience:	
	2 Name:	
	Job	
	Responsibilities:	
	Qualifications:	
	Experience:	

		CV's (and further key persons data including CVs) are appended to Tender Schedule entitled .		
11.2(14)	The following matters will be included in the Risk Register			
31.1	The programme identified in the Contract Data is			
A	Priced contract with activity schedule			
11.2(20)	The <i>activity schedule</i> is in			
11.2(30)	The tendered total of the Prices is	(in figures) (in words), excluding VAT		
	Data for Schedules of Cost Components	<i>Note "SCC" means Schedule of Cost Components starting on page 60 of ECC, and "SSCC" means Shorter Schedule of Cost Components starting on page 63 of ECC.</i>		
A	Priced contract with activity schedule	Data for the Shorter Schedule of Cost Components		
41 in SSCC	The percentage for people overheads is:	%		
21 in SSCC	The published list of Equipment is the last edition of the list published by			
	The percentage for adjustment for Equipment in the published list is	% (state plus or minus)		
22 in SSCC	The rates of other Equipment are:	Equipment	Size or capacity	Rate
61 in SSCC	The hourly rates for Defined Cost of design outside the Working Areas are	Category of employee		Hourly rate

62	in	The percentage for design overheads is	%
SSCC			
63	in	The categories of design employees whose travelling expenses to and from the Working Areas are included in Defined Cost are:	
SSCC			

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PART 2: PRICING DATA

Document reference	Title	No of pages
C2.1	Pricing instructions: Option A	
C2.2	Activity Schedule	

C2.1 Pricing Instructions: Option A

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, (with amendments June 2006 and April 2013) (ECC) Option A states:

Identified and defined terms

- 11.2 (20) The Activity Schedule is the *activity schedule* unless later changed in accordance with this contract.
- (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.
- (27) The Price for Work Done to Date is the total of the Prices for
- each group of completed activities and
 - each completed activity which is not in a group
- A completed activity is one which is without Defects which would either delay or be covered by immediately following work.
- (30) The Prices are the lump sums for each of the activities on the Activity Schedule unless later changed in accordance with this contract.

1.2. Measurement and Payment

- 1.2.1 The Activity Schedule provides the basis of all valuations of the Price for Work Done to Date, payments in multiple currencies, price adjustments for inflation and general progress monitoring.
- 1.2.2 The amount due at each assessment date is based on **completed activities and/or milestones** as indicated on the Activity Schedule.
- 1.2.3 The Activity Schedule work breakdown structure provided by the *Contractor* is based on the Activity Schedule provided by the *Employer*. The activities listed by the *Employer* are the minimum activities acceptable and identify the specific activities which are required to achieve Completion. The activity schedule work breakdown structure is compiled to the satisfaction of the *Project Manager* with any additions and/or amendments deemed necessary.
- 1.2.4 The *Contractor's* detailed Activity Schedule summates back to the Activity Schedule provided by the *Employer* and is in sufficient detail to monitor completion of activities related to the Accepted Programme in order that payment of completed activities may be assessed.

- 1.2.5 The short descriptions in the Activity Schedule are for identification purposes only. All work described in the Works Information is deemed included in the activities.
- 1.2.6 The Activity Schedule is integrated with the Prices, Accepted Programme and where required the forecast rate of payment schedule.
- 1.2.7 Activities in multiple currencies are separately identified on both the Activity Schedule and the Accepted Programme for each currency.
- 1.2.8 The tendered total of the prices as stated in the Contract Data is obtained from the Activity Schedule summary. The tendered total of the prices includes for all direct and indirect costs, overheads, profits, risks, liabilities and obligations relative to the Contract.

C2.2 Activity Schedule

The Tenderer details his Activity Schedule below or makes reference to his Activity Schedule and attaches it to this schedule.

The details given below serve as guidelines only and the Tenderer may split or combine the activities to suit his particular methods.

Activity No	Activity Description	Unit	Rate	Quantity	Price of each activity
1.1	WORK AREA 01 - CONVERTING EXHIBITION SPACE TO BROADCAST STUDIO				
1.1.1	Design soundproof dry wall partitions and solid soundproof doors and allow for access control, signage to doors to match that on existing doors, raised floor and entrance ramp and make good to floors walls and ceilings, allowance for alteration to access controls systems, A/V fit out.	sum		1.00	
1.1.2	Supply & Install soundproof dry wall partitions and solid soundproof doors and allow for access control, signage to doors to match that on existing doors, raised floor and entrance ramp and make good to floors walls and ceilings, allowance for alteration to access controls systems, A/V fit out.	sum		1.00	
1.2	WORK AREA 0.2- CONSTRUCT TWO MEETING ROOMS IN EXHIBITION SPACE				
1.2.1	Design glazed shopfront partitions and glazed aluminium single doors. Allow for privacy film/decals. Allow for signage to doors, to match that on existing doors. Make good to affected floors, walls, and ceilings. Allow for A/V fit-out.	sum		1.00	

1.2.2	Supply and install glazed shopfront partitions and glazed aluminium single doors. Allow for privacy film/decals. Allow for signage to doors, to match that on existing doors. Make good to affected floors, walls, and ceilings. Allow for A/V fit-out.	sum		1.00	
1.3	WORK AREA 03				
1.3.1	Design drywall partitions including single glass doors, 900 wide, from floor to ceiling to match existing shopfronts in the building. Close off view panel in existing office. Install new hand wash basin in corner of passage. Replace floor finish in consulting rooms and sick bays with vinyl sheeting. Make good other affected floors, walls, and ceilings. Allow for alteration to ICT, Electrical, HVAC and Fire layouts. Allow for privacy film / frosted decals on glazing. Allow for signage in the passage and on doors to match existing signage in the building.	sum		1.00	
1.3.2	Supply and install drywall partitions including single glass doors, 900 wide, from floor to ceiling to match existing shopfronts in the building. Close off view panel in existing office. Install new hand wash basin in corner of passage. Replace floor finish in consulting rooms and sick bays with vinyl sheeting. Make good other affected floors, walls, and ceilings. Allow for alteration to ICT, Electrical, HVAC and Fire layouts. Allow for privacy film / frosted decals on glazing. Allow for signage in the passage and on doors to match existing signage in the building.	sum		1	

1.4	WORK AREA 1.1 - CREATE A PASSAGE AT AN OPEN PLAN OFFICE OPPOSITE KITCHEN				
1.4.1	Design glass partitions including 1,5 double glass doors, from floor to ceiling, to match existing Shopfronts in building. Make an allowance for signage to doors, frosted decals on all glazed sections, alterations to access control system and make good affected floors, walls and ceilings.	sum		1.00	
1.4.2	Supply & Install glass partitions including 1,5 double glass doors, from floor to ceiling, to match existing Shopfronts in building. Make an allowance for signage to doors, frosted decals on all glazed sections, alterations to access control system and make good affected floors, walls, and ceilings.	sum		1.00	
1.5	WORK AREA 1.2- CONVERTING OPEN SPACE TO MEETING AREA				
1.5.1	Design glass and dry wall partitions including glass door, from floor to ceiling, to match existing Shopfronts in building. Make an allowance for signage to doors, frosted decals on all glazed sections, AV fit out, alterations to access control system and make good affected floors, walls and ceilings.	sum		1.00	
1.5.2	Supply & Install glass and dry wall partitions including glass door, from floor to ceiling, to match existing Shopfronts in building. Make an allowance for signage to doors, frosted decals on all glazed sections, AV fit out, alterations to access control system and make good affected floors, walls, and ceilings.	sum		1.00	

1.6	WORK AREA 1.3 - ENCLOSING EXISTING OPEN PLAN OFFICE				
1.6.1	Design glass partitions including glass door, from floor to ceiling, to match existing Shopfronts in building. Make an allowance for signage to doors, frosted decals on all glazed sections alterations to access control system and make good affected floors, walls, and ceilings.	sum		1.00	
1.6.2	Supply & Install glass partitions including glass door, from floor to ceiling, to match existing Shopfronts in building. Make an allowance for signage to doors, frosted decals on all glazed sections alterations to access control system and make good affected floors, walls, and ceilings.	sum		1.00	
1.7	WORK AREA 1.4				
1.7.1	Design glass shopfront partitions including 2 double glass doors, each 1,5m wide, from floor to ceiling to match existing shopfronts in the building. Allow frosted decals on glazing. Allow for signage to match existing. Allow for new carpet tiles on the floor. Make good the affected floors, walls, and ceilings. Allow for alteration to ICT, Electrical, HVAC and Fire layouts. Allow for alteration to Access Control systems.	sum		1.00	
1.7.2	Design suspended ceiling with suitable acoustic properties. Allow for alteration to ICT, Electrical, HVAC and Fire layouts. Allow for alteration to Access Control systems.	sum		1.00	

1.7.3	Supply and install glass shopfront partitions including 2 double glass doors, each 1,5m wide, from floor to ceiling to match existing shopfronts in the building. Allow frosted decals on glazing. Allow for signage to match existing. Allow for new carpet tiles on the floor. Make good the affected floors, walls, and ceilings. Allow for alteration to ICT, Electrical, HVAC and Fire layouts. Allow for alteration to Access Control systems.	sum		1.00	
1.8	WORK AREA 2.1 - ENCLOSING EXISTING OPEN PLAN OFFICE				
1.8.1	Design glass partitions including glass door, from floor to ceiling, to match existing Shopfronts in building. Make an allowance for signage to doors, frosted decals on all glazed sections alterations to access control system and make good affected floors, walls, and ceilings.	sum		1.00	
1.8.2	Supply & Install glass partitions including glass door, from floor to ceiling, to match existing Shopfronts in building. Make an allowance for signage to doors, frosted decals on all glazed sections alterations to access control system and make good affected floors, walls, and ceilings.	sum		1.00	
1.9	WORK AREA 2.2 ENCLOSING EXISTING OPEN PLAN OFFICE				

1.9.1	Design glass partitions including glass door, from floor to ceiling, to match existing Shopfronts in building. Make an allowance for signage to doors, frosted decals on all glazed sections alterations to access control system and make good affected floors, walls, and ceilings.	sum		1.00	
1.9.2	Supply & Install glass partitions including glass door, from floor to ceiling, to match existing Shopfronts in building. Make an allowance for signage to doors, frosted decals on all glazed sections alterations to access control system and make good affected floors, walls, and ceilings.	sum		1.00	
1.10	WORK AREA 2.3- ENCLOSING EXISTING OPEN PLAN OFFICE				
1.10.1	Design glass partitions including glass door, from floor to ceiling, to match existing Shopfronts in building. Make an allowance for signage to doors, frosted decals on all glazed sections alterations to access control system and make good affected floors, walls, and ceilings.	sum		1.00	
1.10.2	Supply & Install glass partitions including glass door, from floor to ceiling, to match existing Shopfronts in building. Make an allowance for signage to doors, frosted decals on all glazed sections alterations to access control system and make good affected floors, walls, and ceilings.	sum		1.00	
1.11	WORK AREA 2.4- NEW MEETING ROOM				

1.11.1	Design glass partitions including glass door, from floor to ceiling, to match existing Shopfronts in building. Make an allowance for signage to doors, frosted decals on all glazed sections alterations to access control system and make good affected floors, walls and ceilings.	sum		1.00	
1.11.2	Supply & Install glass partitions including glass door, from floor to ceiling, to match existing Shopfronts in building. Make an allowance for signage to doors, frosted decals on all glazed sections alterations to access control system and make good affected floors, walls and ceilings.	sum		1.00	
1.12	WORK AREA 2.5				
1.12.1	Remove existing shopfront to create a passage to the new space. Install new drywall between office and new space. Allow frosted decals on glazing. Make good the affected floors, walls, and ceilings.	sum		1.00	
1.12.2	Remove existing shopfront facing the atrium to be replaced with drywall.	sum		1.00	
1.12.3	Install new shopfront including single glass door to create new smaller office. Allow frosted decals on glazing. Make good the affected floors, walls, and ceilings.	sum		1.00	
1.12.4	Install new drywall between office and new space. Allow frosted decals on glazing. Make good the affected floors, walls, and ceilings	sum		1.00	
1.13	WORK AREA 2.6				

1.13.1	Design glass shopfront partitions including 1 double glass door (1,5m wide) and 1 single glass door (900 wide) from floor to ceiling to match existing shopfronts in the building. Allow frosted decals on glazing. Allow for signage to match existing. Allow for new carpet tiles on the floor. Make good the affected floors, walls and ceilings. Allow for alteration to ICT, Electrical, HVAC and Fire layouts. Allow for alteration to Access Control systems.	sum		1.00	
1.13.2	Design and construct suspended ceiling with suitable acoustic properties. Allow for alteration to ICT, Electrical, HVAC and Fire layouts. Allow for alteration to Access Control systems.	sum		1.00	
1.13.3	Supply and install glass shopfront partitions including 1 double glass door (1,5m wide) and 1 single glass door (900 wide) from floor to ceiling to match existing shopfronts in the building. Allow frosted decals on glazing. Allow for signage to match existing. Allow for new carpet tiles on the floor. Make good the affected floors, walls and ceilings. Allow for alteration to ICT, Electrical, HVAC and Fire layouts. Allow for alteration to Access Control systems.	sum		1.00	
1.13.4	Construct suspended ceiling with suitable acoustic properties. Allow for alteration to ICT, Electrical, HVAC and Fire layouts. Allow for alteration to Access Control systems.	sum		1.00	
1.14	WORK AREA 3.1 - CONVERT EXISTING OFFICE TO PAUSE AREA AND KITCHEN				

1.14.1	Design kitchen cupboards to match those in green areas of similar size and make allowance for fridge, hydro boiler, water connection to fixtures, core drilling floor and connection drainage to closest stacks, signage to doors, frosted decals on all glazed sections alterations to access control system, floor and wall finishes to match that of other existing kitchens and make good affected floors, walls and ceilings. Install timber floorboards suitable to carry the load for office use.	sum		1.00	
1.14.2	Supply & Install kitchen cupboards to match those in green areas of similar size and make allowance for fridge, hydro boiler, water connection to fixtures, core drilling floor and connection drainage to closest stacks, signage to doors, frosted decals on all glazed sections alterations to access control system, floor and wall finishes to match that of other existing kitchens and make good affected floors, walls and ceilings.	sum		1.00	
1.15	WORK AREA 3.2- ENCLOSE EXISTING OPEN PLAN OFFICE				
1.15.1	Design glass partitions including 1,5 double glass doors, from floor to ceiling or u/s beams and balustrade to u/s beams, to match existing Shopfronts in building. Make an allowance for signage to doors, frosted decals on all glazed sections, alterations to access control system and make good affected floors, walls and ceilings.	sum		1.00	

1.15.2	Supply & Install glass partitions including 1,5 double glass doors, from floor to ceiling or u/s beams and balustrade to u/s beams, to match existing Shopfronts in building. Make an allowance for signage to doors, frosted decals on all glazed sections, alterations to access control system and make good affected floors, walls and ceilings.	sum		1.00	
1.16	WORK AREA 3.3				
1.16.1	Remove existing shopfront to create a passage to the new space. Make good the affected floors, walls and ceilings	sum		1.00	
1.16.2	Remove existing shopfront facing the atrium to be replaced with drywall. Make good the affected floors, walls and ceilings	sum		1.00	
1.16.3	Install new shopfront including single glass door to create new smaller office. Allow frosted decals on glazing. Make good the affected floors, walls and ceilings	sum		1.00	
1.16.4	Install new drywall between office and new space. Allow frosted decals on glazing. Make good the affected floors, walls and ceilings.	sum		1.00	
1.17	WORK AREA 3.4				

1.17.1	Design all timber floorboards suitable to carry the load for office use glass shopfront partitions including 1 double glass door (1,5m wide) and 1 single glass door (900 wide) from floor to ceiling to match existing shopfronts in the building. Allow frosted decals on glazing. Allow for signage to match existing. Allow for new carpet tiles on the floor. Make good the affected floors, walls, and ceilings. Allow for alteration to ICT, Electrical, HVAC and Fire layouts. Allow for alteration to Access Control systems.	sum		1.00	
1.17.2	Design suspended ceiling with suitable acoustic properties. Allow for alteration to ICT, Electrical, HVAC and Fire layouts. Allow for alteration to Access Control systems.	sum		1.00	
1.17.3	Supply and install timber floorboards suitable to carry the load for office use glass shopfront partitions including 1 double glass door (1,5m wide) and 1 single glass door (900 wide) from floor to ceiling to match existing shopfronts in the building. Allow frosted decals on glazing. Allow for signage to match existing. Allow for new carpet tiles on the floor. Make good the affected floors, walls, and ceilings. Design and construct suspended ceiling with suitable acoustic properties. Allow for alteration to ICT, Electrical, HVAC and Fire layouts. Allow for alteration to Access Control systems.	sum		1.00	
1.17.4	Construct suspended ceiling with suitable acoustic properties. Allow for alteration to ICT, Electrical, HVAC and Fire layouts. Allow for alteration to Access Control systems.	sum		1.00	

1.18	WORK AREA 4.1 -ALTER CURRENT PORT MANAGER'S OFFICE				
1.18.1	Design glass and dry wall partitions including 1,5 double glass doors, from floor to ceiling, to match existing Shopfronts in building. Make an allowance for signage to doors and make good affected floors, walls and ceilings.	sum		1.00	
1.18.2	Supply & Install glass and dry wall partitions including 1,5 double glass doors, from floor to ceiling, to match existing Shopfronts in building. Make an allowance for signage to doors and make good affected floors, walls and ceilings	sum		1.00	
1.19	WORK AREA 4.2 - ALTER AREA INFRONT OF MANAGER'S OFFICE				
1.19.1	Design glass partitions including glass door, from floor to ceiling, to match existing Shopfronts in building. Make an allowance for signage to doors, frosted decals on all glazed sections alterations to access control system and make good affected floors, walls and ceilings.	sum		1.00	
1.19.2	Supply & Install glass partitions including glass door, from floor to ceiling, to match existing Shopfronts in building. Make an allowance for signage to doors, frosted decals on all glazed sections alterations to access control system and make good affected floors, walls and ceilings.	sum		1.00	
1.20	WORK AREA 4.3- ALTER CE'S OFFICE TO INCLUDE BODYGUIDE'S CUBICLE				

1.20.1	Design glass partitions including glass door, from floor to ceiling, to match existing Shopfronts in building. Make an allowance for signage to doors, frosted decals on all glazed sections alterations to access control system and make good affected floors, walls and ceilings.	sum		1.00	
1.20.2	Supply & Install glass partitions including glass door, from floor to ceiling, to match existing Shopfronts in building. Make an allowance for signage to doors, frosted decals on all glazed sections alterations to access control system and make good affected floors, walls and ceilings.	sum		1.00	
1.21	WORK AREA 4.4 - DEMOLISH DRY WALL PARTITION TO COMBINE 2 OFFICE				
1.21.1	Remove dry wall partition to combine two offices, allow for alteration to Access Control Systems and make good to affected floors, walls, and ceilings.	sum		1.00	
1.22	WORK AREA 4.5				
1.22.1	Remove existing shopfront to create a passage to the new balcony space.	sum		1.00	
1.22.2	Remove existing shopfront facing the atrium to be replaced with drywall.	sum		1.00	
1.22.3	Install new shopfront including single glass door to create new smaller office.	sum		1.00	
1.22.4	Install new drywall between office and new space. Allow frosted decals on glazing. Make good the affected floors, walls, and ceilings.	sum		1.00	
1.23	WORK AREA 4.6				
1.23.1	Install timber floorboards suitable to carry the load for office use.	sum		1.00	
1.23.2	Provide connection points for Electrical and HVAC.	sum		1.00	

1.23.3	Design supply and install modular "pods" suitable for small meeting rooms / think tanks. Allow for alteration to ICT, Electrical, HVAC and Fire layouts.	sum		1.00	
1.23.4	Supply and install modular "pods" suitable for small meeting rooms / think tanks. Allow for alteration to ICT, Electrical, HVAC and Fire layouts.	sum		1.00	
	ELECTRICAL WORKS				
1.24	DISTRIBUTION BOARDS				
1.24.1	Design low voltage distribution board including Modifications to the existing distribution boards, addition of circuit breakers including all other accessories.	sum		1.00	
1.24.2	Supply, deliver, offload, and install low voltage distribution board including Modifications to the existing distribution boards, addition of circuit breakers including all other accessories.	sum		1.00	
1.25	LUMINAIRES AND LAMPS				
1.25.1	Supply, delivery and install recessed and surface mounted luminaires for all the rooms with ceiling including all associated accessories.	sum		1.00	
1.26	POWER SUPPLY POINTS				
1.26.1	Supply, deliver and install Equal or similar approved to GEWISS 20A 1Ø Isolator including all associated accessories.	sum		1.00	
1.26.2	Supply, delivery and install 16A Double socket outlet (installed 300mm above ground) including all associated accessories.	sum		1.00	
1.26.3	Supply, delivery and install 16A Double socket outlet (installed 1350mm above ground) including all associated accessories.	sum		1.00	

1.26.4	Supply, delivery and install 16A single socket outlet (installed in power skirting) including all associated accessories.	sum		1.00	
1.26.5	Supply, delivery and install 16A dedicated socket outlet (installed in power skirting) including all associated accessories.	sum		1.00	
1.27	SWITCHING				
1.27.1	Supply, delivery and install occupancy sensor, to be recessed into the ceiling using a ceiling mounted adaptor plate to secure the sensor.	sum		1.00	
1.28	CABLE MANAGEMENT				
1.28.1	Design SABS approved pvc conduits flush mounted in the wall, pvc to use a wireway linking all isolators.	sum		1.00	
1.28.1	Supply, deliver and install SABS approved pvc conduits flush mounted in the wall, pvc to use a wireway linking all isolators	sum		1.00	
1.29	CABLING AND WIRING				
1.29.1	Supply, deliver offload and terminate similar or equal approved 4 core low voltage 600/1000V, SWA, ECC, PVC	sum		1.00	
1.30	CABLE TERMINATIONS				
1.30.1	Supply and install 4mm ² , 4core, ECC, SWA, PVC copper cable terminations complete with accessories including all wiring consumable accessories including lugs, ferrules, glands, tags, etc.	sum		1.00	
1.31	EARTHING AND LIGHTNING				
1.31.1	Design earthing and lighting protection.	sum		1.00	
1.31.2	Supply and installation of earthing and lighting protection.	sum		1.00	
1.32	TESTING AND COMMISSIONING				

1.32.1	Testing and commissioning of complete installation in accordance to SANS 10142-1 including the issuing of certificate of compliance	sum		1.00	
	MECHANICAL WORKS				
1.25	Section 1: Transportation, commissioning and testing and preparation of as-built drawing				
1.25.1	Transportation of fire protection, water reticulation, and HVAC components from TNPA premises to the Contractor's workshop and back to TNPA premises	sum		1.00	
1.25.2	Commissioning and testing of the HVAV system, water reticulation system, sprinkler system, smoke detection system, and smoke extraction	sum		1.00	
1.25.3	Provision of detailed as built drawings, Data Books, Operating manuals, Maintenance plans and schedules in both hard copy and electronic format	sum		1.00	
1.26	Section 2: evaluation/assessment of components of the HVAC system, water reticulation, sprinkler system, smoke detection, and smoke extraction system				
1.26.1	HVAC System: Design, sizing, selection of ductwork, diffusers, fan coil units, dampers, motors, fans, louvers, heating and cooling coils, and refrigeration pipe network	sum		1.00	

1.26.2	HVAC System: Supply, and installation of ductwork, diffusers, fan coil units, dampers, motors, fans, louvers, heating and cooling coils, and refrigeration pipe network	sum		1.00	
1.26.3	Fire Protection: Design, sizing, selection of ductwork, fans, pipe network, sprinkler system, smoke detection system, and smoke extraction system	sum		1.00	
1.26.4	Fire Protection: Supply, and installing of ductwork, fans, pipe network, sprinkler system, smoke detection system, and smoke extraction system	sum		1.00	
1.26.5	Water Reticulation: Design, sizing, selection of valves, fittings, pipe network, and other components of the water system	sum		1.00	
1.26.6	Water Reticulation: Supply, and installing of valves, fittings, pipe network, and other components of the water system	sum		1.00	
1.27	Section 3: Supply and install components of the HVAC system, water reticulation, sprinkler system, smoke detection, and smoke extraction system				
1.27.1	Design, sizing, selection, of ductwork, diffusers, fan coil units, dampers, motors, fans, louvers, heating and cooling coils, and refrigeration pipe network	sum		1.00	
1.27.2	Supply, and installation of ductwork, diffusers, fan coil units, dampers, motors, fans, louvers, heating and cooling coils, and refrigeration pipe network	sum		1.00	

1.27.3	Fire Protection: Design, sizing, selection of ductwork, fans, pipe network, sprinkler system, smoke detection system, and smoke extraction system	sum		1.00	
1.27.4	Fire Protection: supply, and installing of ductwork, fans, pipe network, sprinkler system, smoke detection system, and smoke extraction system	sum		1.00	
1.27.5	Water reticulation: Design, sizing, selection, supply, and installing of valves, fittings, pipe network, and other components of the water system	sum		1.00	
1.27.6	Water reticulation: Supply, and installing of valves, fittings, pipe network, and other components of the water system	sum		1.00	
Total Price to be carried over to the Form of Offer & Acceptance (excl. VAT)					
Value Added Tax @15%					
Total Price to be carried over to the Form of Offer & Acceptance (incl. VAT)					
Items to be separated under scope exclusion					
1.1	Converting office area to clinic				

1.1.1	Design for drywall partitions and glazed aluminium single door to new consulting room. Allow for Closed off view panel in existing office wall, installation for new hand wash basin in corner of passage, replace floor finish in consulting rooms and sick bays with vinyl sheeting and make good other affected floors, walls, and ceilings. Allow for alteration to ICT, electrical, HVAC and fire layouts. Allow for privacy film/decals. Allow for signage in passage and to door, to match existing signage in the building.	sum		1.00	
1.1.2	Supply & install drywall partitions and glazed aluminium single door to new consulting room. Replace floor finish in consulting rooms and sick bays with vinyl sheeting.	sum		1.00	
1.1.3	Closed off view panel in existing office wall.	sum		1.00	
1.1.4	Install new hands wash basin in corner of passage.	sum		1.00	
1.1.5	Make good other affected floors, walls, and ceilings.	sum		1.00	
1.1.6	Allow for alteration to ICT, electrical, HVAC and fire layouts. Allow for privacy film/decals. Allow for signage in passage and to door, to match existing signage in the building	sum		1.00	
Total Price Under Exclusion					

Document reference	Title	No of page
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C3.1 EMPLOYER'S WORKS INFORMATION

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SECTION 1

1 Description of the *works*

1.1 Executive overview

Transnet National Port Authority's Head Office have recently relocated from Parktown, Johannesburg and Kingsmead, Durban offices to Port of Ngqura's eMendi Building. The eMendi building was commissioned in April 2017, however there was some outstanding scope that couldn't be done due to budget constraints.

With the relocation of the TNPA head office to the port of Ngqura (eMendi building), an opportunity has presented itself to maximise the occupancy potential of the building through a reconfiguration of the office space.

The building maximum capacity ranges between 300 to 380 people and measures 10 000m² in size. This allows for spatial reconfiguration to maximise the building capacity to 372 occupants (as per proposed architectural layout).

The project scope entails finalising layout designs, eMendi building alterations, HVAC & power installation.

1.2 *Employer's objectives*

The *Employer* would like to partition the eMendi building to ensure it is fit for use and accommodates the new capacity of the Port and HQ employees.

1.3 Scope of Works

The *Contractor* shall propose deliverables to achieve the required *scope of work* for acceptance by the *Employer*. The *Contractor* shall propose the skilled staff to be formally mobilized to ensure that the deliverables of this project are met. Furthermore, the *Employer* and *Contractor* shall agree the interface particulars as and when applicable. All *Owners'* team representatives shall be consulted prior to commencement of each task order. All relevant policies and procedure documents shall be made available to the *Contractor* upon request. The Scope of work for this contract shall include the following disciplines:

1.3.1 Architecture Scope of Work

****Read in conjunction with the latest version of the Architectural Layouts***

The various work packages / work areas have been coded as per below and clearly marked on the floor plans.

1.3.1.1 Work Area 0.2 – CONSTRUCT 2 MEETING ROOMS IN EXHIBITION SPACE

- Design Supply & Install glazed shopfront partitions and glazed aluminium single doors.
- Allow for privacy film / decals
- Allow for signage to doors, to match that on existing doors
- Make good to affected floors walls and ceiling
- Allow for alteration to Electrical, HVAC and Fire Layouts
- Allow for A/V fit-out

1.3.1.2 Work Area 0.1 - CONVERT EXHIBITION SPACE TO BROADCAST STUDIO

- Design Supply & Install soundproof dry wall partitions and solid soundproof doors.
- Allow for access control
- Allow for signage to doors, to match that on existing doors
- Allow for raised floor and entrance ramp (cabling under floor)
- Make good to affected floors walls and ceiling
- Allow for alteration to Electrical, HVAC and Fire Layouts
- Allow for alteration to Access Control Systems
- Allow for A/V fit-out

1.3.1.3 Work Area 1.1 - CREATE PASSAGE AT OPEN PLAN OFFICE OPPOSITE KITCHEN

- Design Supply & Install glass partitions including 1,5 double glass doors, from floor to ceiling, to match existing Shopfronts in building.
- Allow for signage to door, to match that on existing doors
- Allow frosted decals on all glazed sections

- Make good to affected floors walls and ceiling
- Allow for alteration to Electrical, HVAC and Fire Layouts
- Allow for alteration to Access Control Systems

1.3.1.4 Work Area 1.2 - CONVERT OPEN SPACE TO MEETING ROOM

- Design Supply & Install glass and drywall partitions including glass doors, from floor to soffit, to match existing Partitions and Shopfronts in building.
- Allow for signage to doors, to match that on existing doors
- Allow frosted decals on all glazed sections
- Make good to affected floors walls and ceiling
- Allow for alteration to Electrical, HVAC and Fire Layouts
- Allow for alteration to Access Control Systems

1.3.1.5 Work Area 1.3 - ENCLOSE EXISTING OPEN PLAN OFFICE

- Design Supply & Install drywall partitions including single glass door, from floor to ceiling, the door to match existing Shopfronts in building.
- Make good to affected floors walls and ceiling
- Allow for alteration to Electrical, HVAC and Fire Layouts
- Allow for alteration to Access Control Systems

1.3.1.6 Work Area 2.1 - ENCLOSE EXISTING OPEN PLAN OFFICE

- Design Supply & Install glass partitions including single glass door, from floor to ceiling, to match existing Shopfronts in building.
- Allow for signage to door, to match that on existing doors
- Allow frosted decals on all glazed sections
- Make good to affected floors walls and ceiling
- Allow for alteration to Electrical, HVAC and Fire Layouts
- Allow for alteration to Access Control Systems

1.3.1.7 Work Area 2.2 - ENCLOSE EXISTING OPEN PLAN OFFICE

- Design Supply & Install glass partitions including 1,5 double glass door, from floor to ceiling or u/s beams, to match existing Shopfronts in the building
- Allow for signage to door, to match that on existing doors
- Allow frosted decals on all glazed sections
- Make good to affected floors walls and ceiling
- Allow for alteration to Electrical, HVAC and Fire Layouts

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- Allow for alteration to Access Control Systems

1.3.1.8 Work Area 2.3 - ENCLOSE EXISTING OPEN PLAN OFFICE

- Design Supply & Install glass partitions including 1,5 double glass door, from floor to ceiling, to match existing Shopfronts in building.
- Allow for signage to door, to match that on existing doors
- Allow frosted decals on all glazed sections
- Make good to affected floors walls and ceiling
- Allow for alteration to Electrical, HVAC and Fire Layouts
- Allow for alteration to Access Control Systems

1.3.1.9 Work Area 2.4 - NEW MEETING ROOMS

- Design Supply & Install glass partitions including single glass doors, from floor to ceiling, to match existing Shopfronts in building.
- Allow for drywall partition between rooms as indicated on the plan.
- Allow for signage to door, to match that on existing doors
- Allow frosted decals on all glazed sections
- Make good to affected floors walls and ceiling
- Allow for alteration to Electrical, HVAC and Fire Layouts
- Allow for alteration to Access Control Systems

1.3.1.10 Work Area 3.1 – CONVERT EXISTING OFFICE TO PAUSE AREA AND KITCHEN

- Design Supply & Install kitchen cupboards to match those in green areas of similar size. Allow for Fridge, Microwave and Hydroboil
- Allow for water connection to fixtures
- Allow for core drilling floor and connection drainage to closest stacks
- Allow for boxing in of pipes finished with floor tiles.
- Allow for new floor finish to match that of other kitchen areas
- Allow for new wall finishes to match that of other kitchen areas Make good to affected floors walls and ceiling Allow for alteration to Electrical, HVAC and Fire Layouts

1.3.1.11 Work Area 3.2 - ENCLOSE EXISTING OPEN PLAN OFFICE

- Design Supply & Install glass partitions including 1,5 double glass door, from floor to ceiling or u/s beams and balustrade to u/s beams, to match existing Shopfronts in building.
- Allow for signage to door, to match that on existing doors
- Allow frosted decals on all glazed sections.
- Allow removal of existing wallpaper and repaint wall (1 layer primer and 2 coats of preferred paint colour).
- Allow privacy film to the passage door leading to the gym.
- Make good to affected floors walls and ceiling
- Allow for alteration to Electrical, HVAC and Fire Layouts
- Allow for alteration to Access Control Systems

1.3.1.12 Work Area 4.1 - ALTER CURRENT PORT MANAGER'S OFFICE (SUB DIVIDE)

- Design Supply & Install dry wall partitions including single glass doors in the passage to match existing Shopfronts in building.
- Make good to affected floors walls and ceiling
- Allow for alteration to Electrical, HVAC and Fire Layouts.

1.3.1.13 Work Area 4.2 - ALTER AREA IN FRONT OF PORT MANAGER'S OFFICE

- Design Supply & Install glass partitions including single glass door, from floor to ceiling, to match existing Shopfronts in building.
- Allow for signage to door, to match that on existing doors
- Allow frosted decals on all glazed sections
- Make good to affected floors walls and ceiling
- Allow for alteration to Electrical, HVAC and Fire Layouts
- Allow for alteration to Access Control Systems.

1.3.1.14 Work Area 4.3 - ALTER CE OFFICE TO INCLUDE BODYGUARD's CUBICLE

- Design Supply & Install glass partitions including single glass door, from floor to ceiling, to match existing Shopfronts in building.
- Allow for signage to door, to match that on existing doors
- Allow frosted decals on all glazed sections
- Make good to affected floors walls and ceiling

- Allow for alteration to Electrical, HVAC and Fire Layouts
- Allow for alteration to Access Control Systems

1.3.1.15 Work Area 4.4 - DEMOLISH DRYWALL PARTITION TO COMBINE 2 OFFICES

- Make good to affected floors walls and ceiling
- Allow for alteration to Electrical, HVAC and Fire Layouts
- Allow for alteration to Access Control Systems

NB: THESE LAYOUTS ARE SUBJECT TO FIRE CHIEF's APPROVAL PRIOR
IMPLEMENTATION

1.4 Mechanical Engineering works

1.4.1 Scope of work

The *works* to be carried out by the *Contractor* shall include:

- The design, supply, and installation of ducting for HVAC and smoke detection.
- The sizing, selection, supply, and installation of air filters, dampers, fans, motors, Ceiling Concealed Air Conditioning Units, return and supply air grilles
- The sizing, selection, supply, and installation of air filters for the HVAC system
- The design, supply, and installation of extractor fans in the third floor the kitchen.
- The design, supply, and installation of the pipe network for the water reticulation for the third-floor kitchen
- The design, supply, and installation of the pipe network for the refrigeration system of the HVAC system
- The design, supply, and installation of the cooling and heating coils for the Fan Coil Units
- The evaluation, design, supply, and installation of the smoke detection system

- The evaluation, design, supply, and installation of the smoke extraction system
- The evaluation, design, supply, and installation of the sprinkler pipe network
- The evaluation, design, supply, and installation of the ceiling sprinkler heads for the sprinkler system.
- All new air-conditioning system to be installed shall be integrated into the existing BMS system
- The new HVAC system must be connected to the fire detection system and the two systems must be integrated into the existing BMS system

1.4.2 Standard of Work, Equipment, and Materials

1.4.2.1. Standard of Work, Equipment and Materials

All equipment and material used shall be of high quality and the work shall be of a high standard of workmanship carried out by qualified staff under proper supervision by experienced and competent officers.

All equipment and material shall comply with the relevant National or International standard specifications. Where equipment does not comply, it shall be submitted to the TNPA mechanical engineer for approval prior to installation.

All installation, testing and termination must be approved by the TNPA Engineer prior to commissioning.

1.4.2.2. Service Conditions

The equipment shall be designed and rated for continuous operation under the following conditions:

Altitude	0 – 1800 above sea level
Ambient temperature	-3°C to +40 °C
Relativity humidity	As high as 86%

Lightning conditions	Severe, with a maximum lightning ground flash density of 2.0 lashes per km ² per annum
Atmosphere	Atmosphere will be of a highly saline and dust-laden nature

1.4.2.3. Specifications

The following publications and specifications (latest edition) shall apply:

SANS 10400	The Application of the National Building Regulations
SANS 10400-T	Fire Protection
SANS 10400-W	Fire Installation
SANS 10400-O	Lighting and Ventilation
SANS 10400-W	Energy Usage in Buildings
SANS 10287	Automatic sprinkler installations for firefighting purposes
SANS 50054-1	Fire Detection and Fire Alarm Systems
SANS 10139	Code of practice for design, installation, commissioning and maintenance of fire detection and alarm systems in non-domestic premises
ASIB	Rules for Automatic Sprinkler Installations, Latest Edition
SANS 193	Dampers Installation and Testing
EN 15650	Duct Mounted Fire Dampers
SANS 1424	Filters for Use in Air-Conditioning and General Ventilation
SANS 1238	Air Conditioning Ductwork
SANS 10173	The Installation, Testing, and Balancing of Air Conditioning Ductwork
SANS 10147	Refrigerating Systems, Including Plants Associated with Air-Conditioning Systems

SANS 10252	Water Supply and Drainage for Buildings
ASHRAE 55	Thermal Environmental Conditions for Human Occupancy
ASHRAE 62.1	Ventilation for Acceptable Indoor Air Quality
ASHRAE 90.1	Energy Standard for Buildings Except Low-Rise Residential Buildings
ASHRAE 2013	Handbook of Fundamentals
ASHRAE 2012	Handbook HVAC Systems and Equipment
ASHRAE 2011	Handbook HVAC Applications

1.4.3 Mechanical Engineering Scope:

1.4.2.4. Ductwork

The *Contractor* shall evaluate the current duct system.

The *Contractor* shall design, supply, and install ductwork for the studio room (located on the ground floor, east wing) which must be supplied with minimum air flow rate of 45 litres per second

The *Contractor* shall design, supply, and install ductwork for the two boardrooms (located on the ground floor, east wing). Both boardrooms must be supplied with minimum air flow rate of 185 litres per second

The *Contractor* shall design, supply, and install ductwork for the boardroom room (located on the first floor, atrium) which must be supplied with minimum air flow rate of 345 litres per second unless the *Contractor* can rationalise otherwise.

The *Contractor* shall design, supply, and install ductwork for the big meeting room (located on the second floor, west wing) which must be supplied with an air flow rate of 75 litres per second.

The *Contractor* shall design, supply, and install ductwork for the open plan offices (located on the fourth floor, W-4-03 & W-4-02) which must be supplied with minimum air flow rate of 60 litres per second.

The *Contractor* shall design, supply, and install ductwork for the open plan offices next to the Port Manager's Office (located on the fourth floor, E-4-21, E-4-14, E-4-10, and E-4-22) which must be supplied with minimum fresh air flow rate of 75 litres per second.

The *Contractor* shall design, supply, and install ductwork for the Port Manager's Office for the return and supply air. This is to ensure that there is sufficient air circulation in the office.

The *Contractor's* designs and equipment shall ensure that the air flow rate distributed to the rest of the building is uninterrupted by these changes. The *Contractor* shall balance the fresh air flowrates of the ductwork in cases where these changes affect the current ductwork.

The *Contractor* provide ductwork for smoke extraction where necessary for the newly partitioned work areas.

The ductwork shall comply with the applicable requirements stated in SANS 1238:2005. The installation, testing and balancing of air conditioning ductwork shall comply with SANS 10173:2003.

1.4.2.5. Ceiling Concealed Ducted Air Conditioning Units

The *Contractor* shall evaluate and conduct the relevant tests on the existing ceiling concealed ducted air conditioning unit systems and install ceiling concealed ducted air conditioning units where necessary. The ceiling concealed ducted air conditioning units shall condition the fresh air and distribute the tempered fresh air at a standard indoor air temperature as stated in ASHRAE fundamentals.

The *Contractor* shall design, supply, and install a ceiling concealed ducted air conditioning unit for the two boardrooms (located on the ground floor, east wing).

The *Contractor* shall design, supply, and install a ceiling concealed ducted air conditioning unit for the boardroom room (located on the first floor, atrium).

The *Contractor* shall design, supply, and install a ceiling concealed ducted air conditioning unit for the open plan offices (located on the fourth floor, W-4-03 & W-4-02) which must be supplied with minimum air flow rate of 60 litres per second.

The *Contractor* shall design, supply, and install a ceiling concealed ducted air conditioning unit for the open plan offices next to the Port Manager's Office (located on the fourth floor, E-4-21, E-4-14, E-4-10, and E-4-22).

The *Contractor* shall ensure that the ceiling concealed ducted air conditioning unit includes the air filter, motor, fan, damper, and heating and cooling coils. The *Contractor* shall ensure the correct sizing, selection, and installation of the fan coil unit and its components.

A data sheet containing parameters listed to SANS 1424:2013 shall be supplied by the *Contractor* for air filters.

1.4.2.6. Refrigeration Pipe Network

The *Contractor* shall evaluate the existing refrigeration pipe network that supplies the heating and cooling coils of various ceiling concealed ducted air conditioning units in the building's HVAC system.

The *Contractor* shall design, supply, and install the correctly sized piping of the refrigeration system for the ceiling concealed ducted air conditioning unit(s) that will be installed in the two boardrooms (located on the ground floor, east wing).

The *Contractor* shall design, supply, and install the correctly sized piping of the refrigeration system for the ceiling concealed ducted air conditioning unit that will be installed in the boardroom room (located on the first floor, atrium).

The *Contractor* shall design, supply, and install the correctly sized piping of the refrigeration system for the ceiling concealed ducted air conditioning unit that

will be installed in the open plan office (located on the fourth floor, W-4-03 & W-4-02). The installation of the pipe network may include valves for isolation and maintenance purposes.

The *Contractor* shall design, supply, and install the correctly sized piping of the refrigeration system for the ceiling concealed ducted air conditioning unit that will be installed in the open plan offices next to the Port Manager's Office (located on the fourth floor, E-4-21, E-4-14, E-4-10, and E-4-22).

The *Contractor* shall design, supply, and install the correctly sized piping of the refrigeration system for the ceiling concealed ducted air conditioning units where necessary.

1.4.2.7. Diffusers and Air Conditioning Units

The *Contractor* shall evaluate and install, where necessary, the air diffusers and air conditioning units that have been installed for various newly work areas of the building.

The *Contractor* shall supply and install air diffusers and air conditioning units in the work areas that have been identified from the evaluation as requiring this equipment. The air conditioning units includes the indoor and outdoor units. The air diffusers shall be adjustable for temperature and air flow control.

The *Contractor* shall size, select, and install the air diffusers for the studio room and the two boardrooms located on the ground floor's east wing. The boardrooms shall have wireless remote controllers.

The *Contractor* shall size, select, and install the air diffusers in the boardroom room (located on the first floor, atrium).

The *Contractor* shall size, select, and install air diffusers for the open plan offices (located on the fourth floor, W-4-03 & W-4-02) and the open plan offices next to the Port Manager's Office (located on the fourth floor, E-4-21, E-4-14, E-4-10, and E-4-22).

1.4.2.8. Fresh Air Flow Rates

The *Contractor* shall evaluate the current HVAC system including the duct system, dampers, and ceiling concealed ducted air conditioning units and note the air flow rates supplied to each ceiling concealed ducted air conditioning.

The *Contractor* shall modify or replace the existing dampers connected to the ceiling concealed ducted air conditioning units that supply air to the designated working areas to meet the minimum air change rates.

The *Contractor* shall make the necessary provision to increase the air flow rates of the studio control room (located on the ground floor) to 30 litres per second.

The *Contractor* shall make the necessary provision to increase the air flow rates of the two boardrooms (located on the ground floor, east wing). Both boardrooms must be supplied with minimum air flow rate of 185 litres per second

The *Contractor* shall make the necessary provision to increase the air flow rates of the boardroom room (located on the first floor, atrium) which must be supplied with minimum air flow rate of 345 litres per second unless the *Contractor* can rationalise otherwise.

The *Contractor* shall make the necessary provision to increase the air flow rates of the studio room (located on the ground floor) to more than 45 litres per second.

The *Contractor* shall make the necessary provision to increase the air flow rates of the open plan office (W-1-15, first floor) to a minimum of 60 litres per second.

The *Contractor* shall make the necessary provision to increase the air flow rates of the Boardroom (E-1-19, first floor) to a minimum of 120 litres per second.

The *Contractor* shall make the necessary provision to increase the air flow rates of the big meeting (West wing, second floor) to a minimum of 75 litres per second.

The *Contractor* shall make the necessary provision to increase the air flow rates of the small boardroom (West wing, second floor) to a minimum of 30 litres per second.

The *Contractor* shall make the necessary provision to supply fresh air to the open plan office (W-4-03 & W-4-02, fourth floor) at a minimum air flow rate of 60 litres per second.

The *Contractor* shall make the necessary provision to increase the air flow rates of the Port Manager's Office (located on the fourth floor, E-4-21, E-4-14, E-4-10, and E-4-22) which must be supplied with minimum fresh air flow rate of 75 litres per second.

1.4.2.9. New Kitchen (E-3-10, Third Floor)

The *Contractor* shall evaluate the current HVAC system in the kitchen. There is no existing ventilation or air conditioning in the kitchen.

The *Contractor* shall design, supply, and install sufficient extractor fans in the kitchen for moisture and heat removal. Ductwork shall be installed and connected to the extractor fans for the removal of heat in the kitchen. The Contractor shall size, select, supply, and install the motor for driving the fan and other components. The extractor fan shall be installed according to the requirements stated in SANS 10400-O.

The Contractor shall design, supply, and install the water reticulation system for the kitchen.

1.4.2.10. Door Louvers, Window Louvers, Return and Supply Air Grilles

The *Contractor* shall size, select, supply, and install door or window louvers for the newly glass partitioned offices.

The *Contractor* shall size, select, supply, and install door or window louvers for the passages created on various building floor levels.

The *Contractor* shall size, select, supply, and install return air grilles and supply air grilles for the passages created on various building floor levels.
The *Contractor* shall size, select, supply, and install return air grilles and supply air grilles for the passages created on various building floor levels.

The *Contractor* shall size, select, supply and install return air grilles for the office spaces that do not have sufficient air circulation system in place.

The *Contractor* shall size, select, supply, and install supply air grilles for the office spaces that do not have sufficient air circulation system in place.

1.4.2.11. Sprinkler Heads and Sprinkler System Pipe Network

The *Contractor* shall evaluate and conduct all the necessary tests on the existing sprinkler system and ensure that each work area has sufficient sprinkler system for fire protection.

The *Contractor* shall make provision for the sprinkler system fire protection by ensuring that the newly partitioned work areas have sufficient sprinkler heads and that these sprinkler heads are connected to the sprinkler system.

The *Contractor* shall test and commission the sprinkler system to ensure that it complies to the relevant standards. The *Contractor* shall provide ASIB certificate showing the compliance of the sprinkler system.

The *Contractor* shall evaluate the existing sprinkler system and ensure that each work area has sufficient sprinkler system for fire protection.

The *Contractor* shall ensure that the installation of the sprinkler system complies with SANS 10287.

1.4.2.12. Smoke Detection and Smoke Extraction

The *Contractor* shall evaluate the existing smoke detection and smoke extraction system and ensure that each newly partitioned work area has sufficient smoke detectors and smoke extractors for fire protection.

1.4.2.13. Noise Control

Artificial ventilation must not emit noise, the level of which causes the ambient to exceed 50dBA. The *Contractor* must submit a noise impact report in terms of regulation 2(d) of the Noise Control Regulations (NCR) in a case where there is an excessive noise.

The *Contractor* shall ensure that the ductwork has duct mounted fire dampers for fire protection. The duct mounted fire dampers shall be installed and testing according to SANS 193.

1.4.2.14. Testing and Commissioning of the *Works*

The *Contractor* shall evaluate the existing smoke detection and smoke extraction system and ensure that each newly partitioned work area has sufficient smoke detectors and smoke extractors for fire protection.

The *Contractor* shall test the entire installation including the ductwork, dampers, fire dampers, refrigeration pipework, diffusers, ceiling concealed air conditioning units, heating coils, cooling coils, fans, motors, sprinkler system, water reticulation system, fire detection and smoke extraction systems, etc. The *Contractor* shall handover the certificate of compliance for the Sprinkler System issued by ASIB.

The *Contractor* shall ensure that all the plant and equipment comply to the relevant standards and certificates of compliance shall be submitted to the *Employer's Project Manager* for acceptance.

The *Contractor* shall notify the Employer's Project Manager before commencement of the testing of plant and equipment. The Employer's Engineer shall be present for the commissioning of the plant and equipment.

1.5 Electrical engineering *scope of work*

The *works* that the *Contractor* is to perform includes the following:

- Supply and install interior Lighting
- Supply and install distribution boards
- Modifications to existing Distribution boards and Electrical kiosks
- Supply and installation of small power
- Design, supply, and installation of low voltage cabling
- Building Management System integration of additional equipment
- Design, supply and install Earthing and Lightning protection
- Testing and commissioning of the installation

1.5.1 Standard of Work, Equipment and Materials

The electrical installation shall conform to the requirements of the latest edition and amendments of SANS 10142-1 Code of Practice for the Wiring of Premises Low- voltage installation and any additional requirements thereto, described in this specification.

Where the local supply authority requirements differ from those specified herein, the Transnet National Ports Authority (TNPA) electrical engineer shall be approached for a decision.

All equipment and material used shall be of high quality and the work shall be of a high standard of workmanship carried out by qualified staff under proper supervision by experienced and competent officers.

All equipment and material shall comply with the relevant National or International standard specifications. Where equipment does not comply, it shall be submitted to the TNPA electrical engineer for approval prior to installation.

All installation, testing and termination must be approved by the TNPA Engineer prior to commissioning.

1.5.1.1 Service Conditions

The equipment shall be designed and rated for continuous operation under the following conditions:

Altitude	0 – 1800 above sea level
Ambient temperature	-3°C to +40 °C
Relativity humidity	As high as 86%
Lightning conditions	Severe, with a maximum lightning ground flash density of 2.0 lashes per km ² per annum
Atmosphere	Atmosphere will be of a highly saline and dust-laden nature

1.5.1.2 Electrical Conditions:

The voltage may vary within the range of 95% to 105% of the nominal and all equipment installed shall be suitably rated.

The low voltage system of supply will be three phase 400 V, 4 wire, and 50 Hz alternating current.

1.5.2 Lightning conditions

All lightning protection equipment offered shall be rated to withstand the following conditions:

Current: The peak lightning current and its rate of rise shall be regarded as severe when $I_{max} = 200kA$.

Voltage: The highest cloud potential shall be assumed to be more than 100MV, where;
 $Q = CV$, where Q is assumed at 100C and C to be $10^{-7} F$

1.5.3 Specifications

The following publications and specifications (latest edition) shall apply:

CODES OF PRACTICE

SANS 10142-1	Code of Practice for the Wiring of Premises
SANS 10114-1	Interior lighting Part 1: Artificial lighting of interiors
SANS 10114-2	Interior lighting Part 2: Emergency lighting
SANS 10389-1	Exterior lighting Part 1: Artificial lighting of exterior areas for work and safety

SANS 10389-2	Exterior lighting Part 2: Exterior security lighting
SANS 10389-3	Exterior lighting Part 3: Guide on the limitation of the effects of obtrusive light from outdoor lighting installations
SANS 10400	The Application of the National Building Regulations
SANS 62305-1	Protection against lightning Part 1: General principles
SANS 62305-2	Protection against lightning Part 2: Risk management
SANS 62305-3	Protection against lightning Part 3: Physical damage to structures and life hazard
SANS 62305-4	Protection against lightning Part 4: Electrical and electronic systems within structures
SANS 10313	Protection against lightning - Physical damage to structures and life hazard
SANS 1063	Earth rods, couplers, and connections
SANS 10198-8	The selection, handling, and installation of electric power cables of rating not exceeding 33 kV Part 8: Cable laying and installation
SANS 10199	The design and installation of earth electrodes

4.3.3 Transnet Specifications

The following publications and specifications (latest edition) shall apply:

TPD-001-EL&PSPEC	Technical specification for the supply and installation of electrical lighting and power in buildings other than dwelling houses.
TPD-002-DBSPEC	Technical specification for the design and manufacturing of low voltage distribution boards.
TPD-003-CABLESPEC	Technical specification for the installation of medium and low voltage cables.

TPD-004-EARTHINGSPEC	Technical specification for the design, supply and installation of lightning protection and earthing for buildings and structures.
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4.3.4 Electrical Engineering Scope:

1.5.1.1 Lighting

The *Contractor* shall supply, deliver, offload, and install recessed and surface mounted luminaires for all the rooms with ceiling. The recessed luminaires shall be connected through individual 5A single socket outlets to isolate luminaires during maintenance.

The *Contractor* shall supply, deliver, and install 16A one lever light switches and light switch dimmers, similar or equal approved to Legrand Arteor. The light switches shall be installed on 4x2 PVC boxes.

The *Contractor* shall supply and install light fitting that are compatible with the BMS used in the TNPA Building. Contractor shall integrate all new installation into the BMS system used in the Building

The *Contractor* shall supply, deliver, and install similar or equal approved to Schneider occupancy sensors. The sensor shall be recessed into the ceiling using a ceiling mounted adapter plate to secure the sensor. The time delay DIP switch setting on the occupancy sensor shall be set at ten (10) minutes.

The *Contractor* shall design, supply, deliver and install SABS approved, 20mm outer diameter, PVC conduit flush mounted in the wall. The PVC conduit shall be used as wireways, linking all flush mounted PVC boxes to the distribution board and luminaires. All necessary accessories such as fasteners, bends, junction boxes, adaptors, etc. shall be included to ensure a safe neat link for the conduit system.

The *Contractor* shall supply, deliver, offload, and install SABS approved PVC insulated house wire for all lighting circuits. The PVC insulated wire shall comply with Transnet specification TPD-003-CABLESPEC. The wire shall be installed inside the Uni-strut system and conduit.

Where new conduits are installed in masonry walls, the contractor shall do the necessary chasing and all these areas will be made good after installation

1.5.1.2 Switched Socket Outlets

The *Contractor* shall also supply, deliver, offload, install 2-tier power skirting, one compartment shall be dedicated to Electrical and the other to Data/communications. The size of both the compartments shall be 70mm². The power skirting shall be supplied with all fastening accessories such as screws, and end covers. The power skirting shall be installed in the position as indicated in drawings.

The *Contractor* shall supply, deliver, and install 16A single, dedicated, and non-dedicated switched socket outlets as shown in the drawings.

The *Contractor* shall also supply, deliver, and install 16A double, flush mount, switched socket outlets as shown in drawings. The socket outlets shall be installed 300mm and 1350mm above the floor.

The *Contractor* shall design, supply, deliver and install SABS approved, 20mm outer diameter, PVC conduits flush mounted in the wall. The PVC conduit shall be used as a wireway, linking all socket outlets to the distribution board. All necessary accessories such as fasteners, bends, junction boxes, adaptors, etc. shall be included to ensure a safe neat link for the conduit system.

The *Contractor* shall design, supply, deliver, offload, and install appropriately length of SABS approved, 32mm outer diameter, PVC conduit. The conduit shall be used as a wire way system to provide a path for data wires to connect from the power skirting to the data swing frame panel. The conduit wire way system shall be flush mount in the wall.

All necessary accessories such as fasteners, bends, junction boxes, adaptors, etc. shall be included to ensure a safe neat link for the conduit system.

The *Contractor* shall supply, deliver, offload, and install SABS approved PVC insulated house wire for all socket outlet circuits. The PVC insulated wire shall comply with Transnet specification TPD-003-CABLESPEC. The PVC insulated house wire shall be installed in conduit and trunking.

1.5.1.3 Switched Isolators

The *Contractor* shall supply, deliver, offload, and install 20A flush mount, double pole, single phase switched disconnecter (isolator). The isolators shall be installed at various heights to accommodate the equipment being supplied. Location of isolator should comply with SANS 10142-1 reequipments.

The *Contractor* shall also supply, deliver, offload, and install surface mounted weatherproof, single phase and three phase switched disconnectors (isolators), for all areas disposed to water.

The *Contractor* shall design, supply, deliver and install SABS approved, 20mm outer diameter and 32mm outer diameter, PVC conduits flush mounted in the wall. The PVC conduit shall be used as a wireway, linking all isolators to the distribution board. All necessary accessories such as fasteners, bends, junction boxes, adaptors, etc. shall be included to ensure a safe neat link for the conduit system.

The *Contractor* shall supply, deliver, offload, and install SABS approved PVC insulated house wire for all isolator circuits. The PVC insulated wire shall comply with Transnet specification TPD-003-CABLESPEC. The PVC insulated house wire shall be installed in conduit.

1.5.1.4 Distribution Boards

The *Contractor* shall design, construct, supply, deliver, offload and install a Low Voltage Distribution Boards. The Distribution Board shall be installed in the position as indicated in drawings. The distribution board shall be wall flush/surface mounted. The distribution board shall be manufactured from grade 3CR12 stainless steel and shall allow for both bottom and top cable entry for ease of connection. The distribution board shall be installed complete with the appropriately sized din rail, cover, spare ways cover and any other necessary mechanical accessories for support.

The Distribution Board shall contain the following signage.

- Name of the Distribution Board
- The rated Voltage level of the Distribution Board
- The rated Short Circuit Current for distribution board
- The rated current rating for the distribution board
- Description of circuits fed by the associated circuit breaker as indicated in drawings
 - Full description of the type of cable (Copper PVC insulated ECC, SWA), the size in mm² of the cable terminated in the associated circuit breaker and the cable run length to the load.
 - Danger sign for electrical power exposure

1.5.1.5 Cable and Cable Way System

The *Contractor* shall supply, deliver, offload, install and terminate 4-core low voltage 600/1000V, SWA, ECC, PVC insulated copper cable between the distribution boards. The PVC insulated, ECC, SWA, 4 core LV cables shall be terminated, and glanded neatly and appropriately using suitable sized Cable Corrosion Glands

The cables shall also be also installed on a cable ladder system. The OEM bending radii requirements of the cable shall be adhered to. The cable ladder system shall be used to sufficiently support the weight of PVC insulated, ECC, SWA, 4 core LV cables. The cable ladder and all associated mechanical supports such as anchor fixings bolts to the wall,

suspending rods, supporting channel, etc. shall be made of stainless steel (grade 3CR12) and shall be powder coated grey. The cable ladder system shall be suitably bonded and connected to the nearest building earth bar with an appropriately sized protective earth conductor in compliance to SANS 10142-1 and TPD-004-EARTHINGSPEC. The *Contractor* shall submit, to the Employer's Engineer, all design aspects of the cable ladder system prior to any procurement of materials for acceptance.

1.5.1.6 Earthing and Lightning Protection

The Contractor shall design, supply, and install earthing and lightning protection for and in accordance with specification No. TPD: 004-EARTHINGSPEC. The earthing and lightning protection design shall be submitted to TNPA electrical engineer for acceptance before any installation commences.

Design and installation of earthing and lightning protection system shall be in strict accordance with the latest SANS Codes of practice 10313, 10199, and 1063 in conjunction with SANS 62305 1-4.

1.5.1.7 Testing and Commissioning the Entire Installation

The *Contractor* shall conduct a Factory Acceptance Test (FAT) for all *Plant's* to be installed as part of the *Works* to be executed in this *Contract* prior to delivery to site. The FAT shall be conducted in the presence of the *Employer's Engineer*. The legal transfer of ownership from the *Plant's* supplier to the *Contractor* shall be held by the *Contractor* until the *Plant* is fully installed, tested commissioned on the *Employer's* designated site.

The *Contractor* shall conduct a Site Acceptance Test (SAT) for all *Plant's* supplied, offloaded, and delivered to the designated *Employer's* site. The SAT shall be conducted in the presence of the *Employer's Engineer*. The legal transfer of ownership from the *Plant's* supplier to the *Contractor* shall be held by the *Contractor* until the *Plant* is fully installed, tested commissioned on the *Employer's* designated site.

The contractor shall test the entire installation, including but not limited to the MV installation, LV installation and the lighting installation as per SANS 10142-1 and hand over all relevant test certificates to the *Employers Project Manager* for acceptance. The *Contractor* shall hand over both MV and LV certificate of compliance as per the OHS Act of 85 and SANS 10142-1 and SANS1042-2 for the installations.

The *Contractor* shall test and commission the entire Earthing and Lightning protection system as per Transnet Specification TPD-004-EARTHINGSPEC and SANS 10142-1 in the presence of the *Employer's Engineer*. The *Contractor* shall handover all test certificates to the *Employer's Project Manager* for acceptance by the *Employer's Engineer*.

1.6 Interpretation and terminology

The following abbreviations are used in this Works Information:

Abbreviation	Meaning given to the abbreviation
CDR	Contractor Documentation Register
CDS	Contractor Documentation Schedule
CIRP	Contractor's Industrial Relations Practitioner
CSHEO	Contractor's Safety, Health and Environmental Officer
CM	Construction Manager
DTI	Department of Trade and Industry
DWG	Drawings
EO	Environmental Officer
Native	Original electronic file format of documentation
NRS	National Regulatory Standard
NEC3 ECC	NEC3 Engineering and Construction Contract
QA	Quality Assurance
QC	Quality Control
R&D	Research and Development
SANS	South African National Standards
SAPS	South African Police Services
SASRIA	South African Special Risks Insurance Association
SAT	Site acceptance tests
SES	Standard Environmental Specification
SHE	Safety, Health and Environment

Abbreviation	Meaning given to the abbreviation
SHEC	Safety, Health and Environment Co-ordinator
SIP	Site Induction Programme
SMP	Safety Management Plan
SSA	State Security Agency
SSRC	Site Safety Review Committee
TNPA	Transnet National Ports Authority
AFC	Approved For Construction
DGN	Design
DWG	Drawings
EPCM	Engineering, Procurement & Construction Management
FEL	Front End Loading
NEC 3	New Engineering Contracts
PEP	Project Execution Plan
SANS	South African National Standards
SHE	Safety, Health and Environmental
TNPA	Transnet National Ports Authority
URS	User Requirement Specification
ECSA	Engineering Council of South Africa

2 Engineering and the *Contractor's* design

2.1 *Employer's* design

- 2.1.1 The *Employer's* design for the *Works* is contained in the *Works* Information and all annexures thereto, including drawings.
- 2.1.2 The drawings for providing the *Works* are listed in this *Works* Information.
- 2.1.3 The *Employer* grants the *Contractor* a licence to use the copyright in design data presented to the *Contractor* for the purpose of the *Works* (and the *Contractor's* obligation under paragraph **Error! Reference source not found.** of the *Employer's Works Information*) ONLY.

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

2.2.1 The *Contractor* is to design the following parts of the *Work*:

The *Contractor* is to design the following parts of the *electrical works*:

2.2.1.1 Cableways, cable support systems, conduit systems

Cableways, cable support systems, conduit systems and arrangement, piped systems and pipe support systems, and the selection of fasteners and fastening systems for these items, where not specified, referenced, or detailed by the Employer.

2.2.1.2 The Earthing and Bonding System:

The earthing and bonding installation is to be designed to meet requirements of SANS 10142 and SANS 61312 and SANS 10313 mentioned therein. Detailed design, including general arrangement connectivity and layout drawings are to be submitted to the Project Manager for acceptance.

All supporting infrastructure required to implement all the Employers' high-level designs. These may include, but is not necessarily limited to formwork and scaffolding, cableways, cable support systems, conduit systems and arrangement, piped systems, and pipe support

Any temporary works that may be necessary should be approved by the Project Manager prior to construction. Any temporary work submitted is required in a format of both calculations and drawings. The temporary works shall be structurally adequate and the foundations adequate with no settlement.

Further details of design requirements for the parts of the Works which the Contractor is to design are provided in the relevant technical specifications included within the Annexures.

The Contractor shall appoint suitably qualified and experienced designers to carry out such work and shall indemnify and hold indemnified the Project Manager and Employer against any claims and actions that may arise out of his designs.

All calculations must be authenticated and authorised by Professional Engineers and/or Technologists registered with the Engineering Council of South Africa.

The Contractor shall submit to the Supervisor for acceptance all design calculations and drawings for all permanent Works as well as all temporary Works as listed under paragraph

2.2.1 Employer's Works Information.

The Contractor shall submit detailed drawings and workshop details for all designs, both Contractor's designs and Employer's designs, to the Project Manager for acceptance by the Employer's Consultant or the Employer's Engineers.

The Contractor shall be responsible for full compliance with all codes of practice, safety, professional procedures, checking, Site approval and requirement of the construction regulations with regards to permanent Works as listed under paragraph 2.2.1 of the Employer's Works Information as well as all temporary Works.

The Contractor is wholly responsible for all design coordination, integration and liaison activities involved the Works, and shall take all measures necessary and make all arrangements for activities such as meetings, inspections, endorsements, and any other activities required for the timeous completion of the Works and to the appropriate quality. When these activities require the involvement of the Employer's Professional Engineering team or any other stakeholders, the Contractor is required to make these arrangements with due consideration of the Employer's Professional Engineering team's availability and the availability of other stakeholders.

The Contractor is responsible in his design for the overall integration of the design of the Works with the design of the Employer as stated under section **Error! Reference source not found..**

The Contractor shall thus be wholly accountable and responsible for all aspects of his designs, including the implementation of all Statutory Safety, Health and Environmental Regulations of South Africa AND the requirements, specifications, and regulations of the Employer pertaining to Health and Safety, Environment, Quality and Engineering.

The Contractor shall be wholly accountable and responsible for the implementation of the aspects of his designs including commissioning, putting into service and handover of his constructed designs to the Employer, and his duly appointed ECSA registered Engineers shall be held accountable and responsible for these aspects of the Works for the lifetime duration of the Works.

Unless expressly stated to form part of the design responsibility of the Employer as stated under **Error! Reference source not found.** and whether or not specifically stated to form part of the design responsibility of the Contractor under this paragraph **Error! Reference source not found.**, all residual design r

responsibility and overall responsibility for the total design solution for the Works rests with the Contractor.

2.2.2 The *Contractor* is to design the following parts of the *Mechanical works*:

2.2.1.3 Ducting

Ducted systems and duct support systems, and the selection of fasteners and fastening systems for these items, where not specified, referenced, or detailed by the Employer

2.2.1.4 Dampers

Damper size and damper blades. The selection of fasteners and fastening systems to be used. The integration of the dampers with the building's HVAC control system or Building Management System (BMS).

2.2.1.5 Ceiling Concealed Air Conditioning Units

Sizing and selection of the ceiling concealed air conditioning units. Sizing and selection of the motors and fans. Coupling configuration and mounting of equipment inside the ceiling concealed air conditioning units. Design and selection of the heating and cooling coils. Design and selection of drip pan.

2.2.1.6 Piping Network for the Refrigeration System

The pipe network design for the refrigeration system that will be feeding the heating and cooling coils. Sizing and selection of valves.

2.2.1.7 Piping Network for the Fire Protection System

The pipe network design for the fire protection system including the ceiling sprinkler system

2.2.1.8 Sprinkler System, Smoke Detection and Smoke Extraction

The necessary designs to accommodate the smoke detection and extraction of the partitioned work areas and provision of linking the fire protection system to the HVAC system. The integration of the sprinkler system to the partitioned work areas. Selection and location of the sprinkler heads

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

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

The *Contractor's* documentation shall be issued to the *Project Manager* under cover of the Contractor's Transmittal Note indicating all Contract references (i.e., Project No, Contract No, etc.) as well as the *Contractor's* Project Document Number, Revision Number, Title, and chronological listing of transmitted documentation.

Formats of *Contractor* data submitted is dependent on the project procedure and shall be specified by the *Project Manager*, upon the notified request of the *Contractor*.

The *Contractor* shall deliver both hard copies and electronic media copies (CD Rom) to the *Project Manager* at the address stated within the Contract Data.

All electronic documentation shall be submitted by the *Contractor* in Adobe Acrobat (.PDF) and Native file format.

Acceptance of documentation by the *Project Manager* will in no way relieve the *Contractor* of his responsibility for the correctness of information, or conformance with his obligation to provide the Works. This obligation rests solely with the *Contractor*.

After review, a copy of the original reviewed/marked-up drawing/document, with the *Project Manager's* consolidated comments and document status marked on the *Contractor* Review Label, is scanned and the hard copy shall be returned to the *Contractor* under cover of the project's Transmittal Note for revision or re-submittal as instructed.

The *Contractor* shall allow the *Project Manager* 2 (two) weeks to review and respond to the *Contractor's* submission of their documentation, i.e., from time of receipt by the *Project Manager* to the time of despatch.

However, work shall proceed without delay in the event of late return of the documentation by the *Project Manager* with prior notification in writing by the *Contractor*.

On receipt of the reviewed documentation the *Contractor* shall make any modifications requested/marked-up and resubmit the revised documentation to the *Project Manager* within 2 (two) weeks. Queries regarding comments/changes should be addressed with the *Project Manager* prior to re-submittal.

Any re-submittals, which have not included the changes/comments identified, will be returned to the *Contractor* to be corrected. The *Contractor* shall re-issue the revised documentation incorporating all comments and other specified details not included in the previous issue within 2 (two) working days of receipt of the marked-up document. No cost arising from any revisions which are a result of the *Contractor's* omission of critical details and any costs incurred by the *Contractor* in completing such designs and drawings, may be claimed from the *Employer*.

2.4 Review and Acceptance of *Contractor* Documentation

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

2.5 Use of *Contractor's* design

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

2.6 As-built drawings, operating manuals, and maintenance schedules

The *Contractor* provides the following:

Redline mark-up drawings, these drawings shall be submitted to the *Project Manager*.

As built drawings (2 (two) x hard copy plus editable Pdf and native file) for electrical and mechanical work.

As Built/Final Documentation

In undertaking the 'Works' (including all incidental services required), the Supplier shall conform and adhere to the requirements of the *Contractor* Document Submittal Requirements.

3 Construction

3.1 Temporary works, Site services & construction constraints

3.1.1 Employer's Site entry and security control permits and Site regulations.

The *works* are located within the Port of Ngqura. The Port of Ngqura is a designated Security Area under the ISPS requirement, and in terms of this, all access into the Port and terminal area will be strictly controlled. The cost of complying with this access security, including labour transport and access requirements, obtaining, and maintaining access cards for the people working on the Site is all to the *Contractor's* account.

The *Contractor* shall obtain the necessary entry permits for all staff working within the Port of Ngqura in accordance with the access control requirements of the terminal and the Port. The *Contractor* is also required to obtain the relevant permits for Subcontractors and all suppliers. The *Contractor* is required to make applications for these permits on behalf of all workers, suppliers, and Subcontractors, and is to nominate a single person to liaise with the relevant Port authorities. The *Contractor* is to make a cost and time allowance for obtaining the necessary permits.

The *Contractor* provides all staff working within the Port of Ngqura with identification cards to be used in conjunction with the Port access permit. The cards must be able to positively identify the individual along with all the relevant *Contractor/Employer* details. All costs incurred in providing construction personnel with ID cards shall be borne by the *Contractor* and shall be made by the *Contractor* to a standard acceptable to the *Project Manager*

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

The *Contractor* is required to make applications for these permits on behalf of workers, Suppliers and Subcontractors and is to nominate a single person to liaise with the relevant Port authorities. The *Contractor* is to make a cost and time allowance for obtaining the necessary permits.

All *Contractors'* personnel accessing the Site / Working Areas or part thereof are to undergo an *Employer's* induction, prior to being allowed access.

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

The Site is located within the Port of Ngqura. Access to the Port is via TNPA Main Port Entrance.

Generally, the working hours are Monday through Friday from 08:00 to 16h30 For any extended hours or overtime the *Contractor* shall apply in writing and obtain approval from the *Project Manager / Employer*.

3.1.4 Publicity and progress photographs.

The *Contractor* shall obtain the permission and approval of the *Employer* before erecting any notice boards, using the details of the contract in any advertising media, or revealing any details of the contract to the public.

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

3.1.5 *Contractor's* Plant and Equipment.

The *Contractor* shall provide all Plant and Equipment required to provide the *works* and the *Employer* shall not provide any Plant and/or Equipment. The *Contractor* shall keep a tool and material checklist on hand for entering and exiting the Port, for inspection by the *Project Manager* and *Port Security*.

The *Contractor* shall establish on-site, all facilities necessary to undertake the *works*, including establishment of such Equipment, storage facilities and personnel that is necessary to execute the *works*.

3.1.6 Plant and/ or Equipment provided by the *Employer*.

None.

3.1.7 The *Employer* provides the following facilities for the *Contractor*:

- Access permit to the Port
- Dedicated laydown area for offices, ablutions, tools and equipment
- The employer will endeavour to provide the appointed contractor with all available information that may facilitate the progress of the project. However, in cases where such information is not available, the contractor shall point out to the Employer for advice on steps to be taken.

3.1.8 Facilities provided by the *Contractor*:

The *Contractor* establishes his offices, lay down area and stores in this location. The *Contractor* ensures that this Site establishment area has a well demarcated suitable security fence and the necessary access gates and control and signage.

All preparation and temporary fencing done by the *Contractor* to be to for his account. The *Contractor* shall, prior to Completion of the *works*, completely remove from Site all facilities he has provided, Equipment, Material and other structures erected stores and temporary office accommodation or any other asset belonging to him and leave the Site in a tidy condition to the satisfaction of the *Project Manager*. No excess or discarded materials, waste or stores may be buried or dumped within the Port boundary.

All security measures, access control and protection services required by the *Contractor* to ensure the safety and/or security of his Plant, Equipment and Material on Site are the responsibility of the *Contractor* and shall be deemed included for in the tendered rates.

3.2 Completion, testing, commissioning, and correction of Defects

The *work* to be done by the Completion Date:

On or before the Completion Date the *Contractor* shall have done everything required to Provide the Works, including removal of his establishment and equipment from the site. The *Project Manager* cannot certify Completion until all the work has been done and is also free of Defects, which would have, in his opinion, prevented the *Employer* from using the works and Others from doing their work.

3.2.1 As-built drawings and data packs

3.2.1.1 The Contractor ensures that the Project Manager has a full and accurate dossier of As-built documents that represent the status of the completed works to present to the Employer.

3.2.2 Pre-Commissioning Tests and Commissioning

The Contractor shall arrange for Factory Acceptance Testing of selected Electrical and Mechanical Plant as required by the Employer's Engineers at the Supplier's Premises before any Plant is despatched to site.

The Factory Acceptance Testing shall be witnessed by the Employers Engineers, but in doing so; the Employers Engineers assume no responsibility or accountability for the proper functionality of the Plant in any way whatsoever.

The Contractor shall arrange Site Acceptance Testing for the selected Plant when it arrives on Site.

The Site Acceptance Testing shall be witnessed by the Employers Engineers, but in doing so; the Employers Engineers assume no responsibility or accountability for the proper functionality of the Plant in any way whatsoever.

The cost of the FATs and SATs, including travel, accommodation, and daily stipend for the Employer's Engineers, is part of this contract, and shall be included in the Contractor's Price. The anticipated number of persons to be catered for in this regard is 3 (three) per FAT.

The Contractor shall appoint an independent ECSA registered commissioning engineer to conduct and coordinate the commissioning activities. The Curriculum Vitae of the commissioning engineer shall be submitted to the Project Manager and Employer's Engineers for acceptance before his appointment.

The Employer's Engineers and/or the Project Manager reserves the right to reject the proposed commissioning engineer if he is deemed unsuitable to carry out the commissioning activities as required by the Employer and the Employer's Engineers.

The installation shall be comprehensively tested and commissioned as individual and integrated systems as may be required by the configuration, after the Works are substantially complete.

The Contractor shall provide adequate and competent personnel for testing and commissioning of every installation and for the full duration of the commissioning process.

The commissioning shall include interaction between other systems and others where interdependence of installations is encountered.

The commissioning process shall, after all testings has been completed be the final proving ground of the systems and during this procedure the installations shall be subjected to all possible inputs and actions which may be encountered under operational conditions.

The Contractor shall prove the full operation, working and compliance of the installation in accordance with the specifications.

A detailed programme of the planned commissioning procedures shall be submitted to the Project Manager and Employer's Engineers at least 14 days before commissioning commences.

3.2.2.1.1 The commissioning programme shall include, but is not limited to:

- A schedule of equipment to be commissioned, the proposed tests to be conducted and the testing methods and the range of acceptable results,
- Commissioning check sheets,
- Commissioning programme dates and duration.

The Contractor shall supply all relevant test equipment, monitoring devices, network analysers, protocol testers/analysers etc. required to test and commission the complete Works.

An accurate record of all commissioning and testing is to be taken and included in the handover documentation as a permanent record.

The Contractor shall perform all tests as required by any Sections or Clauses of the Works Information and all tests required by the Employers Specifications annexed thereto, and all tests required by any applicable SANS Standard, or other Standard, and/or as directed by the Employer's Engineers and the Project Manager.

Testing and commissioning is considered part of the Works and is to be done before completion.

3.2.3 Access for correction of defects:

Should the Contractor have to return to the Site after completion of the works to conduct an improvement or repair, the Contractor shall arrange all staff members required to perform the work and shall also carry the costs of such access.

4 Plant and Materials Standards and Workmanship

4.1 Investigation, Survey and Site Clearance

The *Contractor* is required to protect existing services prior to construction for the full extent of the site.

4.2 Drawings issued by the *Employer*

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

Drawing number	Title
PoN-A0000-001-01	COMBIMED FLOOR LAYOUTS
PoN-A0000-003-01	GROUND FLOOR
PoN-A0000-004-01	FIRST FLOOR
PoN-A0000-005-01	SECOND FLOOR
PoN-A0000-006-01	THIRD FLOOR
PoN-A0000-007-01	FOURTH FLOOR
H500204-1-120-M-GA-2100&2101-01-07-JV	BASEMENT & KILN HVAC & VENTILATION LAYOUT DRAWING
H500204-1-120-M-GA-2104-01-01-JV-	BASEMENT REFRIGERATION
H500204-1-120-M-GA-3100,3101&3102-01-07-JV	GROUND FLOOR HVAC VENTILATION LAYOUT
H500204-1-120-M-GA-3106-01-01-JV	GROUND FLOOR REFRIGERATION
H500204-1-120-M-GA-4100,4101&4102-01-05-JV-	FIRST FLOOR HVAC LAYOUT
H500204-1-120-M-GA-5100,5101&5102-01-04-JV-	SECOND FLOOR HVAC LAYOUT
H500204-1-120-M-GA-6100,6101&6102-01-05-JV-	THIRD FLOOR HVAC LAYOUT
H500204-1-120-M-GA-7100,7101&7102-01-04-JV-	FOURTH FLOOR PLANTROOM



H500204-1-120-M-GA-

8100-01-04-JV-

FIFTH FLOOR PLANTROOM

SECTION 2

5 Management and start up

5.1 Management meetings

The Contract will be managed through the New Engineering Contract, NEC 3 Engineering Construction, Option A: Priced Contract with Activity Schedule. Meetings of a specialist nature may be arranged as specified elsewhere in this Scope, or if not so specified by persons and at times and locations (Gqeberha or virtual) to suit the Parties, the nature, and the progress of the study. The person arranging the meeting within five (5) days of the meeting shall submit records of these meetings to the *Project Manager*.

The *Employer* and the *Contractor* will conduct A Kick-off Meeting, Technical Meetings, progress meetings, *Risk Reduction* and SHE Meetings. All meetings shall be recorded using minutes or a register prepared and circulated by the person who convened the meeting. The Contractor 's key personnel are expected to attend meetings with the objective to resolve problems/challenges including making available to either party, any data that may have bearing in the matter discussed in accordance with this contract.

The *Contractor* shall attend management meetings, bringing with supporting key personnel at the *Project Manager or Engineering Manager's* request as set out above. All meetings shall be held in either Gqeberha or virtual depending on the applicability. At these meetings the *Contractor* shall presents all relevant data including safety, health and environmental issues, progress reports, quality plans, sub-Contractor management reports, as may be required.

It is the *Employer's* specific intention that the Parties and their agents use the techniques of partnering to manage the contract by holding meetings designed to pro-actively and jointly manage the administration of the contract with the objective of justifying the opposing effects of risk for both Parties Regular meetings of a general nature may be convened and chaired by the *Project Manager* as follows:

Title and purpose	Approximate time & interval	Location	Attendance by:
Contract Management Meeting -	Monthly on a day and time	Port of Ngqura or Virtual	<i>Employer, Contractor, Supervisor and Project Manager.</i>



progress and feedback.	mutually to be agreed.		
Contract risk register and Compensation Events.	Monthly on a day and time mutually to be agreed.	Port of Ngqura or Virtual	<i>Employer, Contractor, Supervisor and Project Manager.</i>
Site Inspections.	Ad hoc.	Port of Ngqura	<i>Employer, Contractor, Supervisor and Project Manager.</i>
<i>Contractor</i> Safety Meetings.	Held Monthly with <i>Contractors</i> . Day and time to be agreed.	Port of Ngqura or Virtual	<i>TNPA Safety Advisors; Contractor Safety Officers and Contractor management / supervision and Project Manager.</i>
Safety Pre-Mobilisation Meeting.	Once off at the kick-off meeting.	Port of Ngqura	<i>Employer, Contractor (appropriate key persons), Supervisor (as necessary and appropriate delegates), and Project Manager (and appropriate delegates).</i>
Safety, Health and Environment Induction Training.	Once off Induction programme prior to commencing any work on site and each time for a new start.	Port of Ngqura	<i>Contractor (appropriate key persons), Contractor Supervisor (as necessary and appropriate delegates), Foreman and General Workforce.</i>

One (1) x Site investigation– Project site investigation will be an opportunity where the *Contractor* will meet with local authority to discuss design requirements, highlighting current issues and coordinate with the proposed scope of work.

5.2 Documentation Control

The *Contractor* shall submit all documentation complying with the *Employer's* standards and requirements.

- a) The *Employer* will issue relevant documentation to the *Contractor*, but control, maintenance and handling of these documents will be the *Contractor's* responsibility, at their expense and managed with a suitable document control system.
- b) All project documents issued to 3rd Parties and to the *Employer* must be submitted through the *Employer's* Document Control Department.
- c) In undertaking the study all documentation requirements for the study shall be dealt with in accordance with document DOC-STD-0001 (*Contractor* Documentation Submittal Requirements).
- d) The Documentation Schedule (CDS) is as contemplated in DOC-STD-0001.
- e) The *Contractor* documentation "Starter kit," as contemplated in DOC-STD-0001, will be issued at the kick-off meeting following award.
- f) All contract correspondence is issued through document control. All hardcopy communication will be delivered to the *Employer* via the Lead Document Controller. In the event of urgent communication, electronic communication can be transmitted to the *Employer's Agent*.
- g) Each supplier of documentation and data to the Project is responsible for ensuring that all documentation and data submitted conforms to the Project Standards and data Quality requirements in terms of numbering, uniqueness, quality, accuracy, format, completeness, and currency of information. Data not meeting the Project Standards and data Quality requirements will be cause for rejection and returned to the *Contractor* for corrective action and re-submission.
- h) Should any change be made to documentation or data, which has already been submitted to the Project, then new or revised documentation or data shall be issued to replace the out-dated information.
- i) All drawings supplied shall comply with the CAD Standards, i.e. ENG-STD-0001.

- j) It is the responsibility of all Project participants undertaking work on the Project to ensure they obtain and comply with the relevant requirements to suit their deliverables.
- k) The *Contractor* is to ensure that the latest versions of the required application software and a suitable 'IT' Infrastructure are in place to support the electronic transmission of documentation.
- l) All native files are to be submitted to the *Employer*. Electronic files submitted to the Project shall be clear of known viruses and irrelevant "instructions." The supplier of documentation is required to always have, the latest generation of virus protection software and up-to-date virus definitions.
- m) The required number of copies shall as a minimum be three (2) (1x original + 1 x hard copy), with the corresponding PDF and 'Native' file formats upon final submission.
- n) The *Contractor* shall apply "wet signatures" to the original Documentation before scanning the signed original and prior to formal submission.
- o) Final issues of all documentation shall be supplied to the Project in "wet signature" format along with the associated corresponding electronic 'native files' and PDF renditions.
- p) The *Contractor* shall ensure adequate resources are available to manage and execute the Document Control function as per the requirements of the Project.

5.3 Safety risk management

The *Contractor* shall provide a full time Safety Officer on Site.

The *Contractor* ensures that its Subcontractors comply with the requirements of the SMP.

No alcohol is permitted on Site and Transnet property. The *Employer* has a zero-tolerance policy in this regard and all personnel entering the Site will be required to undergo breathalyser tests.

Long pants are a requirement – no shorts can be worn on site.

The *Contractor* shall provide all personnel with the required PPE as detailed in the Health and Safety Plan and Standard. The following is to be worn as a minimum

- Hard hats
- Safety shoes
- Company Overalls
- Gloves
- Reflective vests
- Safety glasses
- Any other activity specific PPE required.

The *Contractor* shall provide transport for personnel in a safe manner. Transportation in the back of a light delivery vehicle is prohibited. The *Contractor* may transport workforce by means of busses to the respective areas of work.

5.4 Environmental constraints and management

The *Contractor* performs the *works* and all construction activities within the Site and Working Areas having due regard to the environment and to environmental management practices as more particularly described within the SES and PES.

The SES describes the minimal acceptable standard for environmental management for a range of environmental aspects commonly encountered on construction projects and sets environmental objectives and targets, which the *Contractor* observes and complies.

The PES may require higher minimal standards than those described in the SES as may be required by the *Project Manager* or Others.

The overarching obligations of the *Contractor* under the CEMP before construction activities commence on the Site and/or Working Areas is to provide an environmental method statement for a particular construction operation at the Site and/or Working Area by the *Contractor* and were requested by the CM and to comply with the following:

Where relevant, method statements, as detailed in the SES and PES, shall be provided by the *Contractor*. These include, but are not limited to, the following where applicable:

- Establishment of construction lay down area
- Hazardous and non-hazardous solid waste management
- Storm water management
- Contaminated water management

-
- Prevention of marine pollution
 - Hydrocarbon spills
 - Diesel tanks and refuelling procedures
 - Dust control
 - Spoil dumping
 - Sourcing, excavating, transporting, and dumping of fill material
 - Noise and vibration control
 - Removal of rare, endemic, or endangered species
 - Removal and stockpiling of topsoil
 - Rodent and pest control
 - Environmental awareness training
 - Site division
 - Emergency procedures for environmental incidents
 - *Contractor's* SHE Officer
 - Closure of construction laydown area

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

Where applicable, the *Contractor* ensures that he appoints a suitably qualified Subcontractor, to be approved by the *Project Manager*, to undertake the "Removal of rare, endemic or endangered species". This appointment must be completed at least three weeks before commencement of any other work on Site.

5.5 Quality assurance requirements

The *Contractor* shall ensure that all contractual deliverables required to be executed and completed are given due consideration to meet the client's Technical Specifications, Drawings and General Quality Requirements for Contractors and Suppliers (QAL-STD-0001).

The *Contractor* shall have, maintain, and demonstrate to the *Employer* the documented Quality Management System to be used in the performance of the scope. The *Contractor*

shall institute a quality management system, instruments and equipment required including providing adequate quality supervision and control for works at all times.

The *Contractor's* Quality Management System shall conform to International Standard ISO 9001:2015.

The *Contractor* submits his Quality Management System documents to the Employer as part of his programme under ECC Clause 31.2 to include details of:

- Project Quality Plan for the contract SHALL cover project scope and be aligned to ISO 9001:2015 QMS requirements.
- Valid ISO 9001:2015 certification. If it is a joint venture, any ISO 9001:2015 certificate of those in partnership will be accepted.
- Project Specific Quality Data Book Index
- Quality Control Plan MUST cover all Engineering disciplines and clearly identify all inspection, test, verification requirements to meet contractual obligations, specification and drawings as required by the project scope.

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

The *Employer* indicates those documents required to be submitted for information, review or acceptance and the *Contractor* indicates such requirements within his register of documents. The register shall indicate the dates of issue of the documents with the *Employer* responding to documents submitted by the *Contractor* for review or acceptance within the period for reply prior to such documents being used by the Contractor.

The Quality Plan shall outline the quality strategy, methodology, quality resource allocation, Quality Assurance and Quality Control co-ordination activities to ensure that the scope meet the standards stated in the Scope Information.

The *Contractor* shall nominate a suitably experienced quality representative for all aspects of the Works, including general Site activities, with a staff complement that is adequate to perform the requirements of the PQP.

The *Contractor* shall submit the CV of his nominated quality representative for the Project Manager's review and approval.

5.6 Programming constraints

- a) The *Contractor* presents their first programme and all subsequently revised programmes in hard copy format printed in full colour in A3 size and in soft copy 'Native' format. Note that PDF soft copy versions are not acceptable.
- b) The *Contractor* submits his Level 4 programme to the *Employer* for acceptance in the period stated in the Contract Data.
- c) The *Contractor* uses Primavera version 6 or Microsoft Project for his programme.
- d) The *Contractor* shows on his programme submitted for Acceptance and all subsequently revised programmes schedules (including calendar) the critical path or paths and all necessary logic diagrams demonstrating the order and timing of the operations which the *Contractor* plans to do.
- e) The *Contractor's* programme shows duration of operations in working days.

The *Contractor's* programme shows the following levels:

- Level 1 Master Schedule – defines the major operations.
- Level 2 Project Schedule – Breakdown showing different packages and/or disciplines involved in the project; a summary schedules 'rolled up' from Level 3 Project Schedule described below.
- Level 3 Project Schedule – detailed schedules generated to demonstrate all operations identified on the programme from the starting date to Completion. The *Employer* notifies any subsequent layouts and corresponding filters on revised programmes.
- Level 4 Project Schedule – detailed discipline speciality level developed and maintained by the *Contractor* relating to all operations identified on the programme representing the daily activities by each discipline.

The *Contractor* shows on each revised programme he submits to the *Employer* a resource histogram showing planned progress versus actual, deviations from the Accepted

Programme and any remedial actions proposed by the *Contractor*. The *Contractor's* weekly programme narrative report includes:

- Level 4 Project Schedule – showing two separate bars for each task i.e. the primary bar must reflect the current forecast dates and the secondary bar the latest Accepted programme.
- 3-week Look ahead Schedule - showing two separate bars for each task i.e. the primary bar must reflect the current forecast dates and the secondary bar the latest Accepted programme.

5.7 Contractor's management, supervision, and key people

The *Contractor* employs a CSHEO as a key person under ECC Clause 24.1

Minimum requirements of people employed on the Site are:

- The *Contractor* shall provide an adequate, experienced, and stable project team for the duration of the contract.
- It is a requirement of this contract that the *Contractor* will employ a full time, fully experienced Site Manager as key person who has been delegated sufficient authority to manage the contract efficiently on-site during construction.
- The *Contractor* shall employ personnel to perform functions of a Site Environmental officer, Safety Officer, and Quality Manager as key persons. These appointments shall have the necessary experience and be suitably qualified.
- The *Contractor* shall provide an Organogram of ALL his Key people (both as required by the *Employer* and as independently stated by the *Contractor* under Contract Data Part Two) and how.

5.8 Insurance provided by the *Employer*

Insurance provided by the *Employer* is contained in the Contract Data – Part 1.

5.9 Contracts change management

No additional requirements apply to ECC Clause 60 series.

5.10 Provision of bonds and guarantees

The form in which a bond or guarantee required by the conditions of contract (if any) is to be provided by the *Contractor* is given in Part 1 Agreements and Contract Data, document C1.3, Sureties.

The *Contractor* provides a bond or guarantee as required by the conditions of contract concurrently with the execution by the Parties of the form of agreement for the ECC contract.

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

The *Contractor* keeps the following records available for the *Project Manager* to inspect:

- Records of design employee's location of work (if appropriate).
- Records of Equipment used, and people employed outside the Working Areas (if applicable).

5.12 The Contractor's Invoices

When the *Project Manager* certifies payment (see ECC Clause 51.1) following an assessment date, the Contractor complies with the *Employer's* procedure for invoice submission.

The invoice must correspond to the *Project Manager's* assessment of the amount due to the *Contractor* as stated in the payment certificate.

The invoice states the following:

Invoice addressed to Transnet SOC Ltd.

Transnet SOC Limited's VAT No: 4720103177.

Invoice number.

The *Contractor's* VAT Number; and

Purchase Order Number and

The Contract numbers

The invoice contains the supporting detail

The invoice is presented either by electronic mail or hand delivery.

Invoices submitted electronically are addressed to:

Invoices submitted by hand are presented to:

Transnet National Ports Authority eMendi Administration Building

Port of Ngqura,

N2, Neptune Road,

Off Klub Road,

Gqeberha

For the attention of

The invoice is presented as an original.

5.13 CONTRACTOR LIABILITY

The *Contractor* warrants that it will be liable to Transnet for any loss or damage caused by strikes, riots, lockouts or any labour disputes by and/or confined to the *Contractor's* employees, which loss will include any indirect or consequential damages.

The *Contractor* warrants that no negotiations or feedback meetings by the *Contractor's* employees shall take place on Transnet premises, whether owned or rented by Transnet.

The *Contractor* shall give notice to Transnet of any industrial action by the *Contractor's* employees immediately upon becoming aware of any actual or contemplated action that is or may be carried out on Transnet's premises, whether owned or rented, and shall notify Transnet of all matters associated with such action that may potentially affect Transnet.

The *Contractor* is responsible for educating its employees on relevant provisions of the Labour Relations Act which deal with industrial action processes, and the risks of non-compliance.

The *Contractor* is required to develop a Contingency Strike Handling Plan, which plan the *Contractor* is obliged to update on a three-monthly basis. The *Contractor* must provide

Transnet with this plan and all updates to the Plan. The *Contractor* is responsible to communicate with its employees on site details of the plan.

5.14 INDUSTRIAL ACTION BY CONTRACTOR EMPLOYEES

In the event of any industrial action by the *Contractor's* employees, the *Contractor* is required to provide competent contingency resources permitted in law to carry out any of the duties that are or could potentially be interrupted by industrial action in delivering the Service.

The *Contractor* warrants that it will compensate Transnet for any costs Transnet incurs in providing additional security to deal with any industrial action by the *Contractor's* employees.

In the event of any industrial action by the *Contractor's* employees, the *Contractor* is obliged to prepare and deliver to Transnet, within two (2) hours of the commencement of industrial action an Industrial Action Report. If the industrial action persists the *Contractor* is required to deliver the report at 8h30 each day.

The Industrial Action Report must provide at least the following information:

- Industrial incident report,
- Attendance register,
- Productivity / progress to schedule reports,
- Operational contingency plan,
- Site security report,
- Industrial action intelligence gathered.

The final Industrial Action Report is to be delivered 24 hours after finalisation of the industrial action.

The management of the *Contractor* is required to hold a daily industrial action teleconference with personnel identified by Transnet to discuss the industrial action, settlement of the industrial action, security issues and the impact on delivery under the contract.

The resolution of any disputes or industrial action by the *Contractor's* employees is the sole responsibility of the *Contractor*.

Access to Transnet premises by the *Contractor* and its employees is only provided for purposes of the *Contractor* delivering its goods and services to Transnet. Should the *Contractor* and its employees not, for any reason, be capable of delivering its goods and services, Transnet is entitled to restrict or deny access onto its premises and unless otherwise authorized; such person will be deemed to be trespassing.

5.15 Plant, Equipment and Materials

The *Contractor* provides Plant, Equipment and/or Materials for inclusion in the works in accordance with SANS 1200A sub-paragraph 2.1, unless otherwise stated elsewhere in the Works Information provided by the *Employer*. All Plant, Equipment and/or Materials are new, unless the use of old or refurbished Plant, Equipment and/or Materials are expressly permitted as stated elsewhere in this Works Information or as may be subsequently instructed by the *Project Manager*.

Where Plant, Equipment and/or Materials for inclusion in the works originate from outside the Republic of South Africa, all such Plant, Equipment and/or Materials are new and of merchantable quality, to a recognised national standard, with all proprietary products installed to manufacturers' instructions.

The Contractor replaces any Plant, Equipment and/or Materials subject to breakages (whether in the Working Areas or not) or any Plant, Equipment and/or Materials not conforming to standards or specifications stated and notifies the Project Manager and the Supervisor on each occasion where replacement is required.

SECTION 3

C3.2 *CONTRACTOR'S WORKS INFORMATION*

The *Contractor* submits with his tender details and specifications for all equipment and systems required for the *works*. These details shall include manufacturing, erection and application details where applicable, performance characteristics as well as any applicable warranties and guarantees

PART C4: SITE INFORMATION

Document reference	Title	No of pages
	This cover page	1
	Contents Table	2
	Site Information	3-5
	Total number of pages	5

Contents

Part c4: site information	1
C4.1.1. General Site Description.....	3
C4.1.2. Working Hours	4
C4.1.3. Access Permit Controls	4
C4.1.4. Health and Safety	4
C4.1.5. Site Facilities.....	5
C4.1.6. Existing services	5

C4.1. Description of the Site and its surroundings

C4.1.1. General Site Description

Gqeberha, previously known as Port Elizabeth, is located approximately 290 km South-West of East London in province of the Eastern Cape. The Metro is on the western portion of Algoa Bay along the southern coast of South Africa following GPS coordinates: 33°54'01"S 25°35'35"E. The climate is oceanic with an even climate throughout the year. High and low temperatures during summer (December, January, and February) are approximately 25°C and 16°C respectively. Winters (June, July, and August) are mild with mean maximum and minimum temperatures of approximately 20°C and 9°C respectively. Although the area is a summer rainfall region significant falls may occur at any time of year. Wind directions are typically from the west or south-west throughout the year.

The Emendi Admin Building is accessed via public roads, off the N2 route from East London to Gqeberha. The work site is situated within the Port of Ngqura and access to site is via Klub Road within the port boundary. The eMendi Building is located off Klub Road, 600m past the onramp.

The eMendi Admin building is occupied by TNPA employees and it serves as an administration building for various departments within the Port. The area is in full operations during the week, with normal working hours from 07:30 – 16:30 from Monday to Friday. The contractor's plan for the execution of the works must not cause any disruptions to the Port operations and personnel currently occupying the building.

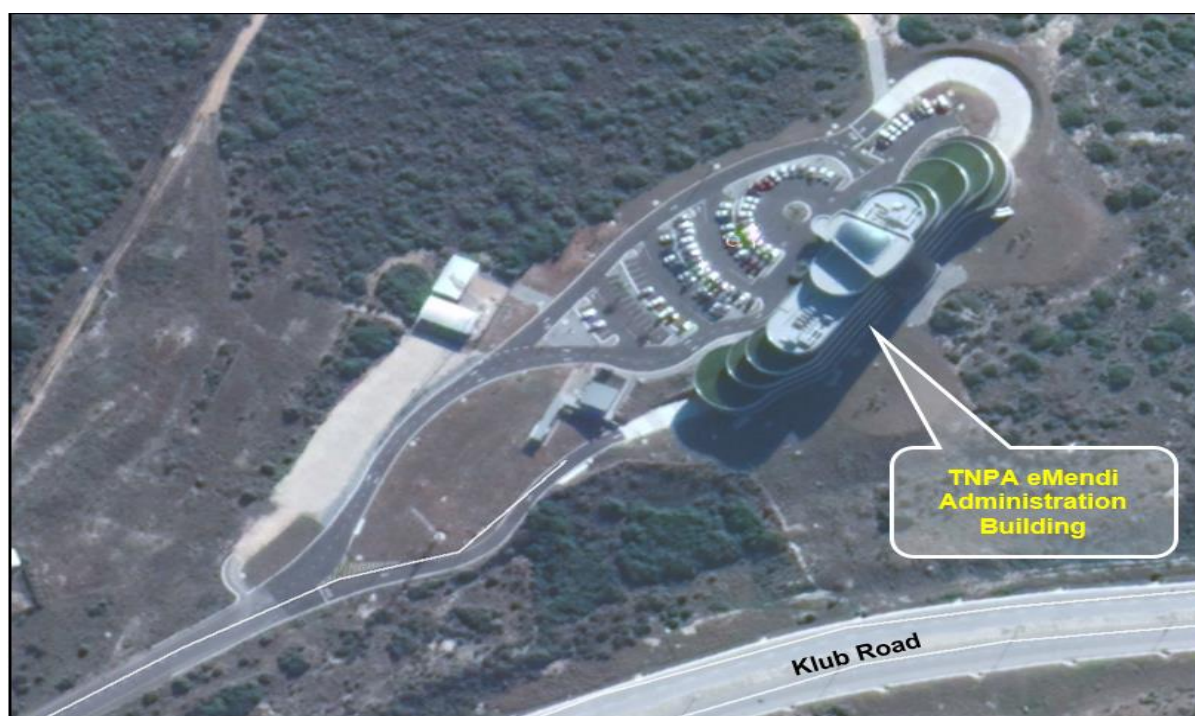


Figure 1: Locality Map for the location of the eMendi Admin Building

The Tenderers shall attend a site visit and acquaint themselves with the nature of the Works, the conditions under which the work is to be performed, and the means of access to the site, any limitations, or other authorities and in general with all matters that may influence or affect the contract.

The Tenderers shall be deemed to have allowed in their tender for any additional cost to be involved due to the foregoing.

Access shall be subject to the Employer's security requirements and regulations.

No additional access to the site may be formed through the vegetation.

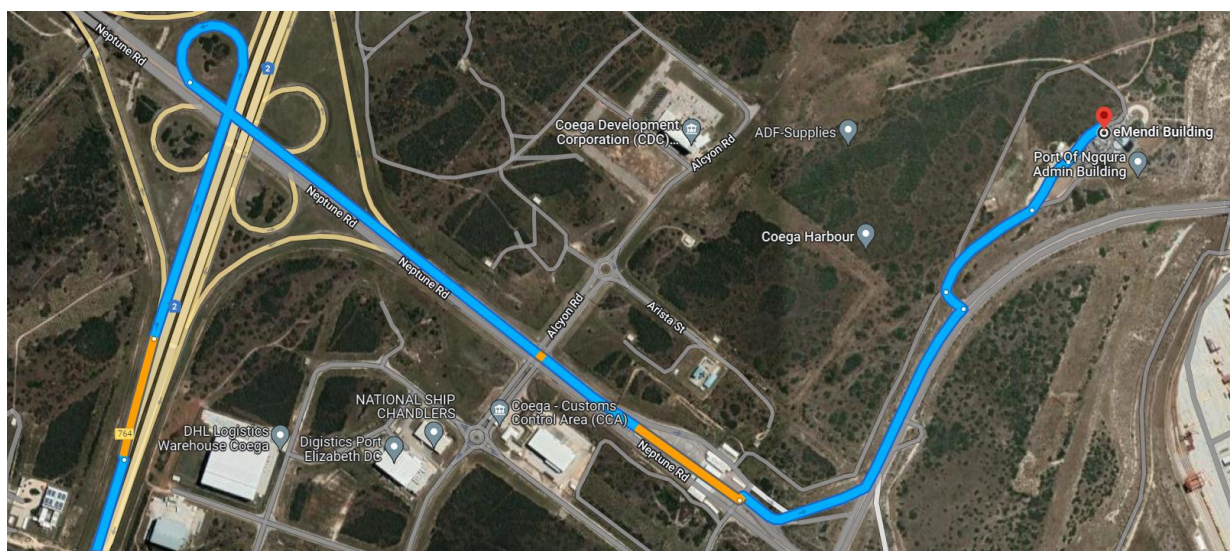


Figure 2: Access to Site Map

C4.1.2. Working Hours

Normal working hours at the Port of Ngqura are from 07:30 to 16:30, Monday to Friday.

C4.1.3. Access Permit Controls

There is a card access system to enter the Port Area. The Port Staff will arrange the required access permits and issue them to the contractor free of charge. Should any person lose his/her access permit these will be replaced at a cost of R 360-00 per person, to be paid by the Contractor. This will also apply if permits are not returned at the end of the project completion.

C4.1.4. Health and Safety

Transnet National Ports Authority has a strict health and safety policy in place. No persons may enter

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DESCRIPTION OF THE WORKS: FOR THE PARTITIONING OF THE EMENDI ADMINISTRATION BUILDING, PORT OF NGQURA

the site and undertake work on the site until undergoing the mandatory medicals and induction as well as submission of the Contractors health and safety file for acceptance by the Client. The induction will be arranged by the Port staff at no cost to the Contractor.

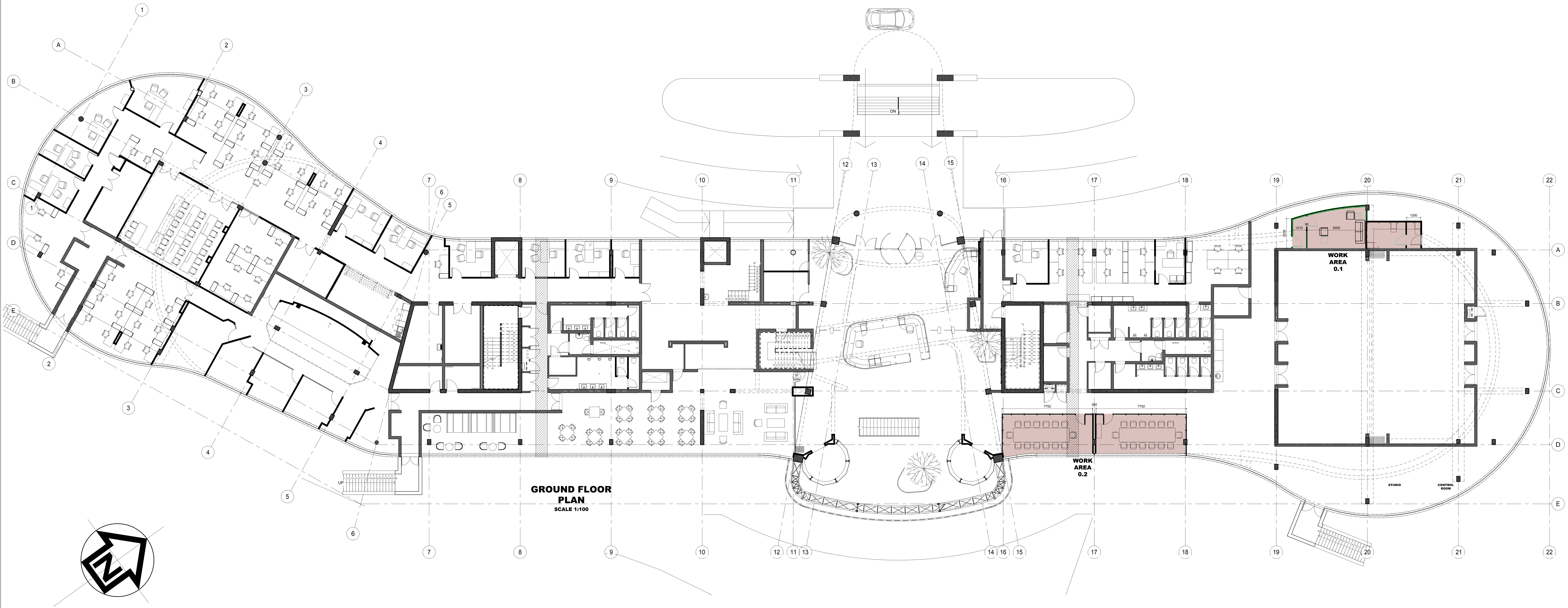
C4.1.5. Site Facilities

The Contractor may only make use of the public toilets within the areas where the Services are to be conducted.

C4.1.6. Existing services

All known services within the works area are in the Employer's As-built drawings. However, precautions should be taken during execution of the works to avoid damages in unknown services.

Annexure A



SCOPE OF WORKS

Work Area 0.1 - CONVERT EXHIBITION SPACE TO BROADCAST STUDIO

- Design Supply & Install equipment for wall panels and wall development doors
- Allow for access control
- Allow for signage to doors to match that on existing doors
- Allow for raised floor and entrance ramp (existing under floor)
- Make good to affected floor walls and ceiling
- Allow for alterations to Electrical, HVAC and Fire Layouts
- Allow for alterations to Access Control Systems
- Allow for AVI Work

Work Area 0.2 - CONSTRUCT 2 MEETING ROOMS IN EXHIBITION SPACE

- Design Supply & Install glass partition partitions and glass aluminium single doors
- Allow for privacy film / doors
- Allow for signage to doors to match that on existing doors
- Make good to affected floor walls and ceiling
- Allow for alterations to Electrical, HVAC and Fire Layouts
- Allow for AVI Work

NH - HARBOUR MASTER		NH - FINANCIAL MANAGER	
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NH - RISK MANAGER		NH - ENVIRONMENTAL MANAGER	
SIGNATURE	DATE	SIGNATURE	DATE
NH - SECURITY MANAGER		NH - PROPERTY MANAGER	
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NH - CORPORATE AFFAIRS MANAGER		NH - MARINE OPERATIONS MANAGER	
SIGNATURE	DATE	SIGNATURE	DATE
NH - MARKETING MANAGER		NH - CHIEF FIRE OFFICER	
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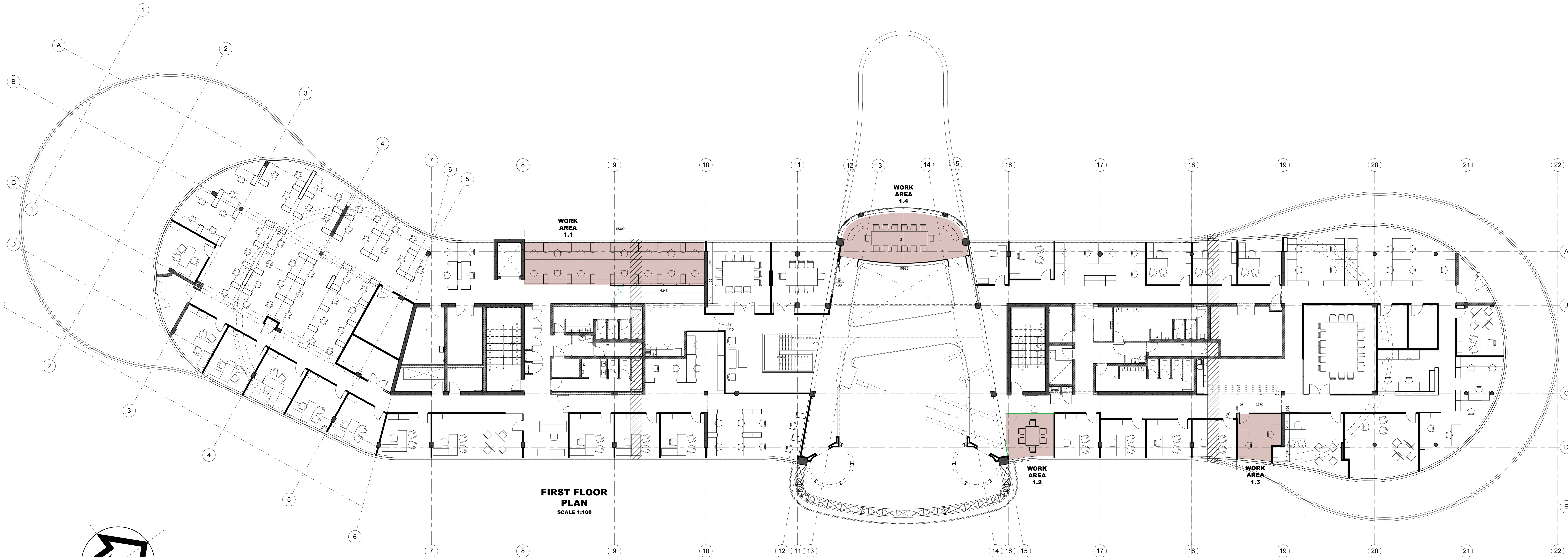
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DESIGNED BY	TA	NH - DEPUTY PORT ENGINEER	
CHECKED BY	LDP	SIGNATURE	DATE
DRAWN BY	TA	NH - PORT ENGINEER	
CHECKED BY	LDP	SIGNATURE	DATE

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Annexure B



SCOPE OF WORKS

Work Area 1.1 - CREATE PASSAGE AT OPEN PLAN OFFICE OPPOSITE KITCHEN

- Design Supply & install glass partitions including 15 folding glass door
- From floor to ceiling, to match existing shopfront in building
- Allow for apogee to door, to match that on existing doors
- Allow for installation of all glass sections
- Make good to affected floor walls and ceiling
- Allow for attention to Electrical, HVAC and Fire Layouts
- Allow for attention to Access Control Systems

Work Area 1.2 - CONVERT OPEN SPACE TO MEETING ROOM

- Design Supply & install glass and drywall partitions including glass doors, from floor to ceiling, to match existing Partitions and Shopfront in building
- Allow for apogee to doors, to match that on existing doors
- Allow for installation of all glass sections
- Make good to affected floor walls and ceiling
- Allow for attention to Electrical, HVAC and Fire Layouts
- Allow for attention to Access Control Systems

Work Area 1.3 - ENCLOSE EXISTING OPEN PLAN OFFICE

- Design Supply & install drywall partitions including single glass door, from floor to ceiling, to match existing Shopfront in building
- Make good to affected floor walls and ceiling
- Allow for attention to Electrical, HVAC and Fire Layouts
- Allow for attention to Access Control Systems

Work Area 1.4 - CONSTRUCT MEETING ROOM IN ATRIUM OPEN SPACE

- Design Supply & install glass shopfront partitions including double glass doors, from floor to ceiling, to match existing Shopfront in building
- Design and construct a suspended "bolthead" roof / ceiling structure
- Allow for installation of all glass sections
- Allow for removal of wall partitions
- Allow for new carpet lines on floor
- Make good to affected floor walls and ceiling
- Allow for attention to Electrical, HVAC and Fire Layouts
- Allow for attention to Access Control Systems

NH - HARBOUR MASTER		NH - FINANCIAL MANAGER	
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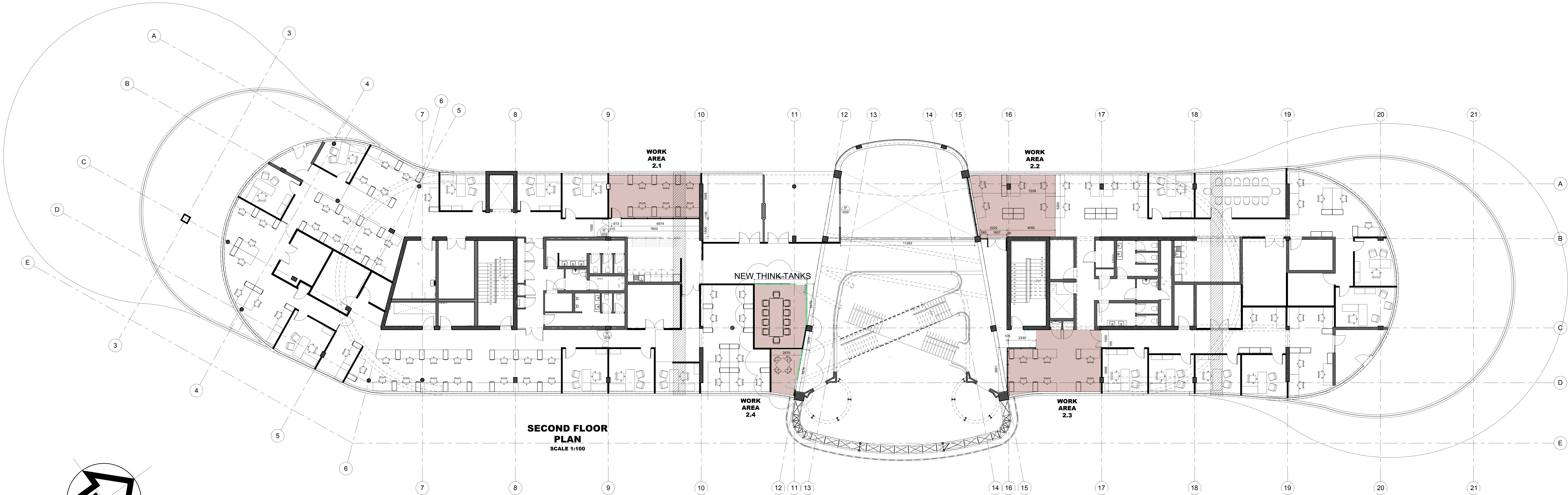
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CHECKED BY	LDP	SIGNATURE
DRAWN BY	TA	NH - PORT ENGINEER MR. G. DU PLESSIS PR.205470102
CHECKED BY	LDP	SIGNATURE

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Annexure C



- SCOPE OF WORKS
- Work Area 2.1 - ENCLOSE EXISTING OPEN PLAN OFFICE
- Design Supply & Install glass partitions including single glass door, from floor to ceiling, to match existing Shopfronts in building
 - Allow for signage to door, to match that on existing doors
 - Allow for alteration to Electrical, HVAC and Fire Layouts
 - Allow for alteration to Access Control Systems
- Work Area 2.2 - ENCLOSE EXISTING OPEN PLAN OFFICE
- Design Supply & Install glass partitions including 1.5m x 2.1m glass door, from floor to ceiling, to match existing Shopfronts in building
 - Allow for signage to door, to match that on existing doors
 - Allow for alteration to Electrical, HVAC and Fire Layouts
 - Allow for alteration to Access Control Systems
- Work Area 2.3 - ENCLOSE EXISTING OPEN PLAN OFFICE
- Design Supply & Install glass partitions including 1.5m x 2.1m glass door, from floor to ceiling, to match existing Shopfronts in building
 - Allow for signage to door, to match that on existing doors
 - Allow for alteration to Electrical, HVAC and Fire Layouts
 - Allow for alteration to Access Control Systems
- Work Area 2.4 - NEW MEETING ROOMS
- Design Supply & Install glass partitions including single glass door, from floor to ceiling, to match existing Shopfronts in building
 - Allow for signage to door, to match that on existing doors
 - Allow for alteration to Electrical, HVAC and Fire Layouts
 - Allow for alteration to Access Control Systems

NH - HARBOUR MASTER		NH - FINANCIAL MANAGER	
SIGNATURE	DATE	SIGNATURE	DATE
NH - RISK MANAGER		NH - ENVIRONMENTAL MANAGER	
SIGNATURE	DATE	SIGNATURE	DATE
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SIGNATURE	DATE	SIGNATURE	DATE

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DRAWING TITLE
SECOND FLOOR
AS-IS LAYOUT
CURRENT SPACE USAGE

DATE	2012-10-15	NH - DESIGN CENTRE MANAGER	
SCALE	AS SHOWN	SIGNATURE	DATE
DESIGNED BY	TA	NH - DEPUTY PORT ENGINEER	
CHECKED BY	GdP	SIGNATURE	DATE
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CHECKED BY	GdP	SIGNATURE	DATE

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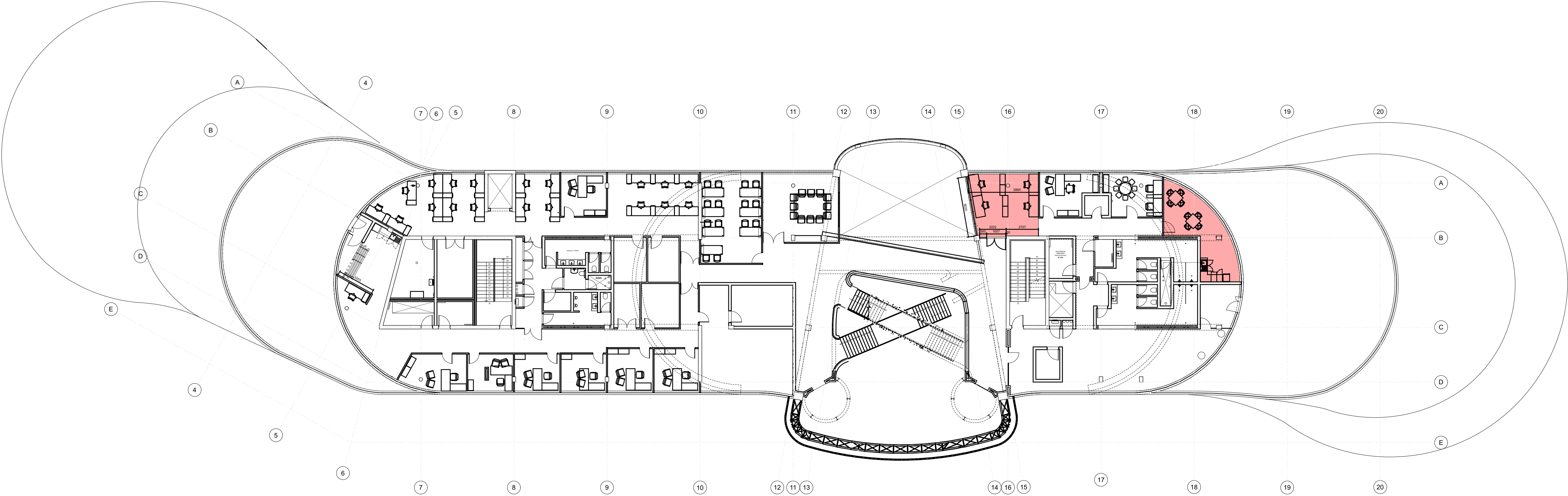
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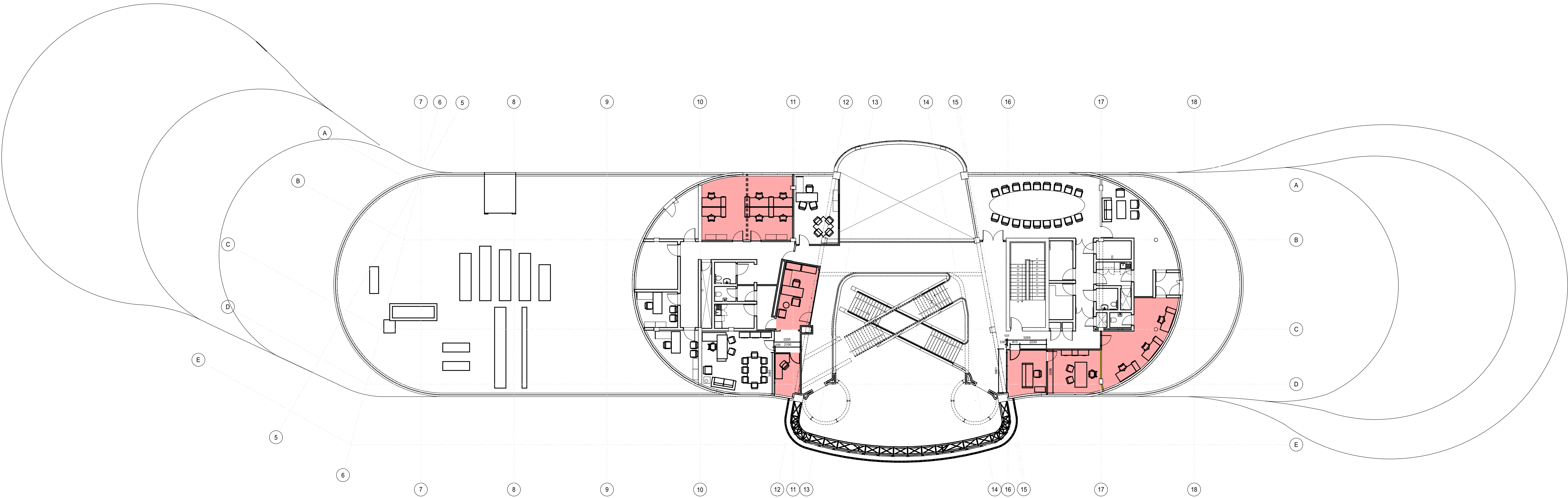
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Annexure D



THIRD FLOOR

Annexure E



FOURTH FLOOR

Transnet Health and Safety Management

Health and Safety Specification:

Alterations to the eMendi Building, Port of Ngqura

Project Number: XHO.E.006

Prepared by: S. Ahmed 15/08/2022
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1. Project Description

Transnet National Port Authority's Head Office have recently relocated the Parktown, Johannesburg and Kingsmead, Durban offices to the eMendi Building at the Port of Ngqura. The eMendi building was commissioned in April 2017, however there was some outstanding scope that could not be done due to budget constraints. Parking bays were amongst the outstanding scope as well as alterations to the building itself which will include, but not limited to, a library and registry. The optimum occupation capacity of the building has been estimated at 371 occupants.

There has been limited parking bays since the relocation of the Head Office employees and the need for additional parking bays has become necessary. Currently the eMendi building has 135 parking bays including the basement parking.

Therefore approximately 215 additional parking bays are required.

With the relocation of the TNPA head office to the port of Ngqura (eMendi building), an opportunity presented itself to maximize the occupancy potential of the building through a reconfiguration of the office space. The building maximum capacity ranged between 300 to 380 people and measures 10 000m² in size. This allowed for spatial reconfiguration to maximize the building capacity to 372 occupants and those reconfigurations were implemented in August 2021 in preparation for the relocation which took place in September 2021.

2. Scope and Purpose

This health and safety specification outlines the working behaviours and safe work practices that must be implemented and complied with by all Transnet employees, Contractors, Consultants, Visitors and Suppliers, that will be undertaking activities associated with the eMendi Additional Parking Project at the Port of Ngqura. 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.

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.

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.

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 OSHAct, 1993 (Act 85 of 1993) and CR 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).

EPCM Consultant

An Engineering, Procurement, and Construction Management Contractor appointed by TRANSNET in order to involve an experienced associate in large projects to manage the entire, or parts of the, project on behalf of TRANSNET. This role will be performed by TRANSNET on this project.

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 (suvs), 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 (OHS Act, Constr. Regulations 9)

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 detailed 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.

When carrying out a Baseline Risk Assessment or a Task-Based Risk Assessment (refer to Section 7.2), Hazard (Energy) Types must be specified in accordance with the categorisation detailed in Table 7-1. Risk scenarios must be described indicating the manner in which a person may come into contact with, or be exposed to, a specific hazard.

An initial risk rating must be assigned to each risk scenario without taking any control measures into consideration. Control measures for managing the risks to levels that are as low as is reasonably practicable must then be identified for implementation on the

project, and a residual risk rating must be assigned to each risk scenario taking the identified control measures into consideration.

Ratings must be assigned qualitatively using TRANSNET consequence and likelihood scales and descriptors (i.e. TRANSNET 5x5 qualitative risk matrix). Refer to Tables 7-2, 7-3 and 7-4.

Table 7-1: Hazard (Energy) Types

Gravitational							
Falling or Rolling Object	Person Falling from Height	Slip, Trip or Fall (Same Level)	Collapsing Structure	Collapsing, Slumping or Flowing Material or Substance			
Mechanical							
Moving Component of Fixed Machinery	Moving Component of Powered Tool	Projectile	Moving Hand Tool	Sharp Object	Moving Mobile Equipment or Light Vehicle	Moving Person	Moving Object (Mechanically or Manually)
Elastic							
Object under Tension or Compression				Compressed Fluid (Gas or Liquid)			
Acoustic							
Noise							
Vibrational							
Hand / Arm Vibration				Whole Body Vibration			
Electrical							
Electricity				Electro-Magnetic Field			
Radiation							
Ionising Radiation				Non-Ionising Radiation			
Illumination							
Lighting							
Thermal							
Heat				Cold			

Fire																	
Fire																	
Explosion																	
Explosion																	
Particulates and Aerosols																	
Dust		Fibres		Fume		Spray		Mist		Smoke							
Chemical																	
Corrosive Substance		Irritant		Asphyxiate		Narcotic / Anaesthetic		Poison		Allergen / Sensitizer		Carcinogen		Teratogen / Mutagen		Venom	
Microbiological																	
Virus			Bacterium			Parasite			Fungus								
Weather																	
Lightning			High Wind			Flooding			Hail								
Physiological																	
Stress					Fatigue												
Ergonomic																	
Exertion			Repetitive Movement			Awkward Posture			Awkward Movement								

Table 7-2: Consequence Descriptors

Consequence	Insignificant	Minor	Moderate	Major	Catastrophic
Health	Reversible health effects of little concern, requiring first aid treatment at most.	Reversible health effects of concern that would typically result in	Reversible health effects of concern that would typically result in a	Single fatality, or irreversible health effects or disabling illness.	Multiple fatalities or permanent disabling illness to multiple people.

Consequence	Insignificant	Minor	Moderate	Major	Catastrophic
		medical treatment.	lost time illness.		
Safety	Low-level, short-term subjective inconvenience or symptoms. Typically a first aid case requiring no medical treatment.	Reversible injury requiring treatment, but not leading to restricted duties. Typically a medical treatment case.	Reversible injury or moderate irreversible damage or impairment. Typically a lost time injury.	Single fatality, or considerable irreversible damage or impairment.	Multiple fatalities or permanent disabling injury to multiple people.

Table 7-3: Likelihood Descriptors

Likelihood	Likelihood Description	Frequency	Substance Exposure
Almost Certain	Recurring event during the life-time of the project.	Typically occurs more than twice per year.	Frequent (daily) exposure at > 10 x OEL.
Likely	Event that may occur frequently during the life-time of the project.	Typically occurs once or twice per year.	Frequent (daily) exposure at > OEL.
Possible	Event that may occur during the life-time of the project.	Typically occurs once in 5 years.	Frequent (daily) exposure at > 50% of OEL. Infrequent exposure at > OEL.

Likelihood	Likelihood Description	Frequency	Substance Exposure
Unlikely	Event that is unlikely to occur during the life-time of the project.	Typically occurs once in 10 years.	Frequent (daily) exposure at > 10% of OEL. Infrequent exposure at > 50% of OEL.
Conceivable but improbable	Event that is very unlikely to occur during the life-time of the project.	Typically occurs once in 100 years.	Frequent (daily) exposure at < 10% of OEL. Infrequent exposure at > 10% of OEL.

Table 7-4: Risk Matrix

Risk Calculator		Consequence				
		Insignificant	Minor	Moderate	Major	Catastrophic
Likelihood		1	2	3	4	5
Almost Certain	5	Moderate (5)	High (10)	High (15)	Extreme (20)	Extreme (25)
Likely	4	Low (4)	Moderate (8)	High (12)	Extreme (16)	Extreme (20)
Possible	3	Low (3)	Moderate (6)	Moderate (9)	High (12)	High (15)
Unlikely	2	Low (2)	Low (4)	Moderate (6)	Moderate (8)	High (10)
Conceivable but improbable	1	Low (1)	Low (2)	Low (3)	Low (4)	Moderate (5)

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 Practitioner 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 CR 9 sub regulation (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 is registered with SACPCMP (South African Council for Project and Construction Management) and 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).

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 Health and Safety Officers

The contractor must appoint a full-time 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 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 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 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 Health and Safety Officers.

Each Contractor 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 Health and Safety Officer is adequately equipped to enable him to perform his duties effectively. Each 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 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 as a Health and Safety Officer on construction projects;
- 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 Health and Safety Officer or 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 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 Lead 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 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 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 supervisor being physically present in the work area(s) and without a daily safety task instruction having been completed.

Each Contractor 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 supervisor must accept these responsibilities in writing as part of his appointment.

Each 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

As per the Construction regulations of 2014, regulation 5(1) – (8) a client will—

- Prepare a baseline risk assessment for an intended construction work project;
- Prepare a suitable, sufficiently documented and coherent site specific health and safety specification for the intended construction work based on the baseline risk assessment contemplated in paragraph
- Provide the designer with the health and safety specification contemplated in paragraph (b);
- Ensure that the designer takes the prepared health and safety specification into consideration during the design stage;
- Ensure that the designer carries out all responsibilities contemplated in CR regulation 6;
- Include the health and safety specification in the tender documents;

- Ensure that potential principal contractors submitting tenders have made adequate provision for the cost of health and safety measures;
- Ensure that the principal contractor to be appointed has the necessary competencies and resources to carry out the construction work safely;
- Take reasonable steps to ensure co-operation between all contractors appointed by the client to enable each of those contractors to comply with these Regulations;
- Ensure before any work commences on a site that every principal contractor is registered and in good standing with the compensation fund or with a licensed compensation insurer as contemplated in the Compensation for Occupational Injuries and Diseases Act, 1993 (Act No. 130 of 1993);
- Appoint every principal contractor in writing for the project or part thereof on the construction site;
- Discuss and negotiate with the principal contractor the contents of the principal contractor's health and safety plan contemplated in CR regulation 7(1), and must thereafter finally approve that plan for implementation;
- Ensure that a copy of the principal contractor's health and safety plan is available on request to an employee, inspector or contractor;
- Take reasonable steps to ensure that each contractor's health and safety plan contemplated in
- CR Regulation 7(1)(a) is implemented and maintained;
- Ensure that periodic health and safety audits and document verification are conducted at intervals mutually agreed upon between the principal contractor and any contractor, but at least once every 30 days;
- Ensure that a copy of the health and safety audit report contemplated in paragraph (o) is provided to the principal contractor within seven days after the audit;
- Stop any contractor from executing a construction activity which poses a threat to the ensure that a copy of the health and safety audit report contemplated in paragraph (o) is provided to the principal contractor within seven days after the audit;
- Stop any contractor from executing a construction activity which poses a threat to the health and safety of persons which is not in accordance with the client's health and safety specifications and the principal contractor's health and safety plan for the site;

- Where changes are brought about to the design or construction work, make sufficient health and safety information and appropriate resources available to the principal contractor to execute the work safely; and
- Ensure that the health and safety file contemplated in CR regulation 7(1) (b) is kept and maintained by the Principal contractor.

Where a client requires additional work to be performed as a result of a design change or an error in Construction due to the actions of the client, the client must ensure that sufficient safety information and appropriate additional resources are available to execute the required work safely.

Where a fatality or permanent disabling injury occurs on a construction site, the client must ensure that the contractor provides the provincial director with a report contemplated in section 24 of the Act, in accordance with regulations 8 and 9 of the General Administrative Regulations, 2013, and that the report includes the measures that the contractor intends to implement to ensure a safe construction site as far as is reasonably practicable.

Where more than one principal contractor is appointed as contemplated in sub-regulation CR 5(1) (k), the client must take reasonable steps to ensure co-operation between all principal contractors and Contractors in order to ensure compliance with these Regulations. Notification of construction work to DOL is required for this project as contemplated in CR regulation 4(1).

10.7 Duties of the Designer

As per the Construction regulations of 2014, regulation 6(1) – (2) a designer must –

- Ensure that the applicable safety standards incorporated into these Regulations under section 44 of the Act are compiled within the design;
- Take into consideration the health and safety specification submitted by the client;
- Before the contract is put out to tender, make available in a report to the client—
- All relevant health and safety information about the design of the relevant structure that may affect the pricing of the construction work;
- The geotechnical-science aspects, where appropriate; and
- The loading that the structure is designed to withstand;
- Inform the client in writing of any known or anticipated dangers or hazards relating to the construction work, and make available all relevant information required for the

safe execution of the work upon being designed or when the design is subsequently altered;

- When modifying the design or substituting materials; take into account the hazards relating to any subsequent maintenance of the relevant structure and must make provision in the design for that work to be performed to minimize the risk;
- When mandated by the client to do so, carry out the necessary inspections at appropriate stages to verify that the construction of the relevant structure is carried out in accordance with his design: Provided that if the designer is not so mandated, the client's appointed agent in this regard is responsible to carry out such inspections;
- When mandated stop any contractor from executing any construction work which is not in accordance with the relevant design's health and safety aspects: Provided that if the designer is not so mandated, the client's appointed agent in that regard must stop that contractor from executing that construction work;
- When mandated in his or her final inspection of the completed structure in accordance with the National Building Regulations, include the health and safety aspects of the structure as far as reasonably practicable, declare the structure safe for use, and issue a completion certificate to the client and a copy thereof to the contractor; and
- During the design stage, take cognisance of ergonomic design principles in order to minimize ergonomic related hazards in all phases of the life cycle of a structure.

The designer of temporary works must ensure that -

- All temporary works are adequately designed so that it will be capable of supporting all anticipated vertical and lateral loads that may be applied;
- The designs of temporary works are done with close reference to the structural;
- The designs of temporary works are done with close reference to the structural design drawings issued by the contractor, and in the event of any uncertainty consult the contractor;
- All drawings and calculations pertaining to the design of temporary works are kept at the office of the temporary works designer and are made available on request by an inspector; and
- The loads caused by the temporary works and any imposed loads are clearly indicated in the design.

10.8 Duties of Principal Contractor

As per the Construction regulations of 2014, regulation 7(1) – (8) a Principal Contractor and Contractor must

- Provide and demonstrate to the client a suitable, sufficiently documented and coherent site specific health and safety plan, based on the client's documented health and safety specifications contemplated in CR 5(1)(b), which plan must be applied from the date of commencement of and for the duration of the construction work and which must be reviewed and updated by the principal contractor as work progresses;
- Open and keep on site a health and safety file, which must include all documentation required in terms of the Act and these Regulations, which must be made available on request to an inspector, the client, the client's agent or a contractor; and
- On appointing any other contractor, in order to ensure compliance with the provisions of the Act:

Provide contractors who are tendering to perform construction work for the principal contractor, with the relevant sections of the health and safety specifications contemplated in CR regulation 5(1)(b) pertaining to the construction work which has to be performed;

- Ensure that potential contractors submitting tenders have made sufficient provision for health and safety measures during the construction process;
- Ensure that no contractor is appointed to perform construction work unless the principal contractor is reasonably satisfied that the contractor that he or she intends to appoint, has the necessary competencies and resources to perform the construction work safely;
- Ensure prior to work commencing on the site that every contractor is registered and in good standing with the compensation fund or with a licensed compensation insurer as contemplated in the Compensation for Occupational Injuries and Diseases Act, 1993;
- Appoint each contractor in writing for the part of the project on the construction site;
- Ensure that a copy of his or her health and safety plan contemplated in paragraph (a),
- As well as the contractor's health and safety plan contemplated in CR 7 sub-regulation (2)(a), is available on request to an employee, an inspector, a contractor, the client or the client's agent;
- Hand over a consolidated health and safety file to the client upon completion of the construction work and must, in addition to the documentation referred to in CR 7 sub-

regulation (2)(b), include a record of all drawings, designs, materials used and other similar information concerning the completed structure;

- In addition to the documentation required in the health and safety file in terms of paragraph (c)(v) and CR 7 sub-regulation (2)(b), include and make available a comprehensive and updated list of all the contractors on site accountable to the principal contractor, the agreements between the parties and the type of work being principal contractor, the agreements between the parties and the type of work being done; and
- Ensure that all his or her employees have a valid medical certificate of fitness, inclusive of a drug test and specific to the Construction work to be performed and issued by an occupational health practitioner in the form of Annexure 3.

10.9 Duties of Contractor

A contractor must -

- Prior to performing any construction work, provide and demonstrate to the principal contractor a suitable and sufficiently documented health and safety plan, based on the relevant sections of the client's health and safety specification and provided by the principal contractor, which plan must be applied from the date of commencement of and for the duration of the construction work and which must be reviewed and updated by the contractor as work progresses;
- Open and keep on site a health and safety file, which must include all documentation required and must be made available on request to an inspector, the client, the client's agent or the principal contractor;
- Before appointing another contractor to perform construction work be reasonably satisfied that the contractor that he or she intends to appoint has the necessary competencies and resources to perform the construction work safely;
- Co-operate with the principal contractor as far as is necessary to enable each of them to comply with the provisions of the Act; and
- As far as is reasonably practicable, promptly provide the principal contractor with any information which might affect the health and safety of any person at work carrying out construction work on the site, any person who might be affected by the work of such a person at work, or which might justify a review of the health and safety plan.

Where a contractor appoints another contractor to perform construction work, the duties that apply to the principal contractor apply to the contractor as if he or she were the principal contractor.

A contractor must take reasonable steps to ensure co-operation between all contractors appointed by the principal contractor to enable each of those contractors to comply with these Regulations.

A contractor must ensure that all visitors to a construction site undergo health and safety induction pertaining to the hazards prevalent on the site and must ensure that such visitors have the necessary personal protective equipment.

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.

A contractor must ensure that all his or her employees have a valid medical certificate of fitness, inclusive of a drug test specific to the construction work to be performed and issued by a registered occupational health practitioner, in the form of Annexure 3.

10.10 Management and supervision of Construction work

A principal contractor must in writing appoint one full-time competent person as the construction manager with the duty of managing all the construction work on a single site, including the duty of ensuring occupational health and safety compliance, and in the absence of the construction manager an alternate must be appointed by the principal contractor.

A principal contractor must upon having considered the size of the project, in writing appoint one or more assistant construction managers for different sections thereof: Provided that the designation of any such person does not relieve the construction manager of any personal accountability for failing in his or her management duties in terms of this regulation.

Where the construction manager has not appointed assistant construction managers as in the opinion of an inspector, a sufficient number of such assistant construction managers, that inspector must direct the construction manager in writing to appoint the number of assistant construction managers indicated by the inspector.

No construction manager appointed may manage any construction work on or in any construction site other than the site in respect of which he or she has been appointed.

A contractor must, after consultation with the client and having considered the size of the project, the degree of danger likely to be encountered or the accumulation of hazards

or risks on the site, appoint a full-time or part-time construction health and safety officer in writing to assist in the control of all health and safety related aspects on the site: Provided that, where the question arises as to whether a construction health and safety officer is necessary, the decision of the Department of Employment and Labour is decisive.

No contractor may appoint a construction health and safety officer to assist in the control of health and safety related aspects on the site unless he or she is reasonably satisfied that the construction health and safety officer that he or she intends to appoint is registered with a statutory body approved by the Chief Inspector and has necessary competencies and resources to assist the contractor

A construction manager must in writing appoint construction supervisors responsible for construction activities and ensuring occupational health and safety compliance on the construction site.

A contractor must, upon having considered the size of the project, in writing appoint one or more competent employees for different sections thereof to assist the construction supervisor and every such employee has, to the extent clearly defined by the contractor in the letter of appointment, the same duties as the construction supervisor: Provided that the designation of any such employee does not relieve the construction supervisor of any personal accountability for failing in his or her supervisory duties in terms of this regulation.

No construction supervisor appointed under may supervise any construction work on or in any construction site other than the site in respect of which he or she has been appointed: Provided that if a sufficient number of competent assistant construction supervisors have been appropriately designated on all the relevant construction sites, the appointed construction supervisor may supervise more than one site.

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 Coaching (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
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 Coaching (SOC's)

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 (SOC's). 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, supervisor, safety personnel has a required number of SOCS to be completed per week. All SOC's 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 (DSTI's)

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

13.5.1 Contractor Health and Safety Meetings (OHS Act Section 19)

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 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;
- SOC's, PTO's and DSTI's 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.

13.5.2 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;
- SOC's, PTO's and DSTI's 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;
- Material Safety Data Sheets (MSDS's) 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 Practitioner on a monthly basis.

Required documentation includes, but is not limited to, the following:

- Valid Letter of Good Standing from the Workman's Compensation Commissioner;
- Proof of Public Liability Insurance;
- Scope of Work under the contract;
- List of Contacts and their Telephone Numbers;
- Health and Safety Policy;
- Health and Safety Management Plan;

- Legal Register;
- Organisational Chart for the project;
- Appointment Letters (appointment of the contracting company, and appointments for all persons with health and safety related responsibilities);
- 37.2 Agreements
- Notifications to the relevant authorities that construction work is in progress;
- Baseline and Task-Based Risk Assessments;
- Safe Work Procedures, Work Instructions and Work Method Statements;
- Planned Task Observations;
- Fall Protection Plan (where applicable);
- A dossier (Equipment Profile) for each fuel-driven vehicle or machine;
- Inspection Registers, Forms and Checklists (e.g. For portable electrical tools, ladders, safety harnesses, light vehicles, mobile equipment, lifting equipment and lifting tackle, first aid boxes, fire extinguishers, etc.);
- PPE Issue Registers;
- Material Safety Data Sheets;
- Emergency Response Procedures;
- Incident Procedures and Records;
- A dossier (Employee Profile) for each employee containing:
- A copy of the employee's Identity Document or Passport;
- Certificate of Fitness (Pre-Employment Medical Examination);
- Proof of Induction Training;
- Other Training Records;
- Copies of Qualification Certificates and / or Certificates of Competency; and
- Copies of Licences;
- Health and Safety Meeting Minutes;
- Health and Safety Performance Reports;
- Copies of Inspection and Audit Reports; and
- Daily Safe Task Instructions (DSTI's) and Toolbox Talks.

The contractor must ensure that an equivalent file is compiled and maintained by each appointed sub-contractor.

14. Notification of Construction Work

A contractor who intends to carry out any construction work other than work contemplated in CR regulation 3(1), must at least 7 days before that work is to be

carried out notify the provincial director in writing in a form similar to Annexure 2 if the intended construction work will—

- include excavation work;
 - include working at a height where there is risk of falling;
 - include the demolition of a structure; or
- include the use of explosives to perform construction work.

15. Operational Control

Refer to Transnet Health and Safety Management Guidelines for Managing Common Hazardous Activities and Tasks: HAS-GN-0001. 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.

16. 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).

17. Planned Task Observations

All contractor, management supervisors must perform Planned Task Observations (PTO's) 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 PTO's 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 PTO's 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.

18. 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.

19. Site Access

The Principal Contractor will only have access to the site once the health and safety file has been accepted by the Client. A health and safety site access certificate will then be issued to the Principal Contractor so that site establishment can commence.

A Contractors health and safety file will also be issued to the Client for acceptance before work can commence.

19.1 Access Control

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.

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.

19.2 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.

19.3 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.

19.4 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. 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 from 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.

19.5 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.

19.6 Vehicles

All vehicles 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).

20. Mobile Equipment and Light Vehicles

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.

20.1 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.

20.2 Mobile Equipment

All Contractors must ensure that Mobile equipment have the following minimum safety specifications:

- Fixed seats and seat belts for all occupants;
- Adequate lighting, including headlights, tail, turn and brake lights, and an amber flashing light (revolving or strobe);
- An identified isolation and lockout point;
- Adequate walkways, railings, steps and grab handle combinations, and boarding facilities including an alternative path of disembarking in the event of an emergency;
- Collision-avoidance technology and / or procedures;
- A reversing alarm or warning device;
- Chock blocks for preventing uncontrolled movement of rubber-tyred equipment when parked;
- A horn;
- Effective windscreen wipers;

- Effective guarding on accessible moving parts;
- A speedometer (if the mobile equipment is capable of exceeding the lowest applicable speed limit);
- High visibility signage (i.e. Mobile equipment call numbers) facilitating easy and positive identification from a reasonable distance; and
- A security system to prevent unauthorised operation.

Mobile equipment must have the following minimum safety specifications, unless a risk assessment stipulates otherwise:

- Approved or certified roll-over protection;
- Fail-to-safe brakes;
- A fire detection and suppression system capable of being activated from both ground level and cabin level (for certain types of mobile equipment, a suitably sized fire extinguisher may be adequate);
- A non-handheld two-way radio or another form of communication;
- Falling object protection (a protective structure over the operator cabin);
- An enclosed and tight-sealing air-conditioned cabin with suitable protective glass; and
- A means of moving supplies and personal items into and out of the operator cabin that enables an operator to continuously maintain three points of contact while boarding and disembarking the equipment (e.g. A backpack or shoulder strap bag).

When purchasing or hiring equipment, the ergonomics of the cabin must be considered, specifically with regard to the seating, operator controls and retrofitted devices.

Fleet and control consistency must be considered in order to minimise the possibility of operator error when changing machines.

For all new (to site) and modified mobile equipment, a formal risk-based selection and acceptance process must be followed prior to the equipment being used on site. Selection of equipment, and any modification, must be subject to a rigorous change management process.

An inspection and maintenance programme must be in place for all mobile equipment. The pre-operation inspection must include a brake functionality test. Registers must be maintained and audited, and must be kept on the machine.

Procedures must be in place to ensure that mobile equipment is only operated on sufficiently stable surfaces and on gradients that are within the limits of safe operation.

Seat belts must be used in all cases, by all occupants. Apart from the driver or operator, only an appointed flagman may be transported in mobile equipment (with the exception of buses) and **only if** the equipment is fitted with a passenger seat. No passengers are permitted on a lift and carry crane (or mobi-lift), mobile crane, forklift, mobile elevating work platform (e.g. A cherry picker), tractor, dozer, dump truck, grader, excavator, loader, back-actor, drill rig, or similar.

Risk assessments must be carried out as part of the planning process for mobile equipment operations and associated activities, and must consider the following:

- Maintenance activities;
- Risks associated with loading, unloading, towing and recovering mobile equipment; and
- The risk of fire.

Procedures must be in place for the safe isolation and lockout of mobile equipment.

Where two or more items of mobile equipment must be operated in proximity to each other, or where an item of mobile equipment must be operated in proximity to persons on foot, a risk assessment involving all persons who will be working in the area must be conducted prior to the work commencing. The risk assessment must be approved by the nominated project management representative. In such a work area:

- No item of mobile equipment may be driven to within 5 metres of another item of mobile equipment without the operator first making eye contact with, and signalling his intentions to, the other operator who must acknowledge that he understands and that it is safe to proceed.
- No person on foot may work or be positioned within 5 metres of an item of mobile equipment that is in operation. Before approaching mobile equipment on foot, a person must make eye contact with, and clearly signal his intentions to, the operator of the equipment. The operator must cease to operate the equipment, and must indicate that he understands and that it is safe to approach.

In certain circumstances (determined through risk assessment), mobile equipment may only move and operate with dedicated flagmen in place:

- Where flagmen are used, it must be ensured that the flagmen, mobile equipment operators, and all other personnel working in the vicinity of the mobile equipment, receive suitable training with regard to signals and signalling to ensure effective communication. The training must be formal and recorded, and competency must be tested.
- A flagman and the mobile equipment operator that he is directing must maintain eye contact. The flagman must never position himself where the equipment operator cannot see him.
- Should a mobile equipment operator lose sight of his flagman, he must stop his activities immediately until contact has been re-established.

A tyre management system must be in place to address issues including fire, heating, explosion, electrical contact, separations, maintenance, tyre changes, etc.

Operators must report conditions and practices that do not conform to procedure.

20.3 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.

20.4 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).

21. 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.

22. 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.

23. 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.

24. Barricading

All applicable legislation concerning barricading 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.

25. 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.

26. Cranes and Lifting Equipment

All applicable legislation concerning cranes and lifting equipment must be complied with at all times. 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.

26.1 Design, Manufacturing and Safety Features

Before any crane or hoist is operated on the project premises (i.e. New to site), it must be formally accepted (authorised) by the nominated project management representative. The acceptance process must be based on an inspection and risk assessment, and must take the crane's or hoist's safety features and cabin ergonomics (if applicable) into account. The same process must be followed before any crane or hoist is returned to service following any modification or repair.

Note: An Equipment Profile (dossier) must be compiled for each crane.

As a minimum, the design and manufacturing of each crane or hoist used on the project premises must comply with the requirements of the relevant ISO standard. The Safe Working Load (SWL) must be clearly indicated on each crane, hoist, and item of lifting equipment.

If the safe working load (rated capacity) of a crane varies with the conditions of use (i.e. varies with the angle of the boom and the boom length) then the manufacturer's load chart(s) indicating the crane's rated capacity at various boom lengths and angles must be available in the crane cabin. If the crane has a single load chart, it must be displayed in a position visible to the crane operator. If the crane has numerous load charts, they must be easily accessible to the operator.

For each crane or hoist, the manufacturer's operating manual must be available to the operator.

The load chart(s) and operating manual for a crane or hoist must be in a language understood by the operator.

All lifting hooks must be fitted with a safety latch to prevent the load from accidentally detaching.

Each crane or hoist must be fitted with a load cell (with the mass of the load displayed in the visual range of the operator) and a load limiting device to prevent the crane or hoist from being operated outside of its safe working limits.

Where practicable, each crane must be equipped with an upper hoist limit switch (or anti two-block device) to prevent the hook block from colliding with the drum, and a lower hoist limit switch to prevent the rope on the drum from unwinding completely. These systems must provide both a visual and an audible alarm to the operator.

Under no circumstances may any limit switch or warning device be bypassed, disconnected, or adjusted in order to lift a load higher (or to lower a load lower) than the respective switches allow. Limit switches MAY NOT be adjusted to stop the hoist at a particular height under normal operating conditions – these are safety devices, and as such, should not be used as operating tools.

Under no circumstances may a load limiting device be bypassed or disconnected in order to lift a load that exceeds the rated capacity of the crane. Load limiting devices MAY NOT be used to “measure” or “test” the mass of a load.

For a vehicle-mounted crane, the operator control station must be located in a position protected from swinging loads and from the crane jib.

A fall protection system must be provided for the assembly, dismantling, operation, maintenance and inspection of any crane where falling from height is identified as a hazard.

Each crane should be fitted with a stability monitoring device to prevent it from toppling over.

Only items of lifting equipment (tackle) that have been designed and manufactured with adequate factors of safety may be used on site. The following minimum factors of safety (with respect to the Safe Working Load) must be met:

- Ten (10) for natural-fibre ropes;
- Six (6) for synthetic-fibre ropes or woven webbing;
- Six (6) for steel-wire ropes;
- Five (5) for steel chains; and
- Four (4) for high-tensile or alloy steel chains.

26.2 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.

26.3 Operation

At the start of every day or shift, the operator of a crane or hoist must carry out a pre-operation safety check using a prescribed checklist.

As a minimum, the pre-operation safety check must include:

- A thorough visual inspection of all wire ropes, chains, hooks and safety latches, hook blocks, sheaves, hydraulic hoses, electrical cables, and the general condition of the crane or hoist;
- Checks to confirm the serviceability of the operating controls;
- Tests to confirm the correct operation of all limit switches, emergency shutdowns, load indicators, alarms and other safety devices; and
- A thorough visual inspection of all lifting equipment (tackle) to be used.

The operator must:

- Check for any loose or missing parts;
- Make sure that the wire rope (or chain) of the hoist is properly seated in its drum and sheave grooves without any slack or overlapping;
- Operate each control to make sure it functions properly, releases immediately, and does not stick. Each control must be labelled to indicate its function;
- Listen for any unusual mechanical noises and look for any jerky movements while operating the crane and / or hoist several feet in each direction that it travels;
- Check the functionality of the upper and lower hoist limit switches (if applicable) by slowly raising and then lowering the block to trip the respective switches;
- Check all hooks. Hooks must not be cracked, stretched, bent or twisted. Each hook must have a safety latch that automatically closes the throat of the hook. If the latch is bent, has a broken spring, or is otherwise damaged, it must be repaired before use. Hooks must rotate freely in the block assembly without any “grinding” felt or heard;
- Check the wire rope by lowering the block to its lowest level and looking for the following signs of damage:
 - Reduced rope diameter. This may indicate that the rope has been stretched, has lost its inner core support, or has worn outside wires;
 - Broken wire strands (any number);
 - Kinked, crushed, cut, or “bird caged” wiring, or wiring with heat damage.
- Check all chains for damage including wear at contact points, cracks, or distorted links (bent, twisted or stretched). All mechanical coupling links must be inspected to ensure that the linking pins are secure and in good condition. The capacity rating of each chain must be adequate for the load and the attachment method;
- Check the condition and capacity of wire rope and synthetic web slings. Capacity ratings must be legible on the manufacturer’s label. The capacity of the sling being used must be adequate for the load and the attachment method. A sling must be replaced immediately if it is excessively worn.

The operator must report any fault, defect or damage to his supervisor immediately. A crane or hoist must not be operated if any safety device is out of order or defective, or if any rope, chain, hook or other component is worn or damaged.

Completed checklists must be made available (on request) for inspection by the nominated project management representative. Wherever possible, these checklists must be kept with the crane or hoist.

All lifting operations must be supervised by suitably qualified, competent and experienced supervisors.

An effective method of communication between the crane operator and those assisting with the lift must be in place. This must be documented and approved by the nominated project management representative.

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.

26.4 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, outriggers, 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.

26.5 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.

27. 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.

27.1.1 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.

27.1.2 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.

27.1.3 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.

27.1.4 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.

27.1.5 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.

27.1.6 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.

28. Scaffolding

28.1.1 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.

28.1.2 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.

28.1.3 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.

28.1.4 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.

28.1.5 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.

28.1.6 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.

28.1.7 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.

28.1.8 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.

29. 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; 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.

30. 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.

31. 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, but not limited to:

- 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.

32. 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.

32.1 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.).

33. 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.

33.1 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.

33.2 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.

33.3 High Voltage Power Lines

Before any mobile equipment (such as a crane, bulldozer, back-actor, boom truck or drill rig) is mobilised to a work site, an assessment must be carried out (including a thorough inspection of the work site and the access route) in order to clearly identify any overhead or underground power lines.

A system must be in place to mitigate the risks associated with working in close proximity to power lines and suitable measures must be taken to prevent personnel or equipment from coming into contact with power lines. Extreme caution must be exercised.

A procedure must be in place for the evacuation of mobile equipment or a vehicle in the event of accidental contact with power lines. All operators must be trained in this procedure and must follow it implicitly.

Scaffolding may not be erected within 5 metres of power lines or overhead track equipment.

34. 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.

35. 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.

36. 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.

37. 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.

38. 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.

38.1 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.

39. 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.

40. 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.

41. 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.

42. 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.

43. 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.

43.1 Stanley Knives / Utility Knives

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.

44. 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.

45. 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).

46. Personal Protective Equipment

All applicable legislation 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 (MSDS).

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.

46.1 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.

46.2 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.

46.3 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.

46.4 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 Material Safety Data Sheets (MSDSs), 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.

46.5 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.

46.6 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.

46.7 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.

46.8 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.

46.9 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.

46.10 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.

46.11 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).

46.12 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.

46.13 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).

47. 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.

48. 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.

49. 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.

50. 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.

51. 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.

52. 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.

53. Demarcation

No demarcation of floors is required inside offices.

Temporary demarcation may be used to demarcate areas where there is, for relatively simple reasons, restricted access. Where hazards exist and entry must be specifically excluded for safety or health reasons, hazard tape in any form must not be used in isolation. A robust and substantial barrier of timber, rope or other material must be used in conjunction with barrier tape, to prevent entry to unauthorised persons.

Outside storage areas where it is impractical to use floor demarcation, demarcation may take the form of creosote poles and wire rope or similar. Spans between uprights should be painted yellow.

54. 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.

55. Occupational 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).

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.

55.1 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.

55.2 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.

55.3 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.

55.4 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.

55.5 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 Material Safety Data Sheet (MSDS) 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 MSDS; 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 MSDS) are readily available on site.

The contractor must ensure that a Material Safety Data Sheet (MSDS) is obtained for each chemical substance brought onto site. A file, or files, containing all of the MSDS'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 MSDS'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 MSDS's);
- Determining precautions and safe practices for transportation, use, handling, storage and disposal (including PPE requirements) (using the MSDS's);
- Determining first aid and emergency response requirements / procedures (using the MSDS's);
- Maintaining the MSDS 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.

55.6 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.

55.7 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 ongoing 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 employed by the Coega Development Corporation (CDC) within the Coega Industrial Development Zone (CIDZ) (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.

55.8 Legionnaires Disease

All equipment with the potential for generating Legionella (such as cooling towers and associated equipment, air-handling systems, hot water services and showers) must be identified and the risks of contamination and aerosol generation assessed.

Where there is an assessed risk that Legionella could grow in the system and cause harm, a programme must be in place such that:

- All such equipment is identified on a register. The register must contain details of the regular maintenance, cleaning and checking programmes;
- Control measures are in place to minimise aerosol emissions;
- There must be a documented water treatment programme, including procedures for inspection, assessment and maintenance of the controls; and
- New or retrofitted equipment is designed and constructed to minimise the risk of Legionella growth.

Where available, the Legionella plate count test should be used if more effective methods are not available.

Good maintenance procedures must be followed to minimise the risk of significant contamination of equipment with other bacteria and microbial organisms.

Adequate procedures must be available for disinfecting systems if significant concentrations of Legionella bacteria are present. Once disinfected, systems must be retested to confirm effectiveness of treatment.

55.9 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.

55.10 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.

55.11 COVID 19

The Principal Contractor to ensure that the latest and most updated legislated COVID 19 requirements, processes and procedures are complied with by all on site.

56. 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.

Refer to the Transnet Health and Safety Management Site Emergency Managements HAS-P-0001.

56.1 Fire Fighting

The contractor must ensure that Fire Fighting requirements are complied with.

56.2 First Aid

The contractor must ensure that First Aiders are trained and appointed as described in this Specification and in accordance with relevant legislative requirements.

56.3 First Aid Kits

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 not stipulated within table 61-1 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.

The first aid kits must, as a minimum, contain the following equipment and supplies:

Table 61-1 Minimum Requirements to be included when equipping first aid boxes

Item 1:	Wound cleaner/ antiseptic – 100ml;
Item 2:	Swabs for cleaning wounds;
Item 3:	Cotton wool for padding – 100g;
Item 4:	Sterile gauze – minimum quantity 10;
Item 5:	1 x Pair of forceps – for splinters;
Item 6:	1 x Pair of scissors – minimum size 100mm
Item 7:	1 x Set of safety pins;
Item 8:	4 x Triangular bandages;
Item 9:	4 x Roller bandages – 75mm x 5m;
Item 10:	4 x Roller bandages – 100mm x 5m;

Item 11:	1 x Roll of elastic adhesive – 25mm x 3m;
Item 12:	1 x Non-allergenic adhesive strip – 25mm x 3m;
Item 13:	1 x Packet of adhesive dressing strips – minimum quantity 10 assorted sizes;
Item 14:	4 x First aid dressings – 75mm x 100mm;
Item 15:	4 x First aid dressings – 150mm x 200mm;
Item 16:	2 x Straight splints;
Item 17:	2 x Pairs large and 2 x pairs medium disposable latex gloves;
Item 18:	2 x CPR mouth pieces or similar devices.

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.

57. 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.

58. 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.

59. 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.

60. Incident Reporting and Investigation

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.

Using the defined consequence scales contained in TRANSNET 5x5 qualitative risk matrix, the Actual Consequence of each impact must be categorised as:

- A Near-miss;
- Insignificant (Level 4; as per TRANSNET incident level classification guidance);
- Minor (Level 3; as per TRANSNET incident level classification guidance);
- Moderate (Level 2; as per TRANSNET incident level classification guidance);
- Major (Level 1; as per TRANSNET incident level classification guidance); or
- Catastrophic (Level 1; as per TRANSNET incident level classification guidance).

The Maximum Reasonable Outcome (MRO) is based on a risk evaluation of the maximum reasonable consequence of an impact and the likelihood of the event occurring again given a reasonable failure of existing controls. Using the matrix referred to above, each impact must be evaluated and classified as:

- Low;
- Moderate;
- High; or
- Extreme.

An incident must be reported on the same work day or shift on which it occurs and preliminary details must be recorded and a TRANSNET Incident Flash Report must be completed and submitted within 24 hours to the relevant Project Construction Manager or representative. Depending on the Actual Consequence and Maximum Reasonable Potential Outcome of the impact(s), 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, or a Maximum Reasonable Potential Outcome of High or Extreme), 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. (e.g TCAM – Transnet Causal Analysis Methodology).

All significant incidents (i.e. incidents with an Actual Consequence of Moderate, Major or Catastrophic, or a Maximum Reasonable Outcome of High or Extreme) 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 (i.e. incidents with an Actual Consequence of Insignificant or Minor, or a Maximum Reasonable Outcome of Low or Moderate) other methodologies approved by the Project Health and Safety Manager may be used.

Each incident (including near-miss incidents) must be investigated to a level of detail that is appropriate for the Maximum Reasonable Potential Outcome of the incident.

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. Refer to the Transnet Health and Safety Management Occurrence Reporting and Investigation HAS-P-0002.

61. 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.

62. 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.

62.1 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 SOC's (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 (PTO's) 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.

63. 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 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 Practitioner, 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.

64. Reference Documents

Table -1: Reference Documents

Document Identification
Occupational health and safety act, 85 of 1993 and Regulations
TIMS Contractor Management Procedure, TNPA



TRANSNET

GENERAL QUALITY REQUIREMENTS FOR CONTRACTORS AND SUPPLIERS

QAL-STD-0001

Document Number	QAL-STD-0001
Version Number	0.0
Review Date	11 August 2020

SUMMARY VERSION CONTROL

[illegible]

Note: Only the latest amendments and/or additions are reflected in italics in the body of the document.

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1. Purpose

This Specification outlines the minimum requirements to ensure that products and services supplied to TRANSNET are manufactured, provided, constructed or installed in accordance with all specified requirements as defined in the Contract, all associated specifications, drawings, codes and standards.

2. Definitions / Abbreviations

Term, Abbreviation	Meaning
<i>Contract:</i>	Formal document evidencing agreement between <i>Employer</i> and <i>Contractor</i> for supply of on site or off site services (generic term used for Purchase Orders, Contracts and Service Orders in this Standard).
<i>Contractor:</i>	The party to a <i>contract</i> that provides services to the <i>Employer</i> (generic term used for Vendors, Suppliers, Contractors, Consultants, etc.).
<i>Contractor</i> Documentation Schedule (CDS)	A schedule specifying the <i>Employer's</i> requirements for the document types to be submitted by the <i>Contractor</i> at various stages of the <i>Contract</i> and the timing of the submissions.
Data:	All drawings/documents/data/information/DPs and IOMs required to be supplied under the <i>Contract</i> .
Data Pack (DP):	A compilation of manufacturing data, certification, inspection and testing records prepared by the <i>Contractor</i> to verify compliance with the Contractual requirements.
<i>Employer:</i>	The party to a <i>Contract</i> or Purchase Order to whom the goods are supplied or for whom the work or services are performed. In the context of this document, Transnet Capital Projects is the <i>Employer</i> .

Term, Abbreviation	Meaning
Field Inspection Checklist (FIC):	A document that details the checks, requirements and test parameters for each type of equipment to permit field installation and pre-commissioning of the equipment
Inspection Release Report (IRR):	A document issued to the <i>Contractor</i> by TRANSNET advising release of materials for shipment. This does not relieve the <i>Contractor</i> of its obligations in accordance with the Terms and Conditions of the <i>Contract</i> .
Inspection Waiver Report (IWR):	A document issued to the <i>Contractor</i> by TRANSNET advising that TRANSNET has waived final inspection for the materials listed in this document. The issue of this report does not preclude further inspections by TRANSNET. It is issued without prejudice and does not relieve the <i>Contractor</i> from the guarantees and obligations included in the <i>Contract</i> .
Installation and Operating Manual (IOM):	A document prepared by the <i>Contractor</i> providing relevant information applicable to the installation and maintenance of the specific equipment, including data relating to consumables (eg. Oils, etc.)
Non Conformance (NC)	Material, product or workmanship which is not in accordance with the requirements of the <i>Contract</i> .
Non-Conformance Report (NCR):	A document initiated by either TRANSNET or the <i>Contractor</i> advising that certain materials/products/workmanship provided by the <i>Contractor</i> do not conform to the required standards and specifications.
Project Quality Plan (PQP):	A document that outlines the <i>Contractor's</i> strategy, methodology, resources allocation, Quality Assurance and Quality Control coordination activities to ensure that Goods and Services supplied meet or exceed the

Term, Abbreviation	Meaning
	requirements defined in the <i>Contract</i> drawings, codes and standards.
Quality Assurance (QA):	A formal methodology designed to assess the quality of products or services provided.
Quality Control (QC):	A set of activities intended to ensure that quality requirements are actually being met.
Quality Control Plan (QCP):	A document outlining specific manufacturing/construction inspection and testing requirements, including responsibilities, test acceptance criteria, nomination of witness and hold points.
Technical Query Note (TQN):	A document used by the <i>Contractor</i> to formally clarify a Technical Query related to the scope of supply. This should not be used where a Non-Conformance Report has already been initiated.
TRANSNET:	Transnet SOE Limited
<i>Works Information:</i>	Refers to the <i>Works Information</i> as defined in the <i>Contract</i>

3. **Applicable Documents**

3.1 **General**

All work performed shall comply with the requirements of this Specification, the documentation referenced in the *Contract* and the latest revision/edition of the relevant Codes and Standards referenced herein.

3.2 **Statutory Regulations**

Occupational Health & Safety Act, Act No 85, of 1993 and Regulations as amended.

3.3 **Codes and Standards**

Document No.	Title
ISO 9001:2008/2015	International Standard Series Quality Systems

4. Quality System

4.1 General

The Contractor is responsible for all quality activities necessary to ensure the Work meets the requirements specified in the Contract, and shall manage and coordinate all Quality aspects of the Work in accordance with the requirements of this Specification, together with the Contractor's PQP and QCPs once reviewed and accepted by TRANSNET.

4.2 **Contractor Quality System Requirements**

The *Contractor* shall have and maintain a documented Quality Management System. The *Contractor* may be required to demonstrate its use to TRANSNET. The *Contractor's* Quality Management System should be in accordance with the requirements of International Standard ISO 9001.

The *Contractor* submits the following Quality System documentation to TRANSNET at the time of tender:

- Project Quality Plan
- Quality Policy
- Index of Procedures to be used
- Programme of internal and external audits

4.3 **Contractor / Supplier Documentation Submittal Requirements**

The *Contractor* will make formal submission of this Quality Documentation on award of the *Contract* and at the times defined in the *Contractor's* Documentation Schedule, included in the *Works Information* for the *Contract*.

The Contractor's responsibilities are defined in terms of *DOC-STD-0001* which outlines the standard requirements for preparation, submission, receipt, review, and collection of Technical and (or) Deliverable Documentation, as detailed in the Contractor Documentation Schedule (CDS).

TRANSNET uses the *Contractor's* Documentation Schedule (CDS), included in the *Works Information* for the *Contract*, to indicate those documents required to be submitted for information/review and/or acceptance.

The *Contractor* develops and maintains a comprehensive register of documents (*Contractor's* Documentation Register – CDR) that will be generated throughout the project.

The CDR includes all quality related documents. The CDR is a 'live' document and Is submitted to TRANSNET for review following each revision by the *Contractor*. The CDR indicates the dates of issue of the documents taking into account sufficient time to allow for the TRANSNET review/acceptance cycle prior to the document being required for use.

TRANSNET includes a standard template for the CDR (DOC-FAT-0002) in the Starter Pack issued to the *Contractor* at the start of every *contract*.

4.4 **Project Quality Plan**

Where specified, the *Contractor* submits a PQP to TRANSNET within the period stated in the CDS and in any event not later than 28 days after the *Contract* start date. The PQP details how the *Contractor's* Quality System will be applied to the Scope of Work specified in the *Contract*, and shall address the following:

- Satisfying the technical and quality requirements of the *Contractor's* Scope of Work, and relevant elements of the applicable ISO 9001 standard
- Include all quality activities relevant to the Scope of Work, identifying all procedures, reviews, audits, controls and records used to control and verify compliance with the specified Contractual requirements.
- Include a listing of all special processes (e.g. welding and non-destructive testing, cube testing etc.) envisaged for use, including confirmation of personnel certification as required.
- Include all proposed method statements (for site based work activities).
- Include a description of the Contractor's project organisation, with key positions and responsibilities identified and individuals named. The organisation structure shall also indicate the resources committed to the management and coordination of QA / QC activities.
- Include a listing of all Quality Control Plans (QCPs), and associated Field Inspection Checklists (FICs), as applicable.
- Identify in the PQP any Sub-Contractor/Sub-Supplier work. Sub-Contractor/Sub-Supplier plans are approved by the Contractor, and a copy forwarded to TRANSNET for information.
- Include the proposed Authorised Inspection Authority (where applicable - for pressurised equipment and systems).
- Include a schedule of proposed quality records.

The PQP shall be controlled and re-submitted for approval when required to incorporate any change necessary during the *Contract* duration to ensure that the document is maintained as an effective control, change management and records. The change management will be done to an agreed policy or procedure.

Note: Where the *Contractor* is required to provide a PQP, no work shall commence until the PQP is accepted by TRANSNET.

4.5 Procedures

The *Contractor's* PQP and procedures shall address the system elements and activities appropriate to the Scope of Work, in compliance with the specified Quality Standard.

Where specified, the *Contractor* submits copies of Quality Procedures for review. In addition, the *Contractor* ensures that copies of all Procedures relevant to the Scope of Work are available for reference by TRANSNET at each work location.

These will include, as applicable, the following:

4.5.1 Document Control

The *Contractor's* PQP shall provide a description of how documents provided by TRANSNET to the *Contractor* are to be managed. The description shall address as a minimum:

- Management tools and databases
- Receipt, registration and maintenance
- Internal and external distribution to *Employer*, third parties and Sub-Contractors
- Management of Codes, Standards and Specifications
- Internal review and approval routines and authorities
- How it is ensured that the correct revisions of documents are available at the point of use including retention periods for all documentation

4.5.2 Design Control

Where the *Contractor* is responsible for any aspect of design related to the Scope of Work, the Quality Plan shall describe the *Contractor's* methods and procedures for the control of these design activities.

4.5.3 **Procurement**

Where the *Contractor* is responsible for any aspect of procurement related to the Scope of Work, the Quality Plan shall describe the *Contractor's* methods and procedures for the control of these activities.

4.6 **Contractor Audits**

The *Contractor* shall:

- Carry out audits in accordance with its Quality System at its own and Sub-Contractor's facilities to ensure project quality requirements are being achieved.
- Include a QA Audit Schedule in the *Contractor* PQP submitted to TRANSNET prior to commencement of the Scope of Work. The Audit Schedule shall include all audits to be implemented by the *Contractor* and Sub-Contractor during the execution of the *Contract*.
- Where stipulated in the *Contract*, perform an audit within three months after the *Contract* start date and thereafter at a minimum frequency of three months. Audit reports are submitted to TRANSNET at the completion of each Audit. Where unsatisfactory performance is evident, TRANSNET will direct the *Contractor* to perform additional audits.

4.7 **Transnet Audit**

TRANSNET reserves the right to perform quality audits or participate as an observer in *Contractor* audits to verify compliance with the Contractual requirements. The *Contractor* shall within a time frame as agreed upon, correct any adverse audit finding advised by TRANSNET.

5. **Inspection and Testing**

5.1 **General**

TRANSNET may, at its discretion, perform surveillance inspection at the *Contractor's* premises, the premises of any Sub-Contractor or at the location of the Scope of Work.

Dependent on the nature of the Scope of Work and the frequency of inspections, TRANSNET may elect to have inspection personnel resident at the place of manufacture, fabrication, or assembly.

The *Contractor* ensures free entry and access is given to TRANSNET, certifying authorities and statutory authorities to inspect the Scope of Work and review procedures and quality

records at all parts of the *Contractor's* and Sub-Contractor's premises, or at the location of the Scope of Work while any work or test is in progress.

The *Contractor* provides TRANSNET with all necessary tools, calibrated measuring equipment, safety equipment and workspace to verify or witness tests in progress.

While TRANSNET is at the *Contractor's* premises, the *Contractor* provides, free of charge, reasonable facilities including office facilities and reasonable access to a telephone, facsimile machine and computer connection point.

The *Contractor* provides written notice within a time frame as agreed upon, to allow the attendance of TRANSNET and other representatives at nominated witness and hold points.

5.2 **Quality Control Plans**

The *Contractor* prepares and submits QCPs to TRANSNET for review in accordance with the requirements of the *Contract* and PQP.

QCPs must clearly identify all inspection, test and verification requirements to meet the Contractual obligations, specifications, drawings and related details including destructive and non-destructive testing, witness and hold points.

The *Contractor* shall not commence fabrication or manufacture prior to review and approval of the applicable QCP by TRANSNET.

QCPs shall include reference to all tests specified in the *Works Information*.

A typical format for a QCP is shown in Appendix 1. The *Contractor* may use its own format providing all information shown in the sample in Appendix 1 is included.

5.3 **Inspection Points**

The QCP identifies points in the fabrication, manufacturing and/or installation process that are selected for inspection. These points are denoted by the following inspection codes:

- Hold Point (H) Inspection points in the manufacturing cycle, beyond which work shall not proceed without the specified activity, work or function being witnessed. Hold points require written notification to TRANSNET.
- Witness Point (W) An inspection point in the manufacturing cycle that will be witnessed or verified. If TRANSNET confirms it is unable to attend after being provided with the written

notification then manufacture may proceed. Witness points require written notification to TRANSNET.

- **Review Point (R)** A point at which products and quality records are verified and endorsed. Review points are not points that require notification to TRANSNET.
- **Surveillance (S)** An inspection point in the manufacturing cycle during which any activity, work or function is observed. No formal notification is required.

The *Contractor* maintains the status of testing and inspection by progressively having the QCPs signed off.

5.4 **Revision to Quality Control Plans**

Revision of the QCP is subject to the same submission, review and acceptance routines as described for the original QCP issue.

5.5 **Kick Off Meeting**

After the *Contract* start date, and prior to manufacture, TRANSNET will require a Kick-Off Meeting with the *Contractor* to discuss fully the implications of meeting TRANSNET's quality requirements. This meeting may be held as part of the *Contract* kick-off meeting for each package or may be a separate meeting, subject to the critical or complex nature of the work. This requirement for a pre-inspection meeting may be repeated when Sub-Contractors of key equipment are engaged.

5.6 **Schedule of Inspection**

The *Contractor* shall submit a Schedule showing the proposed dates for inspections and tests nominated in the QCP where witness and hold points are required. The Schedule shall be regularly updated with progress and issued to TRANSNET to show the current inspection and test status.

5.7 **Field Inspection Checklists**

For site installation and construction activities, the *Contractor* prepares Field Inspection Checklists (FICs) to permit inspection and testing of installed equipment and constructed facilities in accordance with the respective QCPs.

FICs are submitted to TRANSNET for initial review. FICs are used to record the results of inspection and testing (where applicable). On completion, FICs are submitted to TRANSNET

to confirm satisfactory completion of the tests and inspections at nominated QCP witness and hold points.

5.8 **Inspection Notification**

The *Contractor* notifies TRANSNET in writing at least two calendar weeks prior to the advent of inspections or tests that require witnessing.

For inspections or tests within the country, arrangements are confirmed at least two working days before the event. For inspection and tests outside of the country, arrangements are confirmed at least seven working days before the event.

Inspection notifications include the following essential information:

- Contract Number
- Location of Inspection or Test
- Nature of Inspection or Test
- Date and Time of Inspection or Test
- Name and telephone number of the *Contractor's* Representative.

5.9 **Inspection and Testing**

The *Contractor* is responsible for the conduct of all *Contractor* inspections and tests. This responsibility includes:

- Documenting inspection and test results in the QCPs and relevant FICs.
- Progressively inspecting the quality of the Scope of Work performed, including that of all Sub-Contractors.
- Inspecting to meet all Contractual requirements, in number, type and form
- Inspecting day to day activities, material receipts, issue of material for installation, in-process inspections, and final inspections.

Completed original QCPs and FICs are included in the DP that the *Contractor* submits to TRANSNET.

5.10 **Inspection Release**

At completion of the Scope of Work, either in total or in phases, TRANSNET may issue an Inspection Release Report (IRR) or an Inspection Waiver Report (IWR).

The issue of either an inspection release or waiver of inspection does not relieve the *Contractor* of its obligations under the *Contract*. The *Contractor* ensures that a copy of the release note and final expediting release note for transport, where appropriate, is attached

to the delivery docket and accompanies the Work to the designated destination indicated in the *Contract*. Items delivered to TRANSNET without a copy of these documents may not be accepted.

A copy of the inspection release or waiver of inspection is included in the DP.

5.11 **Special Processes**

It is the *Contractor's* responsibility to ensure that all processes which require prequalified procedures and/or work methods are tested and qualified before work begins. This typically covers such activities as welding, non-destructive testing, special fabrication techniques and painting. Unless specified such procedures are the *Contractor's* responsibility and do not require submission to TRANSNET before work begins. When such procedures are requested, no work shall commence until procedures are approved by TRANSNET.

It is the *Contractor's* responsibility to ensure all operators are qualified for the processes in accordance with the procedure and/or applicable standards. Records of qualification of operators shall be maintained by the *Contractor* and made available to TRANSNET when requested.

Records of qualification of procedures and processes shall be maintained by the *Contractor* in accordance with the applicable procedure or code.

5.12 **Welding Procedures**

Where the *Contractor's* Scope of Work includes fabricated weldments, Welding Procedure Specifications (WPS) defining the method, preparation and sequences to be adopted to achieve a satisfactory welded joint shall be provided for all weld types required in the execution of the *Contractor's* Scope of Work. The procedure shall only be submitted to TRANSNET when requested in the *Contract*.

WPS include all welding essential and non-essential variables for each process used, including appropriate test results. WPS comply fully with the standard or code pertaining to welding required in the execution of the *Contractor's* Scope of Work.

When requested in the *Contract*, a suitably marked "weld map" is completed by the *Contractor* for all items to be fabricated. A summary of WPS is prepared and, when used, is identified on the weld map.

Where TRANSNET approval is required, fabrication is not to commence until written approval of WPS and Welding Procedure Qualification Records (WPQR) is received by the

Contractor. No welding fabrication will be accepted that is not covered by a TRANSNET approved WPS/WPQR.

Welding Procedure Qualification (WPQ) tests may be witnessed by TRANSNET and/or an independent inspection authority. Testing of the specimens prepared during the WPQ Tests is carried out by an approved testing laboratory, independent of both TRANSNET and the *Contractor*. In certain instances, a certificate to EN 10204 3.1 B may be required which will be clarified at Tender review and clarification stage.

Where actual weld deposit analysis and weld metal physical properties are required for procedure qualification, the information is taken from the procedure qualification tests. Data listed in the catalogues of the manufacturer of welding consumables is not acceptable.

Welders/welding operators are qualified in accordance with the relevant welding code prior to commencing production fabrication. Specific Welder Qualification (WQ) records will be reviewed by TRANSNET in the *Contractor's* works and should NOT be submitted for review.

A register of welders qualified to work shall be maintained by the *Contractor*.

5.13 **Material Traceability**

Where, and to the extent that material traceability is required, the *Contractor* shall provide its procedures for the maintenance of material identification throughout all phases of manufacture. Methods of identification, routines for re-stamping or stencilling as appropriate shall be defined and agreed with the *Employer*.

Adequate records shall be maintained throughout construction enabling traceability of key materials from final product back to original material certificates. The material traceability records shall form part of the DP

The *Contractor* shall prepare a schedule of materials and equipment that are subject to traceability requirements.

5.14 **Material Certification**

Where specified in the Contract the following certificates shall be provided to TRANSNET and included in the DP.

Type A: A *Contractor's* certificate of compliance with the *Contract*. This certifies that the goods or services are supplied in compliance with the *Contract* without mention of any test results (EN10204 certificate 2.1).

- Type B: A certificate issued by a laboratory or test facility independent of the *Contractor's* works. It shall quote test results carried out on the product supplied and state whether compliance with the relevant technical standard, code, etc., has been complied with. (EN10204 certificate 3.1B).
- Type C: The same as Type B, the tests are to be witnessed by a third party (EN10204 certificate 3.1C).

6. Non-Conforming Products

6.1 General

The *Contractor* shall establish and maintain procedures to control material or products that do not meet the specified requirements.

All *Contractor* product and/or materials identified as not conforming to requirements shall be dealt with promptly as follows:

- If the *Contractor* discovers material or product which is not in accordance with the requirements of the *Contract*, i.e. a non-conformance, the *Contractor* shall immediately initiate the non-conformance procedure in terms of the *Contractor's* Quality Management System, advise TRANSNET promptly, and provide a copy of the non-conformance report (NCR) to TRANSNET
- If TRANSNET or its agent identifies a non-conformance, a TRANSNET NCR may be raised.

Originals of all closed out NCRs shall be included in the DP.

6.2 Corrective and Preventative Action

If the *Contractor* proposes a disposition of any non-conforming materials or product which varies from the requirements of the Specification or *Contract*, such a proposal shall be submitted in writing to TRANSNET whose decision on the proposal shall be obtained in writing before the non-conforming material or product is covered up or incorporated into the Works, or is the subject of any other disposition.

The disposition of non-conformances which do not vary the requirements of the *Contract*, specification or drawings may be approved by the *Contractor* following discussion and agreement with TRANSNET.

7. **Concession Requests and Technical Queries**

7.1 **Concession Requests**

Where a *Contractor* requests a Concession to deviate from the requirements of the *Contract* or specified requirements, the *Contractor* raises the request with TRANSNET using the format as shown in Appendix 2.

The Concession Requests shall clearly identify all elements of the proposed deviation together with any resulting technical, commercial and/or schedule impacts.

Completed original Concession Requests shall be included in the DP.

7.2 **Technical Queries**

For clarification of technical issues (only), the *Contractor* may submit a Field Engineering Query (FEQ) to TRANSNET in accordance with the *Contract*.

The FEQ shall clearly identify all elements of the query, and all supporting documentation and/or drawings shall be attached where appropriate.

Completed original FEQ's shall be included in the DP.

8. **Inspection, Measuring and Test Equipment**

8.1 **Calibration**

The *Contractor*, including its Sub-Contractors/Sub-Suppliers, shall ensure the calibration of test and measuring equipment is performed and maintained in accordance with the relevant *Contractor* procedures and/or the equipment manufacturer's specifications.

Where calibration is required by an external laboratory, the *Contractor* shall ensure that the facility selected for calibration possesses current certification. Calibration certificates shall contain a statement that the test equipment is accurate to within specified tolerances.

The *Contractor* should establish the frequency of calibration for each item of equipment (including jigs, fixtures or templates) and record the details in a 'Measuring and Test Equipment Register' (or similar).

8.2 **Use of Inspection, Measuring and Test Equipment**

The *Contractor* shall ensure that authorised equipment users:

- Use the equipment in accordance with manufacturer's instructions, and accepted industry practices
- Ensure the equipment is covered by a current calibration certificate

- Conduct the measurements or tests in accordance with the equipment manufacturer's specifications or other relevant specification
- Prior to commencement of each inspection or test activities:
 - Identify the measurements to be made
 - Determine the accuracy required
 - Select the appropriate inspection, measuring or test equipment for the scope of work.

8.3 **Verification of Previous Test Results**

Where the calibration status of the equipment is unknown, expired or has doubtful accuracy, the equipment shall immediately be quarantined, and tagged according to *Contractor's* Quality System procedures. The *Contractor* shall then arrange for either in-house or external calibration, and:

- review all previous test results associated with the suspect equipment;
- identify the inspections, measurements or tests required to re-validate the results;
- ensure that suitable re-testing is performed with calibrated equipment;
- record the results of the re-testing on the respective inspection and test documentation.

9. **Quality Personnel Qualifications**

It is preferable that *Contractor's* personnel engaged in Quality Assurance and Quality Control are members of one or more of the following organisations:

South African Quality Institute

Southern African Society for Quality

It is mandatory that personnel undertaking testing of rail-associated infrastructure are qualified as follows:

10. **Quality Records**

Contractors shall maintain Quality Records necessary to provide objective evidence that demonstrates and verifies achievement of the QA / QC requirements associated with the Scope of Work. All Quality Records, including original source material test certificates and

non-destructive test reports, shall be retained by the *Contractor* during the project, and be provided to TRANSNET at the times, and in the quantities specified in the *Contract*.

The *Contractor* shall collate all quality records in the DP and submit the DP to TRANSNET in accordance with the *Contract* and all referenced standards and specifications. This DP shall be compiled progressively, and shall be available for review at all phases of manufacture or construction activities.

The Scope of Work shall not be complete until the *Contractor's* DP, including the quality records from Sub-Contractors/Sub-Suppliers, has been reviewed and accepted by TRANSNET.

The *Contractor* compiles the DP progressively during the execution of the Scope of Work and makes the DP available for review by TRANSNET as required.

The *Contractor* shall retain a copy of all Quality documentation generated during the *contract*, including a copy of the complete DP, for his own records for a minimum period of five years after the completion of the work.

Annexure 1 – Sample Quality Control Plan

Quality Control Plan No. _____					Revision: _____					Date Issued: _____				
Contract No. _____					Description: _____					Item No. _____				
Contractor _____					Location: _____									

Activity No.	Activity Description	Procedure Reference / Code Specification	Specification Acceptance Criteria	Verifying Document / Report / Certificate	Verification/Witness						
					Contractor		AIA		TRANSNET		
					Action	Sign	Action	Sign	Action	Sign	

Rev	Date	Reason for Revision	Drawn	Checked

ACTION

H – Hold. Mandatory Hold Point R – Review (Verify) only

W - Witness S - Surveillance

NOTE: H & W points require formal notification to TRANSNET

Annexure 2 – Concession Request (QAL-FAT-0003)

Request for Concession No:															
Project Name:						Project Number:									
A. SUPPLIER/CONTRACTOR SUPPLIED INFORMATION															
SUPPLIER/CONTRACTOR NAME:						P/O /CONTRACT NO.:									
SUPPLIER/CONTRACTOR CONCESSION NO:						DATE:									
Required concession applicable to: (Item/Material/Equipment/Area)															
Quantity Affected:															
Original Requirements:															
Description of Concession – Revised Requirements:															
Justification:															
Cause :															
Consequence :															
References:															
Original Requirements reference:															
Drawing No.:				Rev.:				Specification No.:				Rev.:			
Drawing No.:				Rev.:				Specification No.:				Rev.:			
Drawing No.:				Rev.:				Specification No.:				Rev.:			
Attached applicable documentation:															

♦ A. SUPPLIER/CONTRACTOR SUPPLIED INFORMATION continued						
(NOTE: This concession will be rejected if the following information is not provided):						
(i) VALUE OF BENEFIT TO CLIENT \$/R.....	(ii) AGREE TO AN EXTENSION OF THE WARRANTY	YES <input type="checkbox"/>	NO <input type="checkbox"/>	(iii) ANY IMPACT ON SCHEDULE?	NO <input type="checkbox"/>	YES <input type="checkbox"/>
	IF "YES" WHAT PERIOD?			IF "YES" WHAT PERIOD?		

Requested by: (Supplier/Contractor)							
Name:		Title:		Signature:		Date:	
B. SITE ADMINISTERED CONTRACT?			<input type="checkbox"/> Yes	<input type="checkbox"/> No			
Possible QC implications:							
Recommended	<input type="checkbox"/>	Rejected	<input type="checkbox"/>				
♦ Recommendations with the following Conditions:							
Area Manager:		Signature:		Date:			
Site Engineer:		Signature:		Date:			
C. RECOMMENDATION BY CONTRACT ADMINISTRATOR:							
Name:		Signature:		Date:			
D. RECOMMENDATION BY ENGINEERING:							
Recommended	<input type="checkbox"/>	Rejected	<input type="checkbox"/>	Conditional	<input type="checkbox"/>		
Recommendations:							
PR Engineer:		Signature		Date			
Lead Discipline Engineer:		Signature		Date			
Engineering Manager:		Signature		Date			
Comments:							
E. AREA MANAGER:		Accepted	<input type="checkbox"/>	Rejected	<input type="checkbox"/>		
Name:		Signature		Date			
F. Transnet Capital Projects :		Accepted	<input type="checkbox"/>	Rejected	<input type="checkbox"/>		
Name:		Signature		Date			

CONSTRUCTION ENVIRONMENTAL MANAGEMENT PROGRAMME

FOR THE

PORT OF NGQURA



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1. Purpose

This document describes the main environmental management requirements that Contractors must comply with during construction to ensure that the environment is considered, negative impacts avoided or minimised, and positive impacts enhanced. The Construction Environmental Management Programme (CEMP) addresses requirements of the Records of Decision (RoD) / Environmental Authorisations (EA) relevant to the Construction and Operation of the Port of Ngqura (Ref A24/16/3/56) and Construction of the Port Extensions (Ref 12/12/20/690) that apply to the construction phases of the authorised projects. This document is critical to the main Contractor and the Contractor's Environmental Officer (EO) as well as any sub-contractors reporting to the main Contractor.

The purpose of this Document is to:

- Describe how project environmental risks will be managed during the construction phase;
- Detail the roles and responsibilities of all parties with respect to environmental management during construction;
- Outline the organisational structure for effective implementation of the CEMP;
- Assist the Contractor in understanding the requirements of complying with the CEMP and any relevant specifications; and
- Provide a set of standards for environmental during the construction phase.

2. Scope

This standard applies to Contractors that work on site under the authority of Transnet.

3. Abbreviations/Definitions

CEMP	Construction Environmental Management Plan. Construction EMP including Standard Environmental Specification (SES) and Project Environmental Specification (PES).
Compliance	The act or fact of complying with legislation
Conformance	The act in accordance with this standard and other internal policies, procedures guidelines or 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's Environmental Officer	Contractor's Environmental Officer responsible for ensuring compliance with the CEMPr on a daily basis.
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, eg. Non-conformance to documented procedures and work instructions, non-conformances raised through internal audits, unacceptable monitoring and measurement results, internal & external SHEQ complaints, etc.
DFFE	Department of Forestry, Fisheries and Environment
ECO	Environmental Control Officer (ECO). Independent or internal environmental specialist who monitors compliance with the EA as required.
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 a Contractor's activities, products or services that can interact with the environment and cause an environmental impact (e.g. dust, noise etc.).
Environmental Authorisation (EA)	Environmental Authorisation is the authorisation granted by a competent authority of a listed activity or specified activity in terms of NEMA, and includes a similar authorisation contemplated in a specific environmental management Act
Environmental Impact	Any change to the environment, whether adverse or beneficial, wholly or partially resulting from a Contractor's activities, products or services.
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.
NEMA	National Environmental Management Act, 107 of 1998 (as amended)
Non-conformance	An action or situation that does not conform to Transnet SHEQ standards, procedures or legislative requirement(s) and that can be, or lead to, an unacceptable SHEQ incident.
Transnet Project Manager	Means the overall project manager responsible for implementation of the project.
Transnet Environmental Manager	Works together with the Project Manager and Construction Manager to ensure that the requirements of the CEMPr are met
Transnet Construction Manager	Works together with the Project Manager to ensure that construction proceeds in accordance with the relevant specifications and agreed schedule.
Transnet Environmental Officer	Responsible for ensuring that the CEMPr is implemented by the project/construction team and Contractors and their Sub-contractors.

4. Overview of the Construction Environmental Management Programme

It is the stated goal of Transnet to implement sustainable environmental management practices within the organisation. This will apply to the planning, design, construction, operation, restoration, reuse and decommissioning activities related to all infrastructure development, upgrade and maintenance.

The CEMPr is the tool used to ensure this goal is achieved during construction and commissioning phases at the Port of Ngqura.

The CEMPr has been developed in line with the requirements of all relevant South African Environmental Legislation, Port of Ngqura Environmental Authorisations and Requirements and Standards of Best Practice.

5. Composition of the CEMPr

The CEMPr will form an integral part of all contracts with Contractors. The CEMPr and associated documents or specifications as well as the relevant Environmental Authorisations will be included in the Tender Documents issued to prospective Contractors. The Contractors will incorporate all requirements set out in this Document in their submissions to Transnet.

There are two types of environmental specifications that have been incorporated into this CEMPr:

Standard Environmental Specification that describes the minimum standards for environmental management for a range of environmental aspects associated with all construction projects with which the Contractor must comply.

Project Environmental Specification that describes standards specific to projects within the Port of Ngqura which include conditions and requirements of the Port Environmental Authorisations and Practices.

The specifications are configured as performance specifications to ensure that Transnet and any entities that enter into formal agreements with Transnet viz. Consultants, Contractors and Sub-contractors, achieve the required level of environmental performance.

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.

6. Approval Status of CEMPr

The CEMPr was reviewed and approved by the relevant environmental authorities in terms of the requirements of the Records of Decision for the Construction and Operation of the Port of Ngqura dated 27 May 2002 and Construction of the Port Extensions dated 02 August 2007, and as such becomes a legal document that must be complied with. This approved CEMPr shall be issued to all relevant parties for implementation during construction within the Port of Ngqura.

7. CEMPr Management and Organisational Structure

7.1 Contractual Obligations

The CEMPr will form part of all tender documentation and will be made legally binding on all contractors, consultants and service providers working on projects through inclusion in contractual documentation and signing of the Declaration of Understanding. This will ensure that the obligations are clearly communicated to contractors and that submitted tenders have taken into account, and budgeted for the environmental requirements specified. Obligations imposed by this document are legally binding in terms of the Port of Ngqura Environmental Authorisations.

7.2 Organisational Structure

Transnet will specify the required management structure for the administration and implementation of the CEMPr, with particular emphasis on the roles and responsibilities of key individuals or groups. The organisational structure identifies and defines the responsibilities and authority of the various entities involved in projects within the Port of Ngqura. All instructions and official communications regarding environmental matters will follow the organisational structure as indicated in Figure 1. below. All instructions that relate to the implementation of the CEMPr will be given to the Contractor by the Transnet Project Manager. Where uncertainty relating to the requirements of the CEMPr exists, the Transnet Project Manager will consult with the Project Environmental Manager.

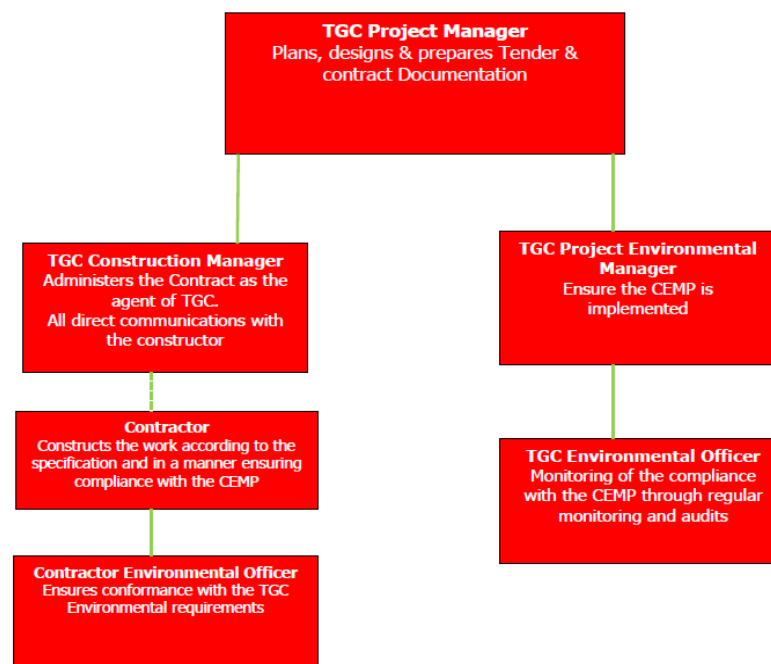


Figure 1: Typical Organogram for Construction

7.3 Roles and Responsibilities

Transnet SOC Ltd is the Developer and has overall responsibility for ensuring that construction and development is undertaken in an environmentally sound and responsible manner, and in particular, reflects the requirements and specifications of the CEMPr and recommendations from the relevant authorities. The roles and responsibilities of all role players are presented below.

7.3.1 Transnet (Employer)

The Employer will be responsible for overall environmental control on the project site during the construction and rehabilitation phases. The Employer's responsibilities will include:

- Appointing an independent ECO for the duration of the Contract;
- Appointment of required environmental specialists in terms of the requirements of the Environmental Authorisation;
- Obtaining necessary approvals of plans, designs and documentation as required by the Environmental Authorisation;
- Being fully familiar with the content of the Environmental Authorisation and CEMPr;
- Notifying the DFFE of changes in the developments that result in significant environmental impacts;
- Notifications to DFFE in terms of the requirements of the Environmental Authorisation and relevant environmental legislation (where required);
- The overall implementation of the EMPr;
- Ensuring compliance, by all parties, and the imposition of penalties for non-compliance through the Transnet Project Manager and ECO;
- Implementing corrective and preventive actions, where required;
- Preventing pollution and actions that will harm or may cause harm to the environment.

7.3.2 Transnet Project Manager

The Transnet Project Manager will be responsible for environmental management throughout the design and construction phases of the project and will report directly to the Employer (or its appointed representative).

The PM's responsibilities in terms of this CEMPr will include the following:

- Be familiar with the contents of the Environmental Management Plans and Specifications, and his role and responsibilities as defined therein.
- Communicate to the Contractor, verbally and in writing, the advice of the Transnet Environmental Manager and / or ECO and the outcome and recommendations of the ECO reports.

- Review and approve drawings produced by the Engineer, Contractor or professional team in connection with any aspect of the proposed project.
- Issue site instructions giving effect to the ECO recommendations and requirements where necessary.
- Review complaints received and make instructions as necessary.
- Discuss with the Environmental team the application of penalties for the infringement of the CEMPr, and other possible enforcement measures when necessary.
- Issue penalties as and when necessary.
- Implement Temporary Work Stoppages as advised by the Environmental Manager and / or the ECO, where serious environmental infringements and non-compliances continue to occur.
- Facilitate proactive communication between all role-players in the interests of effective environmental management.
- Ensuring conditions of the environmental authorisation are complied with.
- While the PM retains the responsibility for the overall implementation of the project, he may delegate certain of his functions to the Transnet Environmental Manager to ensure that requirements of the Environmental Authorisation are met.

7.3.3 Transnet Construction Manager

The Transnet Construction Manager is responsible for ensuring the implementation of the CEMPr; and reports to the Transnet Project Manager. The Transnet Construction Manager is supported by the Transnet Project Environmental Manager.

The specific environmental tasks during the construction phase will include:

- Reviewing the monthly reports compiled by the Transnet Environmental Officer;
- Communicating directly with the Contractors;
- Issuing non-conformance notification to Contractors that do not comply with the requirements of the EMPr and associated requirements or documents, including EA, permits and licenses.

7.3.4 Transnet Project Environmental Manager

The Transnet Project Environmental Manager will be responsible for ensuring that the CEMPr and associated specifications or requirements are complied with during construction.

The Transnet Project Environmental Manager will report functionally to the Transnet Environmental Manager: Governance and Compliance and relevant Project Manager.

The specific tasks during the construction stage will include:

- Liaison with the authorities.
- Tender evaluation, development of environmental criteria and adjudication thereof.
- Review all reports from the Environmental Specialist/Officer, including sign off on Method Statements.
- Conduct any environmental incident enquiries.

- Identify, with support from the Transnet Construction Manager, the need for corrective or remedial measures with regard to proposed works.
- Ensure induction material includes project appropriate environmental issues.
- Approve training programmes and other awareness initiatives.
- Coordinate or facilitate internal environmental audits.
- Prepare environmental monitoring protocols (if monitoring to be done by Environmental Specialist and not an outside consultant).

The Transnet Project Environmental Manager may delegate part or all of these responsibilities to the Transnet Environmental Officer, based on the merits of the particular project at hand.

7.3.5 Transnet Environmental Officer

The Transnet Environmental Officer reports functionally to the Transnet Construction Manager and Transnet Project Environmental Manager and is responsible for conducting the tasks required to ensure that the EMPr including permits and licenses are implemented on the construction site.

The Transnet Environmental Officer will conduct the following tasks:

- Ensure that environmental issues receive adequate attention in the site induction training.
- Prepare and conduct awareness training (e.g. posters, tool box talks and signage).
- Monitor the Contractor's compliance with the EA, EMP, EMPr and any permits and licences on site.
- Conduct monthly observations, inspections and environmental audits of all Contractor's and work areas.
- 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 topsoiled, re-vegetated, stabilised etc.).
- Maintain site documentation related to environmental management (permits, EMPr, method statements, EA, reports, audits, monitoring results, receipts for waste removal etc.). Documentation to be maintained on the relevant site Document Control System.
- Attendance at scheduled SHE meetings and project coordination meetings.
- Inspect and report on environmental incidents and check corrective action.
- Keep a regular photographic record of all environmental incidents.
- Implementation of environmental-related actions arising out of the minutes from scheduled meetings.
- Management of complaints register.
- Review and Sign off Method Statements prepared by Contractor's.
- Audit Environmental Method Statements.

- Collate information received, including monitoring results into a monthly report to the Construction Manager showing progress against targets.
- The compilation of the Project Environmental Management File.

The key deliverables will include the compilation of:

- Project Start Up Checklist
- Monthly inspection/environmental audit report
- Monitoring results
- Site close-out reports
- Incident reports
- Environmental Incident Register
- Environmental Non-Conformance Register
- Complaints Register
- Method Statements Register
- Hazardous Substances Register
- Site Close Out Inspection

Furthermore, the Transnet Environmental Officer will be required to compile a photographic record of all activities on site prior to construction related activities starting, during the construction process and on completion of construction related works. This will include photographs for:

- Monthly environmental audit reports;
- Corrective action;
- Progress of environmental works; and
- Non-conformance reports.

7.3.6 The Contractor

The Contractor will comply with the requirements of the CEMPr and abide by the Transnet Construction Manager's instructions regarding the implementation of the CEMPr. The Declaration of Understanding, as detailed in this document, must be signed, and a signed copy must be submitted to the Transnet Construction Manager prior to the start of construction.

The Contractor must provide a Responsibility Matrix and Organogram which must be approved by the Transnet Project Manager and Transnet Environmental Officer. This document must be updated on a regular basis to ensure that information is correct.

7.3.7 Contractor Environmental Officer

The Contractor will appoint a suitably qualified and experienced Environmental Officer that must be dedicated to the implementation of the CEMPr for the duration of their works on site. The Environmental Officer may not be a shared resource with other disciplines on site.

The Contractor will submit the name and CV of the Environmental Officer as well as an Environmental Management Plan detailing roles and responsibilities with their tender submission. This will be for Transnet's approval and no work will be permitted to commence on site if this has not been done.

Should the Contractor's Environmental Officer change from that person identified during either tender stage, or construction period, the Contractor will submit a CV of a replacement Environmental Officer for approval by the Transnet Environmental Officer and Construction Manager. No work can proceed until the replacement Environmental Officer has been approved.

The Contractor's Environmental Plan will include, but not be limited to:

- Description of environmental management responsibilities of the Contractor's Project Manager, Contractor's Site Manager and the Contractor's Environmental Officer;
- Organisational Environmental Policy;
- Environmental Method Statements.

The Contractor's Environmental Officer will liaise with the Transnet Environmental Officer on site. It will be the responsibility of the Contractor's Environmental Officer to ensure that all work is conducted according to approved Environmental Method Statements and that the roles and responsibilities as set out in this document are fulfilled. The Contractor's Environmental Officer tasks will include:

- Daily or weekly or monthly inspections of the work area(s) as per schedule or authorised through written instruction by the Transnet PEM or Environmental Officer;
- Prepare activity/aspect based Environmental Method Statements;
- Identify local, provincial and national environmental legislation that applies to the Contractor's activities;
- Monitor compliance with the EMPr and Environmental Method Statements;
- 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;
- Close out of environmental incidents;
- Attendance at all SHE meetings and induction programmes, and toolbox talks where possible;
- Waste Management;
- Ensure that environmental signage and barriers are correctly placed;
- Taking required corrective action within specified time frame;

- The Contractor's Environmental Officer will be expected to submit daily and/or weekly (whichever is practical based on the nature of the works on site) and monthly checklists to the Transnet Environmental Officer.

7.3.8 Environmental Monitoring Committee

The Environmental Authorization for the project requires Transnet to participate in the current constituted Coega Environmental Monitoring Committee (EMC). The EMC was initially established as a requirement of the Records of Decision (RoD) issued by National DFFE in 2002 and 2007 respectively for the construction and operation of the Port of Ngqura and proposed port extensions as well as for the establishment of the Coega Industrial Development Zone.

The EMC is responsible for continual monitoring of the Developers' compliance with the conditions of the various RoD's, Environmental Authorisations and requirements of Environmental management Programmes applicable to the construction, operation and decommissioning phases of authorised projects in the Coega IDZ and Port of Ngqura.

Its mandate is to monitor construction and operational activities within the entire IDZ and Port of Ngqura to ensure that they take place in an environmentally responsible manner, in accordance with sound environmental management practices and utilizing, where possible, current best practicable environmental options.

The committee consists of *inter alia* representatives from regulatory authorities, the Developers (Coega Development Corporation (CDC), Transnet SOC Ltd), Environmental Non-Governmental Organizations, SANParks, Algoa Bay Users, Civil Society and Affected Communities.

The EMC may:

- At their discretion, undertake periodic reviews on site to ensure that Transnet and their appointed contractors are implementing appropriate measures and monitoring related to implementation of the procedures and specifications contained in this document; and
- As representatives of government, require Transnet and CDC to make changes as necessary to environmental practices or order the suspension of all, or part of the work, should they believe that it is in the interests of the development zone/environment to do so.

The EMC through its' Terms of Reference (ToR) is mandated to select, after which CDC and Transnet shall appoint, a suitably-qualified independent person as Environmental Control Officer, who shall hold office for such period as determined by the EMC.

The EMC shall meet on a quarterly basis from the inception of the project and shall report to the National DFFE.

7.3.9 Coega/Ngqura Independent Environmental Control Officer

Transnet is required in terms of the Environmental Authorisation for the project to appoint a suitably qualified independent Environmental Control Officer. Appointment of an ECO will be done in line with the requirements of the EMC ToR.

The ECO is accountable to the EMC and reports to the EMC or to the Chairperson acting on behalf of the EMC. The ECO's primary function is to conduct compliance monitoring and auditing activities on behalf of the EMC, as outlined in the project Environmental Authorisation and/or as directed by the EMC or the Chairperson on behalf of the EMC. The ECO's functions include:

- Monitoring and reporting on environmental management of the project;
- Ensuring compliance with authorisation conditions, requirements of the CEMPr and relevant environmental legislation;
- Conducting regular site inspections and periodic environmental audits;
- Conducting bi-annual audits and presenting audit reports to the EMC;
- Providing quarterly environmental compliance reports to the EMC, copied to the relevant DFFE Directorate;
- Providing secretariat services to the EMC as outlined in the EMC ToR; and
- Complying with directions of or any duties assigned by the EMC or the EMC Chairperson.

The ECO is responsible for providing an independent evaluation of compliance with the CEMPr and not for enforcement of conditions of the CEMPr. Transnet is responsible for enforcement of the conditions of the EMPr. The ECO will be responsible for maintaining the following on site:

- A site diary of site visits and audits;
- An activity schedule for project implementation as supplied by Transnet;
- A copy of the Environmental Authorisation and all other relevant permits and licenses, for reference purposes;
- A non-conformance register;
- A public complaints register;
- Copy of audits undertaken by the ECO.

The ECO in terms of this CEMPr will remain employed for the full duration of construction until all snag items have been resolved, rehabilitation measures have been completed, and the site is handed over for Operation, thereby indicating the start of the operational phase.

The ECO will compile and submit a compliance audit report to the National DFFE upon final completion of construction related activities (within 30 days of site hand-over) and within 30 days of the completion of rehabilitation activities in accordance with the requirements of the project environmental authorisation.

8. Implementation of CEMPr

8.1 Availability of the CEMPr

Copies of this CEMPr and related environmental management requirements including relevant Environmental Method Statements must be available at the contractor site offices and / or works areas at all times during the construction phase of the project. The contractor must ensure that all personnel working on site including sub-contractors and their staff are familiar with and understand the requirements of the CEMPr and method statements.

8.2 Project Environmental Management Plan

The Contractor is required to submit an Environmental Management Plan (EMP) with his Tender Documents. The EMP should describe the relevant roles and responsibilities and how potential environmental risks will be assessed and managed including the monitoring and recording thereof. These will be used to establish a Contractor's competency and experience of preventing and managing potential environmental impacts.

8.3 Environmental Method Statements

Method statements are written submissions by the Contractor to the Transnet Construction manager and Environmental Officer in response to the requirements of this CEMPr. Construction activities may not commence prior to approval of the method statements.

Environmental Method Statements must as a minimum describe:

- The proposed activity, setting out the plant, equipment, material, labour and method the contractor propose using to carry out an activity;
- Transportation of staff and equipment to and from site;
- How equipment and material will be transported while on site;
- How and where equipment and material will be stored;
- The containment of leaks or spills of any liquid or material that may occur, including actions to be taken if containment is not possible;
- Timing and location of activity;
- Description of potential positive and negative environmental impacts and how they will be managed;
- Compliance/non-compliance with the requirements of this CEMPr and any other statutory and best practice standards;
- Monitoring and reporting requirements;
- Any other information deemed necessary by the Transnet Construction Manager.

The contractor will compile Activity/Aspect based Environmental Method Statements for all activities proposed. The Environmental Method Statement will enable the potential Positive and negative environmental impacts associated with the proposed construction activities to be identified and mitigation measures put in place. All method statements must be signed by the

contractor 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 Construction Manager and Environmental Officer. Any changes to the original Method Statements must be approved by the Transnet Construction Manager and Environmental Officer prior to implementation. The Contractor will also be required to re-sign the amended Environmental Method Statement.

To enable timely approvals, the Environmental Method Statements must be submitted to the Transnet Construction Manager and Environmental Officer for review two weeks prior to the intended date of commencement of the activity, or as directed by the Transnet Construction manager.

Where changes to the work methodology are proposed, Environmental Method Statements must be amended accordingly and signed off by all relevant parties as indicated above. This Environmental Method Statements MUST contain sufficient information and detail to enable the Transnet Construction Manager and/or Environmental Officer to apply their minds to the potential impacts of the works on the environment. The Contractor will also need to thoroughly understand what is required of him/her in order to undertake the works.

An approved method statement will not absolve the Contractor from any of his obligations or responsibilities in terms of the contract. However, any damage caused to the environment through activities undertaken without an approved method statement will be rehabilitated at the contractor's cost.

8.4 Environmental Awareness Training

All project staff (including contractors) will be required to undergo project specific environmental awareness training and training regarding roles and responsibilities in terms of the implementation of and compliance with the CEMPr. The awareness training will ensure that all parties understand their obligation to exercise due diligence for environmental matters.

The environmental awareness training programmes should focus on the various levels of employment. Environmental awareness training programmes need to be formulated for these levels and records of such must comprise:

- A record of all names, positions and duties of staff who received training;
- A summarised version of the training material.

Environmental Awareness Training programmes must be initiated prior to commencement of project related activities. Awareness training must amongst others include but not be limited to:

- Significant actual or potential impacts associated with the project and the importance of mitigation.
- Location of environmental sensitive receptors and areas of high environmental value.
- Conditions and requirements of the project Environmental Authorisation.
- Importance and relevance of the CEMPr.

- Roles and responsibilities in relation to compliance with the project Environmental Authorisation and CEMPr.
- Familiarisation with site environmental controls.
- Spill response and emergency procedures.
- Hazard and risk management to ensure personnel understand the potential impacts and proposed mitigation measures.
- Accident, incident, spill reporting and methods for prevention.
- Complaints management procedures.
- Environmental Monitoring.

The Transnet Environmental Officer may be required to provide additional training on-site regarding environmental aspects that are unclear to the construction personnel. The Contractor will implement training programmes at own cost.

In addition to the above, the Contractor will be required to train relevant personnel in various emergency incident situations. These persons must be provided with basic emergency response equipment. Alternatively, the Contractor will appoint relevant Preferred Service Providers (PSP's) to fulfil these roles and responsibilities. It is a requirement for the Contractor to make contact with the local emergency response teams and include these in all emergency planning and procedures.

All staff working with hazardous products must receive specialist training. This training must, as a minimum, deal with the following:

- Handling of dangerous/hazardous materials.
- Safe storage of such goods.
- The use of Material Safety Data Sheets.

The response and on-site teams must be provided with the following to effectively manage all environmental, health & safety incidents:

- Up-to-date emergency response plan.
- Material Safety Data Sheets of all materials stored on site.
- Spill kits.
- Adequate fire-fighting equipment.
- Personal Protective Equipment (PPE).

8.5 Recording and Reporting of Environmental Incidents

Transnet implements a procedure for the recording and reporting of environmental incidents which forms part of the implementation of this CEMPr. Where environmental incidents are identified, appropriate action shall be taken to minimize the impacts associated with the incident. Corrective actions must be implemented and an assessment done to determine whether preventive actions can be implemented to prevent similar incidents from occurring.

All environmental incidents shall be reported as soon as possible and must be followed by a corrective action report that outlines the corrective actions implemented and the timeframe in which it was implemented.

8.5.1 Classification of Environmental Incidents

An environmental incident is classified under four levels: 1, 2, 3 and 4. These levels are defined as follows:

Level 1 Environmental Incident

An incident or sequel of incidents, whether immediate or delayed, that results or has the potential to result in:

- A significant impact on the physical or biological environment (air, ground, water and habitat) with extensive or long term impairment of ecosystem function or surface and ground water resources.
- An inconvenience/ disturbance/disruption/annoyance (including odour, dust, noise, traffic problem, loss of water supply) of a long duration or with a long term impact on interested and affected parties. A release of material (gas, liquid, solid) or energy that will cause chronic illness, permanent lost time injury, fatality or extensive property damage experienced by interested and affected parties.
- Irreparable damage to highly valued structures and sacred locations.
- Public or national / international media outcry.
- Instances where inspections undertaken by or for the regulator to check legal compliance, were found to be outside the permitted limits and have resulted in prosecution.
- Any incident with NEMA section 30(1) – and/or NWA section 20(1) reporting requirements (In the even where all administrative requirements have been complied with and the incident has been closed out by the authorities, it may be re-classified as a Level 2 environmental incident).

Where the environmental impact of a Level 2 environmental incident is still present 120 days after occurrence, the incident will be reclassified as a Level 1 incident.

NOTE: A Level 1 environmental incident usually should be reported to the authorities, usually result in a significant pollution and may entail risk of public danger. Level 1 environmental incidents may cause an irreversible impact even with the involvement of long-term external intervention i.e. expertise, best available technology, remedial actions, excessive financial cost etc.

Level 2 Environmental incident

An incident or sequel of incidents, whether immediate or delayed, that results or has the potential to result in:

- A moderate impact on the physical or biological environment (air, ground, water or habitat) with limited impairment of ecosystem function and/or surface and ground water resources.
- An inconvenience disturbance/ disruption/annoyance (including odour, dust, noise, traffic problems, loss of water supply) of moderate or with medium effect on interested and affected parties.

- A release of material (gas, liquid, solid) or energy that causes severe but reversible illness, non-lost time injury or moderate property damage experienced by interested and affected parties.
- Damage to rare structures of cultural significance or significant infringement of cultural values / sacred locations.
- Attention from local media or widespread complaints.
- Instances where inspections undertaken by or for the regulator to check legal compliance have been outside the permitted limits and an official pre-directive or directive was issued.
- Inability of Contractors to close out corrective actions in an NCR without proper reason.

Where the environmental impact of a Level 3 environmental incident is still present 3 days after occurrence, the incident will be reclassified as a Level 2 incident.

NOTE: A Level 2 environmental incident may be reported to the authorities, can result in significant pollution or may entail risk of public danger. The impact of Level 2 environmental incidents should be reversible within a short to medium term with or without intervention.

Level 3 Environmental incident

An incident or sequel of incidents, whether immediate or delayed, that results or has the potential to result in:

- A minor impact on the physical or biological environment (air, ground, water or habitat), with no significant or long-term impairment to the ecosystem function or surface/ground water resources.
- An inconvenience / disturbance / disruption / annoyance (including odour, dust, noise, traffic problems, loss of water supply) of short duration and with no long-term effect on the employees and the community.
- A release of material (gas, liquid, solid) or energy that has the potential to cause illness, or that causes short term discomfort or reversible health effect to interested and affected parties.
- Isolated complaints by interested and affected parties.
- Instances where inspections undertaken taken by or for the regulator to check for legal compliance, have been outside the permitted limits and a non-compliance notice was issued.
- Blatant negligence of Transnet CEMPr leading to the issuing of an NCR.

NOTE: A Level 3 environmental incident is not reportable to authorities, should not result in pollution and may not have a risk of public danger. The impact of Level 3 environmental incidents should be insignificant immediately after occurrence and/or once-off intervention on the day of occurrence.

Level 4 Environmental incident

A minor incident with lesser significance that did not necessarily result in damage or injury but that had the potential to cause damage to the environment, including:

- Could result in service disruption with a lesser significance;
- Did not necessarily result in damage;
- Had the potential , under different circumstances, to cause major damage to the environment; or

- Instances where inspections undertaken internally by Transnet to check for conformance with the Transnet Environmental Governance Framework have been outside the required limits (e.g. an environmental compliance score of less than 80%).

8.5.2 Procedure for Recording and Reporting Environmental Incidents

The procedure for recording and reporting environmental incidents is outlined below:

- Step 1: Immediately take all reasonable measures to contain and minimise the effects of the incident, including its effects on the environment and any risks posed by the incident to the health, safety and property of persons;
- Step 2: Notify the Transnet Environmental Officer in writing including the following information: the nature of the incident and initial classification; substances involved with quantities; initial measures taken to minimise impacts; causes of the incident; measures taken and proposed to avoid the reoccurrence of the incident;
- Step 3: Record the incident on the Environmental Incident Register
- Step 4: Undertake clean-up procedures;
- Step 5: Remedy the effects of the incident; and
- Step 6: Assess the immediate and long-term effects of the incident on the environment and on public health;

In the event of any Level 1 or 2 environmental incidents, the Contractor's Environmental Officer must complete a Transnet Incident Flash Report, Transnet Environmental Incident Report and record the incident in the Transnet Environmental Incident Register.

In the event of any Level 1 or 2 environmental incidents, the Transnet Environmental Officer will:

- Ensure that an Incident Flash Report has been compiled and that it contains the necessary information;
- Ensure that the Contractor has undertaken a detailed incident investigation; and
- Report, record, investigate and analyse the incident and communicate the required action plans to be implemented to the Transnet Construction Manager.

In the event of any Level 3 Environmental Incidents, the Contractors' Environmental Officer must complete a Transnet Environmental Incident Report and record the incident in the Transnet Environmental Incident Register.

In the event of any level 4 Environmental Incidents, the Contractors' Environmental Officer must record the incident in the Transnet Environmental Incident Register.

In the event of an incident (regardless of the level) occurring, the Transnet Environmental Officer must ensure that the problem statement on the report is clear, the actual or potential consequences are noted, and priority mitigation actions are indicated where necessary.

8.6 Communication and Consultation

The management of internal communication as well as the receipt, response and documentation of external communication relating to the construction phase of the project shall be done in accordance with the Transnet procedure for communication management, the requirements of the project environmental authorisation and this CEMPr.

8.6.1 Reporting Requirements

The Contractor shall submit monthly environmental reports to the Transnet Construction Manager and Environmental Officer in line with the requirements below and relevant to their activities. Reporting required in terms of compliance with the requirements of this CEMPr shall include but not be limited to:

- Progress with regards to the implementation of the CEMPr;
- Results of inspections, monitoring and audits conducted;
- Environmental incidents or non-conformances and the corrective actions implemented;
- Public complaints received;
- Requirements for relevant permits or licenses;
- Revisions to management plans and programmes.

8.6.2 Coega Environmental Monitoring Committee

The EMC shall meet on a quarterly basis from the inception of the project and shall report to the National DFFE. Transnet SOC Ltd shall attend quarterly EMC meetings and shall provide a report on construction progress and the status of environmental management and compliance, at these meetings.

8.6.3 Management of Complaints

A complaints register shall be established for the recording of any complaints that may be received during the construction phase of the project. The Complaints Register must be updated regularly, as new concerns or complaints are received. All complaints received will be discussed at environmental meetings and reported in environmental management reports. The status of each complaint must be indicated on the register, as open or closed. A complaint will remain open on the register(s) until all relevant parties are satisfied that the concern has been dealt with and that the matter has been resolved. All complaints shall be categorized in order to identify trends.

The following information must be recorded as a minimum when complaints are received:

- Date, time and nature of complaint received;
- Type of communication received;
- Contact detail of complainant;
- Response to complaint including actions implemented.

Contractors are required to immediately report all complaints received directly by them to the Transnet Construction Manager and Environmental Officer. Complaints must be responded to and closed-out within 10 days after receipt where practical.

8.7 Documentation and Records

The Transnet Environmental Officer will ensure that the Contractor's Environmental Officer is supplied with all required/applicable documents listed in the Transnet Contents for Contractors Environmental Files. This Document has been included as **Annexure A**.

The Contractor's Environmental Officer will complete and maintain copies of all documents and records listed in Annexure A and ensure that these documents and records are kept up to date.

The Contractor's Environmental Officer will submit these documents to the Transnet Environmental Officer on a monthly basis except where documents have remained unchanged in which case written notification to this effect must be provided to the Transnet Environmental Officer.

Once the Transnet Environmental Officer 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 the Transnet Environmental Officer after which an Environmental Site Closure Certificate will be issued.

NOTE: All documents/records are to be retained 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 relevant project-specific NEC contract.

8.8 Application for Exemption from Complying with Parts of the CEMPr

The CEMPr is applicable to all construction activities associated with the project. It is however noted that some construction activities may vary in size, nature and complexity. For smaller contracts, or where the scope of work is limited, the Contractor may request, in writing to the Transnet Project Manager, for exemption from parts of the CEMPr that may not be relevant to the scope of their activities. The Transnet Project Manager will consult the Transnet Project Environmental Manager in reaching a decision on whether exemption from some of the CEMPr provisions may be granted.

9. Contractor Specific Compliance Requirements

9.1 Prior to Commencement of Construction

The Transnet Project Manager must ensure that the requirements below are requested from the Contractor in the Project Construction Contract Document, the Letter of Appointment and any other relevant correspondence with the Contractor prior to the start of works, as relevant.

9.1.1 Declaration of Understanding

The Declaration of Understanding (DoU) will be signed by a person of authority and provided by the Contractor as part of the Tender Documentation. The signed DoU is a written confirmation by the Contractor that the requirements of the CEMPr and other authorisations, permits and licenses are understood and will be complied with for the duration of their works on site. The pro-forma DoU to be signed by the Contractor has been included as **Annexure B**.

9.1.2 Resource Allocation

Financial implications relating to the implementation of the CEMPr must be recognised by the Contractor (for the construction phase) and adequate provision for these costs must be made prior to commencement of construction activities. Such costs can include (but may not be limited to) mitigation actions, environmental awareness training, monitoring and auditing requirements, measures for rectification and rehabilitation, including any equipment or specialists required for these items.

9.1.3 Appointment of Contractors' Environmental Officer

The Contractor will appoint a dedicated and suitably qualified Environmental Officer that will be responsible for environmental management on site during construction. The Contractor will forward details of the appointment to the Transnet Construction Manager and PEM for their review and approval. Should the Contractor's Environmental Officer change from that person identified during either the tender stage, or the construction period, the Contractor will submit the details of such appointment or assignment for the Transnet Project Manager's approval. No work will proceed until the new Environmental Officer is assigned or appointed.

The pro-forma appointment letter for the Environmental Officer to be appointed by the Contractor has been included as **Annexure C**.

9.1.4 Environmental Management Plans and Method Statements

Where relevant, an Environmental Management Plan and Environmental Method Statements, to meet the requirements of the CEMPr (activity based environmental method statements), will be provided by the Contractor as part of their Tender. Required method statements will be specified in the Quality Criteria of the tender. These include, but are not limited to, the following where applicable:

- Establishment of construction lay down area;
- Hazardous and non-hazardous waste management;
- Storm water management;
- Handling, Storage and Management of Hazardous Substances;
- Contaminated water management;
- Prevention of marine pollution;
- Hydrocarbon spills;
- Diesel tanks and refuelling procedures;

- Dust control;
- Spoil dumping;
- Sourcing, excavating, transporting and dumping of fill material;
- Noise and vibration control;
- Removal of rare, endemic or endangered species;
- Removal and stockpiling of topsoil;
- Rodent and pest control;
- Environmental awareness training;
- Site division (demarcation of the site);
- Emergency procedures for environmental incidents;
- Closure of construction laydown area.

Emergency construction activity Environmental Method Statements may also be required. Activities requiring Environmental Method Statements may not commence if these method statements have not been approved by the Construction Manager and PEM or Environmental Officer.

9.1.5 Environmental Inductions

A comprehensive environmental induction programme will be developed and implemented. 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 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 persons also undergo the Induction Programme and are made aware of the environmental requirements and specifications on site. The Contractor must ensure that all of their personnel understand the requirements of the Environmental Authorisation and CEMPr for the project, as relevant to their scope of work.

Inductions, which need to be conducted prior to any construction works occurring, must include but not be limited to:

- Information on applicable specifications, plans and method statements which are applicable to the project.
- Project requirements in treatment and handling of flora and fauna;
- Management and minimising of waste, including waste separation;
- Maintenance of equipment to prevent the accidental discharge or spill of fuel, oil, lubricants, cement, mortar and other chemicals;
- Responsible handling, storage and transportation of hazardous materials;
- Environmental emergency procedures and incident reporting;
- General code of conduct towards I&AP's;
- Housekeeping, hazardous materials/dangerous goods, MSDS;

- Dust management and enhanced awareness;
- Water and electricity savings;
- Important animal species and the need to be aware of their presence on site to avoid collision and other disruptive activities which could affect the animals.

All visitors will be required to undergo a visitor's induction. Special shortened inductions may be provided for visitors to the Project where there is minimal potential for environmental harm. Contractors are responsible for the actions and conduct of their visitors, and must ensure that visitors obey all environmental requirements of the site. Visitors must be accompanied at all times.

9.2 During the Construction Period

9.2.1 Copy of the CEMPr and Familiarisation thereof

A copy of the CEMPr will be available on site and the Contractor will ensure that all the personnel on Site (including sub-contractors and their staff) as well as suppliers, are familiar with and understand the specifications contained in this document.

9.2.2 Weekly Environmental Monitoring Report

The Contractor's Environmental Officer will be required to provide the Transnet Environmental Officer with a weekly environmental monitoring report covering the events of the week. This will highlight key performance areas and provide feedback on corrective and preventive actions taken. The Contractor's Environmental Officer will have the weekly reports signed off by the Contractor's Construction Manager prior to submission to the Transnet Environmental Officer.

9.2.3 Environmental Site Meetings

Environmental Site Meetings will be held monthly on a day to be indicated by the Project Environmental Manager, or as and when required. These meetings must be attended by Senior Site Representative together with the Transnet Environmental Officer, Contractor(s), and Contractor's Environmental Officer ('s).

9.2.4 Site Clean-up for Closure

Retention money will not be paid until a Site Closure Inspection (conducted by the Transnet Environmental Officer) has taken place and has been signed off by the Transnet Construction Manager and Project Environmental Manager, together with the Site Closure Certificate.

10. Standard Environmental Specifications

This section describes the minimum standards for environmental management to which Contractors and sub-contractors must comply during Construction. The Contractor shall identify

the potential environmental impacts that may occur as a result of his/her activities and accordingly prepare separate Method Statements describing how each of these impacts will be prevented or managed so that the standards set below are achieved. These method statements shall be prepared in accordance with the requirements specified in Section 8.3 and 9.1.4 of this CEMPr.

The Contractor shall comply with the standards described below:

10.1 Environmental Awareness Training

An Environmental Awareness Program is considered a necessary part of the Construction Environmental Management Plan for the Project. Appropriate training of 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 of regional and local regulations.
- Problem recognition and communication – training personnel to recognise potential environmental problems, i.e. spills, and communicate the problem to the proper person for action.
- 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 personnel.

10.2 Site Planning and Establishment

Careful consideration must be given to the layout of the construction site prior to the commencement of construction. The appointed contractor must establish construction camps, offices, workshops and other facilities in a manner that does not adversely affect the environment. These facilities must not be sited in close proximity to sensitive areas and any area within the site that are not part of the development.

Before the onset of construction, the Contractor shall submit to the Transnet Construction Manager/Transnet Environmental Officer for his/her approval, plans of the exact location, extent and construction details of these facilities and the impact mitigation measures the Contractor proposes to implement.

The Site Plan must as a minimum include but not necessarily be 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 effluents;
- 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 at all localities on the site where there will be a concentration of labour. Sanitary arrangements should be to the satisfaction of the Transnet Construction Manager and Environmental Officer.

Site camps and laydown areas should not be sited in close proximity to Environmental Sensitive Areas (ESA's) as described in this CEMPr. Should this not be possible, approval for the location of these facilities must be granted by the Transnet Environmental Officer.

10.3 Identification and establishment of suitable access routes and roads

Existing access routes to the construction/works areas must be used as far as possible. The establishment of access roads must be restricted to within the development footprint to prevent unnecessary disturbance of the surrounding environment. Access routes/roads must be maintained in a good condition at all times during construction to minimize erosion and dust generation.

Vehicles should not be permitted to leave access roads, creating multiple tracks and increasing the potential for erosion and unnecessary disturbance of sensitive areas. Turning of vehicles should only take place within a clearly demarcated "turn area" located within the approved construction footprint. Contractors must co-ordinate the loading, transporting and offloading of material during construction to avoid formation of side-roads by passing vehicles.

Vehicles should only be parked within designated parking areas as demarcated on the Site Plan. Parking of vehicles in undisturbed/vegetated areas or outside demarcated areas is not permitted. On completion of construction all access routes/roads that will not become permanent must be adequately rehabilitated to the Satisfaction of the Transnet Project Environmental Manager and Independent Environmental Control Officer.

10.4 Demarcation of Site Limits

Prior to the commencement of construction, the actual site to be developed must be clearly demarcated by means of highly visible barriers.

Methods of demarcation shall be agreed with and approved by the Transnet Construction Manager and Environmental Officer and may vary between areas. Disturbance of vegetation outside of the demarcated development footprint is not permitted.

All plant, material and equipment required for construction must be located within the designated areas. Laydown areas must be clearly demarcated within the site limits. No activities or disturbance are allowed outside of the demarcated development footprint.

10.5 Eating Areas

The Contractor is responsible for providing temporary shade areas within the works area to ensure that workers do not leave the site to eat during working hours. Refuse bins must be provided at all established eating areas. Waste from refuse bins must be removed at the end of each shift and disposed of in accordance with the specified waste management requirements. Contractors must take note that NO fires shall be allowed anywhere on site, this includes site camps and working areas.

10.6 Effluent Management

All effluent water from site shall be disposed of in a properly designed and constructed system, situated so as not to adversely affect any Environmental Sensitive Areas as defined by this CEMPr. Only domestic type wastewater shall be allowed to enter designated systems.

10.7 Sewage and Sanitation

The Contractor is responsible for providing adequate sanitary facilities to all workers on site and for enforcing the proper use of these facilities. Facilities shall be serviced on a regular basis and proof thereof shall be available in the Contractor's Environmental File.

Ablution facilities shall be easily accessible and shall be positioned within walking distance from works areas. Use of open areas (i.e. the veldt) shall not, under any circumstances, be allowed.

Outside toilets shall be provided with locks and doors and shall be secured to prevent them from blowing over. The toilets shall also be placed outside areas susceptible to flooding and high winds (where possible) and away from environmental sensitive areas. 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 Construction Manager and Environmental Officer.

The Contractor shall ensure that there are separate toilet facilities for male and females on site.

10.8 Waste Management

Waste is grouped into "general" or "hazardous", depending on its characteristics. The classification determines handling methods and the ultimate disposal of the material.

Waste management on site during construction must be strictly controlled and monitored. Only approved waste disposal methods are permitted. The Contractor is responsible for ensuring that all site personnel are familiar with the proper disposal of waste. The contractor is required to institute an on-site waste management programme that must be detailed in a waste management

environmental method statement. The waste management method statement must address but not be limited to the following:

- An inventory of expected wastes.
- Category of wastes.
- Plan for dealing with waste.
- Compliance with authority requirements.
- Auditing and monitoring.
- Methods for control of spillages and clean-up.

A hierarchical control approach to waste management is encouraged. Waste should preferably be managed in the following order of preference:

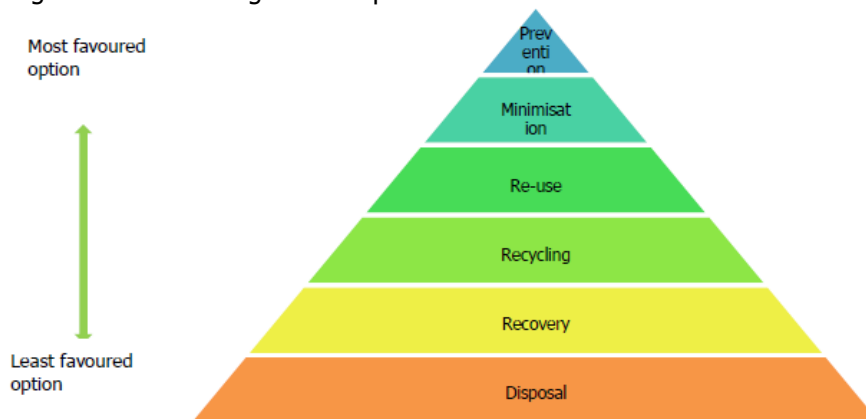


FIGURE 2: THE WASTE MANAGEMENT HIERARCHY

(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 from site generated through the Contractors activities. 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/>).

Contractors shall quantify all waste disposed of, whether general or hazardous (including waste disposed of by any sub-contractors) and keep record of these quantities on site. Management requirements for various waste types are outline below:

10.8.1 General Waste

Contractor shall manage GENERAL WASTE that is anticipated to be generated by activities as follows:

- Determine if waste is non-hazardous and obtain containers for waste storage;
- Notify waste hauler when container is full so that it can be removed and replaced with an empty;
- No littering is allowed on site. In the event where staff mobility is high, refuse bags will be made available by the Contractor;
- Provide documentary evidence of proper disposal of waste.

Contractor shall recycle GENERAL WASTE (as far as practically possible) that is anticipated to be generated by activities on site as follows:

- Obtain and label recycling containers for the following (whichever relevant) and locate them within temporary office building and trailers:
 - Office Waste;
 - Aluminium;
 - Steel;
 - Glass;
 - Ferrous Metals;
 - Non Ferrous Metals; and
 - Waste Timber
- Establish recycled material collection schedule;
- Arrange for full bins to be collected.

Contractors shall ensure that adequate waste facilities are provided for the nature of their works on site and that these facilities are properly maintained. Measures must be implemented to reduce the potential for litter and negligent behaviour with regard to the disposal of all refuse. Litter bins, containers and refuse collection facilities must be provided in all works areas and site camps. Placement of waste facilities must be done in consultation with and must be approved by the Transnet Construction Manager and Environmental Officer.

Waste storage containers must be equipped with lids, tip-proof, weatherproof and scavenger proof. Lids must remain closed to prevent wind-blown waste. Waste storage areas must be clearly demarcated and fenced off where practical.

No burning, on-site burying or dumping of waste will be permitted. All solid waste must be disposed of at appropriate licensed waste management facilities and waste disposal manifests maintained for audit purposes.

Contractors must provide metal refuse bins or equivalent plastic refuse bins with lids for all works areas. Refuse must be collected and removed off site at least twice per week or more frequently when required. Domestic waste must be transported to approved refuse disposal sites in covered containers or trucks.

Construction rubble and other waste materials must be disposed of at a licensed waste disposal site and all disposal slips maintained.

10.8.2 Hazardous Waste

The Contractor shall manage HAZARDOUS WASTE anticipated to be generated by his operations as follows:

- Characterise the waste to determine whether general or hazardous.
- 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 prescribed by the Contractor's waste management plan.
- Track the accumulation time for the waste. Haul the full container to the disposal site.
- Provide documentary evidence of proper waste disposal of the waste (Waste Disposal Certificate).

The Contractor's Environmental Officer will work in conjunction with the Contractor's construction safety and industrial hygiene personnel to create a Hazardous Materials Management Program. This program will establish the necessary protocol for proper handling and removal of hazardous materials on the site.

All hazardous waste including oil and other chemicals (paints and solvents) must be stored in enclosed areas and clearly marked. Such waste must be disposed of at an approved hazardous waste disposal site and disposal manifests kept for audit purposes.

Used oil and grease must be removed from site and sold to an approved used oil recycling company. The spoiling of tar or bitumen products on site, over embankments, or in any excavations, will not be permitted. Used oil, lubricants and cleaning materials, from the maintenance of machinery and equipment must be collected in holding drums and removed from site by a specialist oil recycling company for recycling or disposal at an approved hazardous waste site.

10.8.3 Waste Water

Water from kitchens, laboratories and sinks must be discharged into a conservancy tank for disposal at a licensed waste disposal site. Runoff from refuelling facilities / workshops / machinery washing areas and concrete batching areas must be collected into a conservancy tank and disposed of at an approved waste disposal site.

The Contractor will be required to submit a method statement detailing how wastewater would be collected from all wastewater generating areas, as well as storage and disposal methods.

10.9 Dust Management

Material in transit should be loaded and contained within the load bin of the vehicle in such a way as to prevent any spillage onto roads and the creation of dust clouds. If necessary, the load bin of the vehicle shall be covered with a tarpaulin to prevent dust.

Dust is to be controlled on unpaved access roads and site roads using sprayed water.

Contractors are responsible for managing dust generated as a result of their activities. Some dust control measures which are normally applied during construction are presented in this section for inclusion by the Contractor in the Dust Control Method Statement:

- Operate vehicles within speed limits, where no speed limit has been specified the limit shall be 20km/h;
- Wash paved surfaces within the construction area twice a week;
- Minimise haulage distances;
- Apply water to gravel roads with a spraying truck when required;
- Environmentally Friendly soil stabilisers may be used as additional measures to control dust on gravel roads and construction areas;
- Dust suppression measures will also apply to inactive construction areas. (An inactive construction site is where construction activities will not be undertaken for a month or more);
- Construction material being transported by trucks must be suitably moistened or covered to prevent dust generation where practical;
- Implement a system of reporting excessive dust conditions by construction personnel (as instructed through Environmental Awareness Training);
- Implement a dust monitoring programme as specified in Section 5 of the CEMPr;
- Water used for dust control shall only be taken from approved sources.

Exposed soil and material stockpiles must be protected against wind erosion. The Contractor is responsible for the implementation of adequate dust suppression measures (e.g. water spray vehicles, covering of material stockpiles, etc.) where required.

Sand, stone and cement shall be stored in demarcated areas and shall be covered or sealed to prevent wind erosion and resultant deposition of dust on surrounding indigenous vegetation.

10.10 Erosion and Sedimentation Control

Erosion and sedimentation control measures must be implemented for the duration of construction. Contractors must protect all areas susceptible to erosion by installing necessary temporary and permanent drainage works as soon as possible and by taking any other measures necessary to prevent storm water from concentrating and scouring slopes and banks.

Any erosion channels/gullies developed during construction must be backfilled and compacted and the areas restored to a proper condition. Stabilisation of cleared areas to prevent and control erosion and/or sedimentation must be actively managed.

Traffic and movement over stabilised areas must be restricted and controlled, and damage to stabilised areas repaired and maintained. In areas where construction activities have been completed and no further disturbance is envisaged, rehabilitation and revegetation should commence as soon as possible.

Structural and non-structural (vegetative) erosion control measures shall be designed, implemented, and properly maintained in accordance with best management practices which will include the following:

- Scheduling of activities to minimise the area of disturbance at any one time;
- Implementation of re-vegetation as early as feasible;
- Limiting construction traffic and/or avoidance thereof on access roads and areas to be graded to the extent feasible at drainage ditches;
- Compacting loose soil as soon as possible after excavation, grading, or filling;
- Using silt fences, geo-textiles, temporary rip-rap, soil stabilisation with gravel, diversionary berms or swales, small sedimentation basins, and gravelled roads to minimise transport of sediment;
- Develop and implement an erosion and sedimentation control environmental method statement and ensuring that construction personnel are familiar with and adhere to the requirements thereof;
- Managing runoff during construction;

The Contractor shall be responsible for checking and maintaining all erosion and sedimentation controls.

10.11 Storm Water Management

The Contractor must ensure that pollution of ground or surface water does not occur as a result of site activities. The Contractor must be aware that, apart from run-off from overburden and stockpiles, storm water can also be contaminated from batch plants, workshops and vehicle wash-down slabs and that contaminants during construction may include hydrocarbons from fuels and lubricants, sewerage from employee ablutions and excess fertiliser from rehabilitated areas, etc.

The Contractor shall take note that discharges to controlled waters such as the sea, rivers, groundwater or to sewerage systems are controlled under South African Water Legislation. The following specific measures are required:

- Temporary drainage must be established on site during the construction period until permanent drainage is in place. Contractors are responsible for maintaining the temporary drainage in their areas. Contractors must provide secondary drainage that prevents erosion;
- Contractors must employ good housekeeping in their areas to prevent contamination of drainage water;
- The Contractor shall clear stagnant water;

- Contractors shall ensure that no contaminated surface water flows off-site as a result of their activities. 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;
- Silt Fencing or similar alternatives shall be installed at the perimeters of actively disturbed areas
- If applicable, the Contractor shall be responsible for collection, management, and containment within the site boundaries of all water emanating from general site preparation activities. Methods for removal of water from excavations and trenches shall be agreed with the Transnet Construction Manager and Project Environmental Manager prior to implementation. No discharge of water to off-site land or surface water bodies will be allowed;
- On-site drainage shall be accomplished through gravity flow. The surface drainage system shall consist of mild overland slopes, ditches, and culverts. The graded areas adjacent to buildings shall be sloped away with a 5% slope. Other areas shall have a minimum slope of 0,2% or as otherwise indicated.

10.12 Noise Management

The Contractor must take precautions to minimise noise generated on site as a result of construction activities, especially when working in areas or on activities that may impact on surrounding sensitive receptors. The following noise control measures must be implemented:

- Keep all equipment in good working order;
- Operate plant and equipment within its specification and capacity and don't overload machinery;
- Ensure that equipment is turned off when not in use;
- Apply regular maintenance, particularly with regards to lubrication;
- Operate equipment with appropriate noise abatement accessories, such as sound hoods;
- Sensitive social receptors shall be notified of any excessive noise-generating activities that could affect them.

Noise control measures to be implemented by the Contractor must be clearly specified in the noise control method statement and must as a minimum take into consideration the following:

- Ensure that the potential noise sources conform to the South African Bureau of Standards recommended code of practice, *SANS 10103:2004*, 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*, for construction plant noise generation;
- All the Contractor's vehicles shall be fitted with effective exhaust silencers and shall comply with the Road Traffic Act, (Act 29 of 1989) when any such vehicle is operated on a public road;

- Contractors shall ensure that all noise-related occupational health provisions are met. (Occupational Health and Safety Act, (Act 85 of 1993).

10.13 Water Provision and Management

Contractors shall provide safe drinking water fit for human consumption at site offices and all other working areas. All drinking water must be taken from approved sources and comply with recognised standards for potable use. The generally acceptable standard is that a supply of drinking water shall be available within 200m of any point on the construction site. Drinking water and multi-purpose use water storage facilities must be clearly distinguished and marked.

Abstraction of water from any water course (stream, river, or dam) without the expressed permission of the Transnet Construction Manager and Environmental Officer is not permitted. 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).

Methods must be employed to ensure that water is not wasted. Environmental awareness training must be used to create awareness with staff to conserve water and to prevent pollution of water.

Method Statement(s) must be prepared by the Contractor for the various water uses. The Contractor shall keep record of the quantities of water used during construction (including use by sub-contractors), irrespective of the purpose of use.

10.14 Handling and Batching of Concrete and Cement

Contractor are advised that cement and concrete are regarded as hazardous to the natural environment on account of the high pH of material and chemicals contained therein.

Concrete and cement mixing directly on the ground is not permitted and must take place on impermeable surfaces.

Concrete batching shall only be conducted in demarcated areas which have been approved by the Transnet Construction Manager and Environmental Officer. 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.

Concrete batching activities must be located away from environmental sensitive areas (as defined in this CEMPr). All runoff from batching areas must be strictly controlled, and cement-contaminated water must be collected, stored and disposed of off-site at a licensed waste disposal site. Contaminated water storage facilities must not be allowed to overflow and appropriate protection from rain and flooding must be implemented.

Washing of equipment and tools used for the purpose concrete mixing such as shovels, mixer drums, concrete chutes, etc. shall be done within a designated wash-bay facility. Water used for washing shall be restricted as far as practically possible and must be re-used

Ready-mix concrete trucks are not allowed to wash out anywhere other than in designated wash-bay facilities. The facility must be approved for this purpose by the Transnet Construction Manager and Environmental Officer.

The Contractor shall periodically clean out hardened concrete from the wash-bay facility or concrete mixer, which can either be reused or disposed of as per accepted waste management procedures.

Used (empty) cement bags must be collected and stored in weatherproof containers to prevent wind-blown cement dust and water contamination. Used cement bags are not allowed to be used for any other purpose and must be disposed of on a regular basis via the Contractors' waste management system and in accordance with relevant approved environmental method statements.

All excess concrete must be removed from site and disposed of on completion of concrete works. The washing of visible remains of cement or concrete into the ground is not permissible. All excess aggregate should also be removed.

The Contractor is required to submit a method statement detailing cement storage, concrete batching areas and methods, method of transport of cement and concrete, storage and disposal of used cement bags for each concrete batching operation.

10.15 Spray Painting and Sandblasting

Spray painting and sandblasting should be kept to a minimum. All painting should, as far as practicable, be done before equipment and material is brought to site. Touch-up painting is to be done by hand painting or by an approved procedure. A Method Statement shall be submitted to the Transnet Environmental Officer for approval.

Only approved sources of sand may be used for sandblasting. The contractor shall ensure that the sandblasting methodology allows for measures to minimise dust generation. A detailed method statement must be prepared and submitted for approval by the Transnet Construction Manager and Environmental Officer.

The relevant Contractor will inform his Environmental Officer of when and where spray painting or sandblasting is to be carried out prior to commencement of work. The Contractor's Environmental Officer will monitor these activities to ensure that adequate measures are taken to prevent contamination of the soil.

If the area is in confined or elevated areas, a protection plan must be issued for approval by the Transnet Environmental Officer.

10.16 Management of Hazardous Substances

Contractors shall develop and implement environmental method statements for the handling, storage, use and disposal of fuel, hazardous and poisonous substances including hydrocarbon containing materials.

Contractors shall comply with all relevant national, regional and local legislation with regard to the transportation, use and disposal of hazardous materials.

Material Safety Data Sheets (MSDS) for all hazardous substances shall be kept on site. Information on all hazardous substances shall be made available to personnel. Personnel handling hazardous substances shall be adequately trained and educated on proper use, handling and disposal.

A Register of hazardous substances, together with storage procedures for these materials shall be developed and maintained by the Contractor's Environmental Officer for the duration of the Contractors' works on site.

10.16.1 *Storage of hazardous substances / materials*

Petrochemicals, oils and grease shall only be stored under controlled conditions. All hydrocarbon materials (i.e. fuel, oil, hydraulic fluids and grease) shall be stored in a secured, designated area that has restricted entry and all containers shall be closed to prevent rainwater ingress. Authorisation to store hazardous substances shall be obtained from the relevant authority. Warning signs indicating the nature of the stored materials shall be clearly displayed on the storage facility or containment structure. Bunded containment areas shall be provided for the storage of hazardous materials to prevent pollution of the surrounding environment by leaks or spillages.

Tanks containing fuels shall have lids and shall remain firmly shut. Fuel stores shall be placed on a bunded sealed base. The bund should accommodate 110% of the total volume for single tanks. Where two or more tanks are installed within the same bund, the bunds should accommodate 110% of the largest tank or 25% of the total capacity of all tanks, whichever is the greater. Any waste water or spilled fuel collected within the bund shall be disposed of as hazardous waste.

Necessary precautions shall be taken to prevent fires or spills at hazardous substance stores. No smoking shall be allowed in the vicinity of the stores. Adequate fire-fighting equipment shall be available at these stores.

Where oil-separators are proposed to be installed, these shall be approved by the Transnet Construction Manager and Environmental Officer and will be subject to the approval of an environmental method statement governing environmental and related risks.

10.16.2 Fuels and Chemicals

Contractors shall ensure that the necessary materials and equipment are available on site to deal with spillages of any of the materials used or stored on site. All measures shall be taken to ensure that oil, petrol, diesel, or other hazardous substances are not discharged onto the ground.

Drip trays shall be placed under all pumps, machinery and equipment (requiring oil, diesel, or other substances for operation) that are to remain in one position for longer than two days. The drip trays shall be emptied regularly and the contaminated material(s) disposed of off-site at a facility capable of and authorised to handle such waste water. Drip trays shall be cleaned before any possible rain events that may result in the drip trays overflowing. Used oil shall be stored at a central location, prior to removal off site, in appropriate containers with covers.

All oil-, petrol-, and diesel-soaked sand shall be removed immediately and shall be disposed of as hazardous waste. Equipment and machinery shall be adequately maintained and regularly inspected.

10.16.3 Servicing of Plant and Equipment

The servicing of plant and equipment shall take place in areas designated for this purpose. All waste generated by these activities shall be managed in terms of the requirements of this CEMPr.

All equipment that leaks onto the ground shall be repaired immediately or removed. The change of oil or lubricants shall be done at designated locations, except if there is a breakdown or an emergency repair. In such instances appropriate absorbent materials (or equivalent) and/or drip trays shall be available to collect any oil or liquids.

10.16.4 Workshops, Equipment, Maintenance and Storage

All vehicles and equipment must be kept in good working order to maximise efficiency and minimise the risk of pollution. Maintenance, including washing and refuelling of plant on site must be done at designated locations at workshop areas. These designated areas must be agreed with the Transnet Construction Manager and Transnet Environmental Officer. Contractors shall ensure that no contamination of surrounding areas occurs around workshops and plant maintenance facilities. All machinery servicing areas must be adequately bundled.

Drip trays should be used to collect used oil, lubricants and other substances during maintenance. Drip trays must be provided for all stationary plant. Washing of equipment should be restricted to urgent maintenance requirements only. Adequate wastewater collection facilities must be provided.

10.16.5 Stationary/designated Refuelling of Plant and Equipment

No vehicles or machines shall be serviced or refuelled on site except at designated and approved servicing or refuelling locations. No oil or lubricant changes shall be made except at designated locations, or in case of breakdown or emergency repair.

The Contractor shall store fuel and oil at a secure area, which shall be bunded to contain 110% of the total volume within the bund and designed with an impervious layer or liner or paved surface to prevent spillage from entering the ground.

The Contractor shall provide details of its proposed fuel storage and fuelling facility to the Transnet Environmental Officer for approval. The 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.

10.16.6 Mobile Refuelling

In certain circumstances, the refuelling of vehicles or equipment in a designated area is not a viable/practical option and refuelling has to be done from a tank, truck or fuel bowser moved around on site. In such situations, the Contractor may request approval from the Construction Manager to conduct mobile refuelling 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 spilled during transfer.
- Absorbent pads or drip trays are to be placed around the fuel inlet prior to dispensing.
- Mobile refuelling units are to be operated by a designated competent person.
- The transfer of fuel must be stopped prior to overflowing. Fuel tanks or refuelling equipment on vehicles may only be filled to 90% carrying capacity.
- Mobile refuelling tanks must be stored in an area where they are not susceptible to collisions. The fuel storage area must be located away from environmental sensitive areas.
- All mobile refuelling tanks are to be properly labelled and fire extinguishers shall be located near the fuel storage areas. These extinguishers must be of a suitable type and size.

10.17 Spill Response

Contractors 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 environmental sensitive areas.

Contractors shall provide details of their spill response plan in the event of any spills of fuel, oils, solvents, paints or other hazardous materials for approval by the Transnet Construction Manager and Environmental Officer. The plan must outline measures to be taken in removing contaminated material from site and demonstrate complete removal of contamination.

The Contractor shall instruct construction personnel on the following spill prevention and containment responsibilities:

- Immediately repair all leaks of hydrocarbons or chemicals;
- Take all reasonable means to prevent spills or leaks;
- Do not allow sumps receiving oil or oily water to overflow;
- Prevent storm water runoff from contaminated areas which may have been caused by leaking or spilled drums of oil or chemicals;
- 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 surface water;
- Dispose of contaminated material at a location designated thereto and provide proof thereof.

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 booms and/or absorbent material;
- Recover the spilled product;
- Properly dispose of spilled material and provide proof thereof.

10.18 Fire Prevention

Prior to the start of any construction work for the Project at the Port of Ngqura, all Contractors are required to develop detailed Fire Contingency Plans/Method Statements for each of their construction sites, which must include but not be limited to the following:

- A list of the major workplace fire hazards;
- Proper handling and storage procedures;
- Potential ignition sources (such as welding and smoking);
- Control procedures; and
- Type of fire protection equipment or systems to be used for control.

Contractors must take note that open fires are prohibited. Appropriate fire safety training shall be provided to staff that will be on site for the duration of the construction phase. Fire-fighting equipment shall be made available at various appropriate locations on the construction site.

10.19 Materials Handling and Storage

The potential environmental impact that may result from the handling, use, storage and disposal of materials used during construction must be minimised as far as reasonably possible. Environmental considerations such as proximity to environmental sensitive areas (vegetation, Coega River and Coega River Estuary etc.) must be taken into consideration when citing spoil and other material storage areas. These storage areas must be agreed with the Transnet Construction Manager and Environmental Officer.

10.20 Transportation of Materials

The Contractor is responsible for ensuring that all suppliers and delivery drivers are aware of requirements and restrictions (e.g. no-go areas) in terms of this CEMPr. Material must be appropriately secured to ensure safe passage between destinations during transportation.

Loads must have appropriate cover to prevent spillage from vehicles where practical. The Contractor will be held responsible for any clean-up resulting from the failure to properly secure transported materials.

10.21 Stockpiling of Materials

The Contractor must plan activities so that material from excavations can as far as possible be transported to and placed at points where it is required for re-use and or storage areas for future use.

Should temporary stockpiling become necessary, the areas for the stockpiling of excavated material must be indicated on the site layout plan. Stockpile areas will only be permitted within the authorised project footprint or existing approved stockpile areas within the Coega IDZ.

Any area to be used for stockpiling or material laydown shall be stripped of topsoil. Stockpiles must be positioned and sloped to create the least visual impact. Material stockpiles may not be sited in close proximity to the project footprint boundaries in order to avoid impacts on the surrounding Open Space Areas. Stockpiling of material is not permitted in close proximity of the Coega River and Coega River Estuary.

Stockpiles must as far as reasonably possible be positioned in areas sheltered from wind and rain to prevent erosion and dispersion of loose materials. Stockpiled soil shall be protected by adequate erosion-control measures. Stockpiles shall be placed on flat surfaces where runoff will be minimised.

The height and slope of material stockpiles must be limited to reduce wind entrainment. Stockpiles must preferably not be higher than 2m.

No foreign material generated during construction is allowed to remain on site. Areas affected by stockpiling must be reinstated, where required, to the satisfaction of the Transnet Construction Manager and Environmental Officer and must be done in accordance with the requirements for rehabilitation that may be specified by this CEMPr and/or the Coega Development Corporation (CDC).

Contractors shall be required to submit a method statement for the management of all stockpile and material laydown areas for approval by the Transnet Construction Manager and Environmental Officer.

10.22 Quarries and Borrow Pits

The contractor shall make use of commercial suppliers for all rock and sand raw materials. The Contractor shall ensure that suppliers are in possession of required authorisations permits/licenses and keep record of the quantity of material supplied.

The Contractor will not make direct use of any borrow pits and quarries unless written approval from the Construction Manager has been obtained and a Method Statement has been submitted and approved. The Method Statement shall provide a 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).

10.23 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).

10.24 Visual Impact Management

Transnet shall ensure that the following are considered and allowed for during design of buildings and construction activities and shall instruct service providers and contractors accordingly:

- Lighting in works areas and site camps must be sited in such a way and directed away from sensitive areas within the Project Footprint to avoid disturbance of animals and birds in the Port and on the islands;
- Cut and fill slopes for roads and other accesses should be shaped so that the new cut face is similar to the existing adjacent slopes and re-vegetated with indigenous vegetation.
- The design of structures and infrastructure must take the Visual Impact Guidelines of the Coega Industrial Development Zone into consideration and must take place in consultation with the Coega Development Corporation.
- Disturbance caused by the establishment of access/haul roads, site camps and laydown areas must be limited and restricted within the authorised project footprint and must be rehabilitated on completion of construction.
- All areas not required for operation, but cleared for construction, must be rehabilitated in accordance with the requirements of this CEMPr.
- Lighting should be carefully planned and designed to avoid excessive lighting in the vicinity of the port, within acceptable safety parameters;
- All building and lighting designs shall be made available to SANParks for comment.

10.25 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 the Coega Zone Labour Agreement (ZLA) as well as Transnet Policies and Procedures.

10.25.1 Worker HIV/Aids Awareness Programmes

Contractors are required to provide proper HIV/AIDS awareness training to all workers on site. A detailed method statement indicating how, where and when the training will be done must be compiled. Records must be kept of all awareness training sessions together with lists of attendees. The programme can be integrated into the environmental awareness programme for workers.

11. Project Environmental Specifications

This Section describes specific environmental standards and requirements to be complied with for all construction work at the Port of Ngqura.

These requirements are derived from conditions of Port and Project Environmental Authorisations and/or other applicable environmental permit(s) and licence(s) as well as recommendations and mitigation measures from various Specialists contained in relevant Environmental Impact Reports.

11.1 Demarcation of Open Space Areas

Protection of Open Space Areas in the Coega IDZ and Port of Ngqura is a mandatory requirement in terms of the legislative framework applicable to the area. The demarcation of Authorised Open Space Areas within and/or adjacent to the Project Footprint must be undertaken prior to commencement of any construction related activities to ensure protection of the Open Space areas from accidental ingress or damage during construction. Demarcation of Open Space Areas shall be done in accordance with the methodology approved for the Coega IDZ and Port of Ngqura. The demarcation methodology is outlined below:

- Demarcation of the Open Space must be done using wooden survey poles;
- The top 30cm of the wooden survey poles must be painted with weatherproof white paint, followed by the next 30cm painted green;
- Wooden survey poles must be a minimum width of 50mm;
- Wooden survey poles must be between 1.5 and 2.1m in height and spaced accordingly, depending on the density of the vegetation, with a maximum distance of 10m apart;
- Signage to indicate the boundaries of the Open Space System within the Port of Ngqura must be erected in various locations along the Open Space boundary.

11.2 Identification, Removal and Relocation of Plant Species of Special Concern

All plant species of special concern as well as plant species suitable for landscaping and rehabilitation purposes shall be identified, removed and relocated (Search and Rescue) to pre-identified Areas within the Port of Ngqura, prior to commencement of any construction related activities within the Project Footprint. Search and Rescue shall be undertaken in accordance with the requirements of relevant Legislation and permits issued by the competent Authority.

Transnet shall appoint a suitably qualified and experienced Ecological Specialist to undertake the required Search and Rescue. The Specialist will identify species that must be relocated, selectively remove the plants, cuttings and, where possible, seed and translocate the species to the designated areas.

The appointed Specialist shall be responsible for maintenance of relocated plant species for a specified period. Monitoring of the survival of rescued plant species shall be undertaken for a specified period and monitoring reports submitted to the Transnet Project Environmental Manager.

11.3 Environmental Sensitive Areas (ESAs)

Contractors are advised that certain areas in and around the development footprint are environmentally sensitive and include amongst others vegetated areas, the Coega River and Estuary, wetlands, and sites of Archaeological and Paleontological importance. ESAs may occur within the project area but may not necessarily form part of the development footprint.

In order to minimize adverse impacts to the ESAs during construction, ESAs must be clearly demarcated and must not be entered or used for any purpose. Demarcation must be highly visible to ensure that the location of sensitive areas is obvious from the Contractor's site and from the approach to the Contractor's Site.

Contractors must prevent physical disturbance or pollution of these areas. Transnet may impose conditions on operations near ESAs including instructing contractors to restrict the number of construction personnel and equipment operating near these areas.

11.4 Demarcation of Works Areas

Prior to the commencement of construction, the actual site to be developed must be clearly demarcated by means of highly visible barriers and must be approved by the Transnet Construction Manager and Project Environmental Manager. Areas within the authorised project footprint that is not required for construction shall remain undisturbed and must be clearly demarcated as no-go areas. Vegetation within the demarcated zone required for construction may be cleared. Disturbance of vegetation outside of the demarcated development footprint is not permitted.

11.5 Protection of Faunal Species

Transnet shall appoint a suitably qualified and experienced Ecological Specialist to identify, remove and relocate fauna that may be present within the project footprint to other agreed Open Space Areas within the Port or Coega IDZ. The Specialist shall undertake required activities in accordance with the requirements of relevant Legislation and permits issued by the competent Authority.

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 areas. On no account shall any animal, reptile or bird of any sort be killed. This specifically includes snakes or other creatures considered potentially dangerous that may be present on site.

Where animals are encountered in works areas during construction contractors are required to notify the Transnet Environmental Officer who would be responsible for implementing required actions for effective relocation in consultation with the appointed Specialist and relevant authority.

Lighting in construction areas must be carefully planned so as to not disturb animals in close vicinity of the works areas and in the surrounding Open Space Areas. The contractor Environmental Officer shall monitor all open excavations and trenches on a daily basis for any animals that may be trapped.

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.

11.6 Vegetation Clearing

The destruction of certain tree species requires a license in terms of the National Forest Act of 1998 as amended. Transnet shall be responsible for obtaining the required license prior to the clearance of any vegetation. The clearing of vegetation should be kept to a minimum, keeping the width and length of earthworks to a minimum. Blanket clearing of vegetation shall not be permitted. Vegetation shall only be cleared in areas required for construction.

Vegetation clearing must take place in a phased manner in order to maintain vegetation cover for as long as possible. Cleared vegetation will not be permitted to remain on site. Contractors must give consideration to chipping of vegetation and stockpiling of vegetation chips in designated areas for use during rehabilitation. Alternatively cleared vegetation must be removed from site and disposed of as waste at a licensed waste disposal site.

During clearing of woody vegetation no ground cover or grass and topsoil must be removed and damage to this layer must be minimised as far as possible.

The Contractor shall ensure that all works are undertaken in a manner that prevents disturbance of vegetation outside of the development footprint.

11.7 Removal of Topsoil

Topsoil shall be removed up to a maximum depth of 30cm and stockpiled for re-use during rehabilitation and landscaping activities. Topsoil shall be stockpiled separately from other subsoil and material stockpiles.

Topsoil stockpiles shall not be higher than 2m and shall be located in predetermined designated areas. It is recommended that stockpiles are flattened at the top, without being compacted, to allow for easier growth of vegetation and ultimate protection against erosion.

Vehicles shall not be allowed access onto topsoil stockpiles after it has been placed. Topsoil stockpiles shall not be allowed to become contaminated with oil, diesel, petrol, waste or any other material, which may inhibit the later growth of vegetation. Topsoil stockpiles that are not used within three (3) months after stripping shall be seeded to prevent dust and erosion.

The Contractor shall apply soil conservation measures to the stockpiles to prevent erosion. This can include the use of erosion control fabric or grass seeding.

Topsoil shall be reinstated upon completion of construction (in all areas requiring rehabilitation/reinstatement) to allow plants to rapidly re-colonise bare soil areas.

11.8 Protection of Heritage Resources

If any archaeological or paleontological artefacts or remains are uncovered during earthmoving activities, work in the vicinity of the find must cease immediately. The Contractor will be required to notify the Transnet Construction Manager and Environmental Officer. The Transnet Environmental Officer will be responsible for contacting the South African Heritage Resources Agency (SAHRA) and relevant authorities.

The Contractor will be required to abide by the specifications as set out by SAHRA or the heritage specialist appointed to investigate the find. The Contractor may not, without a permit issued by the relevant heritage resources authority destroy, damage, excavate, alter, deface or otherwise disturb archaeological or paleontological material.

If a grave or midden is uncovered on site, or discovered before the commencement of work, all work in the immediate vicinity of the graves/middens shall be stopped and the Transnet Construction Manager informed of the discovery. SAHRA and the relevant authority must be contacted and in the case of graves, arrangements made for exhumation and reburial.

Transnet shall appoint an archaeologist and palaeontologist to undertake monitoring as specified by this CEMPr as well as to train site monitors (such as Transnet Environmental Officer, ECO and Contractor Environmental Officer) to identify archaeological and paleontological sites and to report to the construction manager when such sites are found/uncovered.

The Transnet Environmental Officer and independent Environmental Control Officer shall examine all major bedrock excavations for fossil material, at regular intervals. Any fossil remains that may be found shall be safeguarded in situ.

11.9 Rehabilitation of Disturbed Areas

Contractors shall rehabilitate the entire site upon completion of work. Transnet may require the Contractor to appoint a suitably qualified rehabilitation specialist to develop a detailed rehabilitation plan. The Rehabilitation Plan must be submitted to the Transnet Construction Manager and Project Environmental Manager for approval, at least six weeks before completion of construction works. The following are critical aspects to be included in the rehabilitation plan:

- Details of soil preparation procedures;
- A list of the plant species that will be used in the rehabilitation process. Note that these should all be indigenous species that are endemic to the area;
- 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).
- Procedures for the prevention of the establishment and spread of alien invasive species.

Contractors will be responsible for fully rehabilitating any area disturbed by their activities outside the construction footprint, and this responsibility will extend to the maintenance of acceptable vegetative cover in these areas, as specified below, for a full 12-month period.

11.9.1 Scope for Rehabilitation

All areas that are disturbed by construction activities must be rehabilitated as soon as possible using appropriate indigenous vegetation. Contractors are responsible to ensure that available topsoil is stockpiled in predetermined designated areas as described in section 5.7 for subsequent use during rehabilitation.

Rehabilitation will also include stabilizing any areas that are cleared or disturbed for construction purposes, which will not be incorporated into open space or buffer zones (i.e. areas that may be developed in the near future). Methods for stabilization shall be indicated in the method statements.

All construction equipment and excess aggregate, gravel, stone, concrete, bricks, temporary fencing and the like must be removed from site by the contractor upon completion of work. No discarded materials of any nature are allowed to be buried on site.

11.9.2 Landscaping and preparation for re-vegetation

All areas requiring reshaping must be cut, filled and compacted so as to blend with the surrounding landscape. Topsoil removed from the area initially must be replaced and care must be taken not to mix the topsoil with the subsoil during shaping operations. Should a crust form on the soil before re-vegetation the crust must be loosened by scarifying to a depth of 150 mm.

All areas no longer required for construction activities must be rehabilitated as soon as they become available for rehabilitation.

11.9.3 Seeding

Seeding methods shall be included in the Rehabilitation Plan. The method should cover but not be limited to the seed mix, seed application methods (e.g. hydro-seeding), fertilization, and irrigation when rainfall proves inadequate.

When valley thicket or bush-clump sections are rehabilitated, aloes and nurse species are to be planted to facilitate the recovery process. The use of anti-erosion compounds should be considered on slopes where there is a risk of erosion.

11.9.4 Acceptable Cover

Acceptable cover shall be deemed to have been achieved when, in the opinion of an independent ecological specialist, 75% of the grassed area has been covered with mature plants, with no bare areas exceeding one meter squared in maximum dimensions except where rocks prevent such coverage.

11.9.5 Maintenance of Rehabilitated Areas

Contractor liability with regards to maintenance of rehabilitated areas will cease 12 months after acceptable cover has been established over all rehabilitated areas on site providing that acceptable cover is maintained throughout the 12-month period.

Control of the spread of alien species, especially Rooikrans (*Acacia Cyclops*) and Russian Tumbleweed (*Salsola Kali*), should be managed by monthly monitoring of the area and removal of these seedlings. Monthly monitoring of the area will also allow for modifications to the rehabilitation programme, for example the need to irrigate, sow more seed or fertilise. The rehabilitation programme should be flexible allowing for these modifications.

11.10 Alien Invasive Vegetation Management

The eradication of alien invasive vegetation species shall be done in accordance with the requirements of the Alien Invasive Plant Eradication Plan that has been developed and is currently implemented for the Port of Ngqura. Transnet National Ports Authority is ultimately responsible for the implementation of the Plan. Contractors must however ensure that their works areas remain clear of alien plant species throughout the construction phase. Monitoring the growth of alien invasive vegetation in all works areas shall be undertaken by the Contractor Environmental Officer and shall be ongoing for the duration of construction.

Contractors shall develop a method statement for the eradication and management of alien vegetation within their works areas. The method statement shall include amongst others management measures for fire and the spread of alien vegetation seeds that may be released when vegetation is removed. The method statement must further address the safe, effective disposal of removed vegetation specifically in terms of storm water management.

The use of herbicides on site must be approved by the Provincial Department of Agriculture and recommended by the Endangered Wildlife Trust's Poison Working Group to be environmentally safe.

Two distinct species that occur around the Port of Ngqura are: Russian Tumbleweed (*Salsola kali*) and Rooikrans (*Acacia cyclops*) and methods for clearance are included in the aforementioned plan.

11.11 Rodent Control and Monitoring

TNPA implements and maintains a poison free programme for the control and monitoring of rodent species inside and around the Port. The Port of Ngqura has been declared a poison-free zone and under no circumstances is poison allowed to be used for any purpose inside the Port.

TNPA developed a rodent control and monitoring plan that outlines the requirements for rodent control inside the Port. Contractors shall ensure compliance with the requirements of this Plan. A copy of the Plan can be obtained from Transnet where required.

11.12 Reptile Species of Special Concern

Specific caution shall be taken during construction activities within the Bontveld habitat or any other vegetated area inside or around the Port, to prevent harm to reptiles.

The discovery of any specimens of the Albany Adder should immediately be brought to the attention of the Transnet Project Environmental Manager and Construction Manager who will be responsible for contacting the relevant conservation authorities. Photos of the Albany Adder will be made available to contractors working inside the Port, for easy identification.

11.13 Traffic Management

Contractors shall ensure that the transportation of construction personnel is aligned with current practices in the Coega IDZ. The use of buses and/or mini buses are encouraged to reduce the number of private vehicles on the road network.

Material delivery to site should be done using large vehicles or truck-trailer combinations where practical to reduce the number of trucks on the road. Overloading of vehicles should be avoided to limit the impact on the structural capacity of roads.

Well maintained, roadworthy vehicles shall be used together with sufficiently trained and licensed drivers. Monitoring of vehicle maintenance and driver competency shall be undertaken in accordance with the requirements of the Transnet Health and Safety Project Specification.

Vehicles are not permitted to leave access roads. 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.

Vehicles should only be parked within designated parking areas as demarcated on the site layout plan.

11.14 Emergency Preparedness and Response

Contractors shall compile and maintain environmental emergency procedures to deal with incidents and accidents, together with appropriate response procedures, for application throughout construction. The emergency response procedures must include, but not be limited to fires and spillages of hazardous substances on the ground or in water. The Procedure must be submitted to the Transnet Construction Manager and Environmental Officer for approval.

Contractors shall be responsible for the implementation and revision (when required) of the emergency preparedness and response procedures and must ensure that all incidents are recorded in a register. The incident register must be kept up to date and made available for audit purposes.

11.15 Oil Spill Contingency Plan

TNPA has developed and continues to implement an oil spill contingency plan for port operation, in accordance with the National Contingency Plan for the Prevention and Combating of Pollution from Ships and Offshore Installations. The plan defines the areas of responsibility and the preparatory activities required prior to an incident and the response actions to be initiated after an oil spill has occurred in the Port of Ngqura.

Contractors are required to submit a detailed environmental method statement for the storage and handling of hydrocarbons and refueling of plant and equipment for review and approval by the Transnet Construction Manager and Environmental Officer. The method statement must adequately address measures to prevent, manage, contain and clean-up spills on land and in water. The method statement must take cognisance of the requirements of the aforementioned Ngqura Harbour Spill Contingency Plan, to be obtained from the Transnet Environmental Officer or Project Environmental Manager.

Oil spill kits and equipment shall be available in all works areas and shall be regularly maintained and replaced where required.

All Vessels operating within the Port for construction purposes including delivery vessels and dredgers must have a detailed spill control plan on board as well as adequate materials and equipment to respond to and clean up spills.

11.16 Ballast Water Management

TNPA developed and implements a Ballast Water Management Plan for the Port of Ngqura. The plan clearly describes the International Maritime Organization's Guideline requirements for ballast

water management. All Vessels operating within the Port for construction purposes including delivery vessels and dredgers will be required to adhere to the requirements of this plan at all times.

Prevention of alien organisms introduced through ballast water can be dealt with in various ways. Contractors must submit method statements for ballast water management. The method statement must include specifications for emptying and cleaning of ballast water tanks while en-route to, and still outside of South African territorial waters.

A copy of the Port of Ngqura Ballast Water Management Plan will be provided to relevant contractors and must be incorporated into the required method statements.

11.17 Fishing in the Port

Contractors should take note that fishing and/or removal of any marine life within the port boundaries are not permitted. This requirements must be communicated to all workers, sub-contractors, vendors and service providers.

11.18 Access to Islands

Uncontrolled access to any of the three Algoa Bay islands is prohibited. No unauthorized visits to the islands will be allowed.

Port Control is responsible for reporting any potentially illegal or unauthorized access to South African National Parks (SANParks) and the relevant authorities, including the TNPA Environmental Management Department.

11.19 Impact on Birds

Where construction activities require blasting the relevant contractor must ensure adherence to blasting guidelines for the Port. This should ensure that injury to birds is kept to a minimum.

Construction works, especially blasting, dredging, and other noisy activities, must be carefully planned and controlled to avoid disturbance of the breeding bird populations on the nearby Islands.

Lighting in works areas and site camps within the Port must be directed away from the Islands and other sensitive areas to minimize and/or avoid disturbance of bird populations.

11.20 Environmental Requirements Specific to Dredging

Appointed dredging contractors are required to develop detailed environmental method statements for specific dredging activities inside the Port (including dredging methodology) and the management of dredged material. The method statements must take cognisance of the requirements of this CEMPr (more specifically the Project Environmental Specifications) and must be approved by the Transnet Construction Manager and Environmental Officer.

11.20.1 Transportation and Disposal of Dredged Material

The offshore disposal of dredged material must be carried out in terms of the conditions set out by the London Protocol and the requirements of the National Environmental Management Integrated Coastal Management Act, No 24 of 2008. The dredging contractor shall ensure that the disposal of dredged material conforms to the requirements of the offshore disposal permit, obtained from the Department of Environmental Affairs. A copy of the permit will be made available to the contractor for inclusion into their method statement and must be displayed at all times on the dredger and disposal barges operating within the Port.

The appointed dredging contractor shall keep a GPS record of the route followed by the dredge spoil disposal vessel. This record must include the following data:

- Time of departure from the dredge site;
- Route followed by the vessel (GPS track);
- Time of arrival at the disposal site;
- Position of the vessel at the time of starting to discharge the dredge spoil;
- Heading and speed of the vessel at the time of starting to discharge the dredge spoil;
- Position of the vessel at the time of completion of discharge of the dredge spoil;
- Heading and speed of the vessel at the time of completion of discharge of the dredge spoil; and
- Route followed by the vessel back to the dredge site.

These records must be provided to the Transnet Construction Manager on a daily basis, together with the contractor's daily site diary.

11.20.2 Water Quality Monitoring

Method statements for the monitoring of water quality during dredging and dumping of dredged material must be submitted to the Transnet Construction Manager and Environmental Officer for approval.

These method statements must as a minimum include the following:

- Detailed description of the methodology for water sampling and measurement;
- Detailed information of the water quality sampling and measurement equipment;
- How the contractor will ensure that standards for suspended solid concentrations are not compromised whilst waiting for the monitoring results;
- Contractor and/or consultant responsible for undertaking the required monitoring;
- Details and credentials of laboratory to be used for testing of samples (where applicable);
- Frequency of sampling;

- Response procedures should turbidity or dissolved oxygen start approaching set limits; and
- Provision of monitoring reports.

It should be noted that the water quality standards refer to total suspended solids (TSS). The contractor has the option of monitoring turbidity rather than total suspended solids given that turbidity can be determined in the field. However, should the Contractor choose this option, a key issue to be addressed in the environmental method statements is the establishment of a correlation between TSS and turbidity. This must be completed and agreed to by Transnet prior to the commencement of dredging activities.

The environmental method statements must highlight monitoring procedures for water quality in the vicinity of the dredging activity and during disposal of the dredged spoil. The conditions of the offshore disposal permit, authorizing the disposal of dredged spoil at sea must be acknowledged in the environmental method statement and must be complied with. The impact of the dredging activities on the marine environment must be controlled as much as is practically possible. Dredging activities have the potential to substantially increase the suspended solid concentrations and also to decrease the concentrations of dissolved oxygen in the water column particularly in areas close to the dredger.

A suspended solids (SS) standard has been developed for dredging contracts at the Port of Ngqura to ensure that the environmental impact of dredging is limited. It is the contractor's responsibility to ensure that the SS standard is adhered to.

The SS standards are as follows:

- The maximum acceptable SS concentrations due to dredging activities, as measured at the selected monitoring locations, shall not exceed 150 mg/l above the ambient concentrations except in areas designated as sensitive where the maximum acceptable SS concentration shall be 80mg/l above ambient SS concentration; and
- Once the measurement of 100mg/l above ambient level is attained or exceeded at the general monitoring stations or 50mg/l at the monitoring stations adjacent to any designated sensitive area, the contractor should ensure that the necessary mitigation steps are taken and documented to prevent a further increase in suspended solid concentration, which could lead to suspension of the operation when 150mg/l (general sites) or 80mg/l (sensitive sites) above ambient is exceeded.

It is recognized that the standard may not be met in the immediate vicinity of where the actual dredging activity is taking place at that time. For this reason, the mixing zone shall apply. The extent of this mixing zone is to be agreed upon prior to the commencement of dredging operations.

The general approach for the monitoring of turbidity levels is as follows:

- At each of the monitoring and reference sites, measurements will be collected from three different locations (replicates) in close proximity to each other;

- The measurements will be in the form of a profile, with the replicate readings averaged at each depth;
- The highest average value is the ruling ambient or monitoring value for that site;
- Should the ruling value at any of the general monitoring stations reach 100mg/l above ambient, the contractor must immediately notify the Environmental Manager for nominated representative;
- Should the ruling value at any of the sensitive area monitoring stations reach 80mg/l above ambient, the Contractor must immediately notify the Environmental Manager for nominated representative; and
- If any of the monitoring sites' ruling value exceeds 150 mg/l above the ambient value for that day, operations shall be stopped.

11.20.3 Dissolved Oxygen Levels

Method statements describing the methodology to be adopted for the monitoring of dissolved oxygen concentrations must be prepared and submitted to the Transnet Construction Manager and Environmental Officer for approval. The method statements must include the locations of reference and monitoring sites.

A dissolved oxygen (DO) standard has been developed for dredging at the Port of Ngqura to ensure that the environmental impact of dredging is limited. This threshold is 10% below the ambient DO levels measured outside of the area impacted on by the dredging plume. In terms of the South African Water Quality Guidelines, the minimum acceptable DO concentrations are 5mg/l. This minimum acceptable standard will apply even if ambient dissolved oxygen concentrations drop to less than 5.5mg/l.

It is the Contractor's responsibility to ensure that the DO standard is adhered to. Once the DO levels approach the threshold levels stipulated, the Contractor must ensure that necessary mitigation measures are taken and documented to prevent a further decrease in dissolved oxygen concentrations. Where further decrease in DO concentrations occur, dredging operations in the affected areas must be ceased until such time as the DO levels return to within acceptable levels.

The general approach for the monitoring of dissolved oxygen concentrations is as follows:

- At each of the monitoring and reference sites, measurements (dissolved oxygen levels, salinity and temperature simultaneously) must be collected from three different locations (replicates) in close proximity to each other;
- The measurements must be in the form of a profile, with the replicate readings averaged at each depth;
- The highest average value is the ruling ambient or monitoring value for that site;

- Should the concentrations of dissolved oxygen drop to 7% less than the ambient dissolved oxygen levels the Contractor must immediately notify the Project Environmental Manager; and
- If any of the monitoring sites ruling value exceeds the agreed to standards, operations must be stopped, which is especially important with regard to the monitoring sites close to sensitive areas.

11.21 Port Operational Environmental Management Requirements

TNPA developed and continue to implement an Operational Environmental Management Programme (OEMP) that addresses minimum environmental requirements and matters associated with the operation of the Port.

The OEMP provides the management framework required for the planning and implementation of operational activities, in accordance with the requirements of the environmental authorizations and recommendations contained in the Environmental Impact Reports, as well as legislative requirements.

All contractors and/or vessels entering and operating within the Port of Ngqura for construction or operational purposes are required to comply with the requirements of the Port OEMP that are applicable to their specific activities.

The Ngqura Harbour Masters Office will issue a copy of the OEMP to Shipping Agents and Vessel Captains for implementation. The TNPA Environmental Management Department will issue a copy of the OEMP to all contractors working within the Port.

11.22 Non-compliance by Contractor

Transnet can initiate a non-conformance for any non-compliance with environmental specifications and approved method statements. All non-conformances must be responded to within a 48-hour period depending on the severity of the non-conformance.

All internal non-conformances initiated by Transnet will be communicated to the ECO. All external non-conformances initiated by the ECO will be communicated by the Transnet Project Manager to relevant contractors and sub-contractors.

If a contractor fails to respond appropriately to a non-conformance, Transnet may have the situation remedied by an outside contractor and back charge the costs of the work to the responsible contractor.

12. Environmental Monitoring Programmes

Transnet and/or a nominated representative shall in terms of the requirements of the project environmental authorisation and associated environmental specialist recommendations as well as relevant legislation, implement various environmental monitoring programmes that shall either commence prior to and / or continue for the duration of the construction phase of the project where required. These monitoring programmes shall amongst others include:

12.1 Dust Monitoring

This monitoring requirement may be delegated to contractors undertaking specific works on site and will form part of the contractor works information. In such instances the contractor will be required to develop and describe the proposed methodology and equipment to be used as part of the environmental method statement for air quality and dust management.

An overall monitoring schedule will be developed by the Transnet Project Environmental Manager and Environmental officer for implementation by appointed Contractors. The Schedule will specify the frequency of monitoring and specific monitoring requirements. As such, the monitoring schedule will be a working document and will be amended and updated where required.

Contractors shall undertake daily visual dust monitoring that will be recorded in a monthly dust monitoring register and accompanied with photo records where required. Visual dust monitoring will include the recording of dust levels (low, medium or high), the source of dust generation, type of dust, direction of moving dust plumes and whether the dust event is localized or widespread.

Contractors may be required to monitor monthly dust fallout in accordance with an approved Standard. Monitoring shall commence with site establishment and prior to any bush clearing activities. The need for ongoing monitoring may be amended based on the monitoring results.

Contractors are required to comply with the requirements for dust management as stipulated in this CEMPr and must report excessive dust incidents to the Transnet Environmental Officer and Construction Manager.

12.2 Storm Water Quality Monitoring

This monitoring requirement may be delegated to contractors undertaking specific works on site and will form part of the contractor works information.

In such instances the contractor will be required to develop and describe the proposed methodology and equipment to be used as part of the environmental method statement for the control and management of storm water during construction. The Contractor must take note of the following when developing the method statement:

- Quality of storm water discharge must be monitored at intervals to be agreed with the Transnet Construction Manager and Environmental Officer, but shall be done as a minimum prior to any discharges off site after rain events;
- Monitoring shall be undertaken by means of grab sampling or any other method agreed with the Transnet Construction Manager and Environmental Officer and analyzed for specific substances and parameters as specified in Table 4 below.
- Monitoring of the quality of the storm water discharge shall be undertaken at specific points at which the storm water leaves the works areas / site camps.
- Sampling sites shall be selected to best identify any impacts of the construction works on the receiving environment.

- The methods for the measurement of specific substances and parameters in storm water must be carried out:
 - By a laboratory that has been accredited under the South African national Accreditation System (SANAS) in terms of the SABS Code 0259 for that method;
 - As approved in writing by the Transnet Construction Manager and Environmental Officer by means of an environmental method statement submission.
- Storm water quality monitoring requirements in terms of this CEMPr have been developed and aligned with the requirements of the National Water Act, 1998 (Act No. 36 of 1998).
- Storm water quality monitoring parameters and allowable limits in terms of this CEMPr are as specified in the table below. The contractor shall ensure that discharges from site camps and works areas do not exceed the limits as specified.
- All monitoring results will be reported to the EMC at the quarterly EMC meetings.

Table 4: Storm water quality monitoring parameters

Substance / Parameter	General Limit
pH	5,5 – 9,5
Chemical Oxygen demand (mg/l)	75
Suspended solids (mg/l)	25
Chlorine as free Chlorine (mg/l)	0,25
Electrical Conductivity (mS/m)	70mS/m to 150mS/m
Soap, Oil or Grease (mg/l)	2,5

Where any of the above general limits are exceeded additional monitoring of specific parameters as specified by the National Water Act may be required.

In addition to the above, Contractors shall be required to:

- Visually inspect all storm water discharges at site camps and works areas during wet weather to identify potential sources of storm water contamination and observe water quality;
- Visually inspect site camps and works areas as a minimum monthly to identify authorized and unauthorized non-storm water discharges;
- Inspect site camps and works areas to evaluate the effectiveness and implementation of storm water pollution prevention practices.

Storm water monitoring programmes during construction may be required to make provision for the establishment of a baseline dataset that will be comparable to that of the Core Development Area of the Coega IDZ, and available relevant datasets of the NMBM where relevant. Where baseline datasets already exist, these shall be made available.

12.3 Noise Monitoring

Noise monitoring shall be conducted during the construction phase of the project to determine if noise emissions are within prescribed limits.

The contractor shall be required to undertake noise monitoring in line with the requirements of this CEMPr. Contractors should take note that noise monitoring requirements may not be relevant

to all scopes of work during construction. Noise shall be monitored using an integrated portable sound level meter complying with relevant standards and specification. The meter shall be calibrated as per the manufacturer's specifications and or legal requirements and the calibration certificate shall be provided to the Transnet Environmental Officer.

Noise levels shall be measured by the contractor at sampling points identified in consultation with the Transnet Construction Manager and Environmental Officer. Noise generated within the general construction footprint (away from sensitive receptors) shall be monitored to ensure compliance with the requirements of the Nelson Mandela Bay Metropolitan Municipality Noise Control Bylaw.

The frequency of monitoring may be decreased or increased at the discretion of the Transnet Construction Manager and Environmental Officer over the construction period, depending on changes in construction methodology and the type of plant and equipment operating on site. Monitoring frequency may only decrease if monitoring data / results show minimal variation in noise levels.

Whenever noise measurements are taken, meteorological data (wind speed and direction, ambient temperature, cloud cover, humidity, barometric pressure) should also be recorded as close to the site as possible.

12.4 Archaeological Monitoring

Transnet shall appoint a suitably qualified Archaeologist to actively monitor the project footprint for the presence of archaeological sites/materials during and after completion of vegetation clearance.

The Archaeologist will be required to report concentrations of archaeological material that may be uncovered (e.g. human remains, and/or accumulations of fossil bone, concentrations of marine shell and stone tools) to the relevant/responsible Authorities and will conduct a systematic and professional investigation of all material uncovered.

A sampling and monitoring permit will be applied for and obtained to remove heritage objects/artefacts from the site where necessary.

12.5 Palaeontological Monitoring

Transnet shall appoint a suitably qualified Palaeontologist to monitor all excavations during construction deeper than 2m for newly exposed fossil material. The Palaeontologist will be required to record and sample fossil material and associated geological data (e.g. sedimentary context), where required and report any concentrations of paleontological material uncovered during construction to the relevant/responsible Authorities.

A sampling, monitoring and collection permit will be applied for and obtained to remove paleontological material from the site where necessary.

12.6 Marine Mammal Monitoring

Contractors operating/undertaking construction work within the Port and in close proximity to the water shall be required to undertake Marine Mammal Monitoring. Monitoring shall be undertaken in accordance with the Port of Ngqura Marine Mammal Monitoring Plan and shall be done daily by means of visual sightings and recording. Monitoring shall include the noting of species (where possible), approximate numbers sighted and date of sighting. A Copy of the Plan shall be made available to contractors where relevant to their specific activities.

13. Evaluation of Compliance

13.1 Compliance Monitoring

All construction activities shall be monitored in terms of the requirements of this CEMPr. Environmental monitoring is required to ensure that the CEMPr and the environmental management requirements contained therein are effectively implemented.

Scheduled environmental monitoring of environmental performance and compliance with the requirements of the project environmental authorisation and the CEMPr is required throughout the construction phase of the Project. Compliance monitoring allows for the overall effectiveness of the environmental controls to be determined and for areas of non-compliance to be identified so corrective actions can be implemented.

Environmental monitoring (in line with the requirements of the Environmental Authorisation) will take place prior to construction to assess the baseline conditions, during construction to assess the impact of the construction on the environment, and after construction to assess the impact of the completed Project. Environmental monitoring is required at various stages of construction for various environmental aspects. The overall monitoring requirements are included in Section 5 of the CEMPr.

13.1.1 Contractor Monitoring Requirements

Contractors are required to submit an Environmental Monitoring Method Statement which details the scope, nature, process, schedule and templates for environmental monitoring.

The monitoring results shall be used to determine the effectiveness of the CEMPr implementation. Monitoring results and the associated required management and mitigation actions for the coming monitoring period are to be presented in the monitoring section of the Contractors Monthly Environmental Report.

The daily and weekly environmental reports must detail observations and information relating to requested management actions and their effectiveness. The Contractor shall monitor and maintain inter alia the following on an on-going basis:

- (Re-)growth of alien invasive vegetation;
- Storm water systems;
- Topsoil and material stockpile volumes;

- Access road condition;
- Dust;
- Noise;
- Water Quality;
- Erosion prevention;
- Rehabilitation requirements;
- Rehabilitation interventions;
- Spoil management.

13.1.2 General Site Monitoring

- Daily: The Contractor and Transnet Environmental Officers will undertake daily inspections of all works areas and activities on site and any issues identified will be noted. These inspections are informal visual inspections in order to check compliance with the CEMPr. Daily inspection checklists can be developed and implemented for this purpose;
- Weekly: Formal site inspections will be undertaken by the Contractor and Transnet Environmental Officers together with the Transnet Project Environmental Manager. Site specific checklists will be developed for this purpose to check compliance with the CEMPr and project environmental authorisation. Issues that present a significant environmental risk will be noted. Weekly compliance monitoring and inspections will be undertaken by the appointed independent Environmental Control Officer (ECO). Findings and observations made by the ECO during these inspections will be communicated on the day of the inspections where required and will be recorded in the ECO monthly report.
- Monthly: The Transnet Environmental Officer will undertake monthly site inspections with the Transnet Project Environmental Manager to confirm that environmental monitoring programmes and environmental control procedures are being implemented in accordance with the CEMPr and project environmental authorisation requirements. These visits can be combined with the monthly contractor environmental compliance audit.

13.2 Site Environmental Inspections and Audits

Environmental inspections and audits are conducted using five basic techniques. These include:

- Interviews with Contractor's staff including Sub-contractors and suppliers;
- Document checks;
- Observations;
- Monitoring;
- Measurement and verification.

This document sets out the areas and aspects of the construction site that will be inspected or audited, the frequency of such audits, the auditor and auditee.

It should be noted that these lists are not exhaustive and that each site will have specific issues that will need to be audited.

13.2.1 Workplace Inspections

The Contractor's Environmental Officer will be required to conduct weekly inspections of all work places for which the Contractor is responsible, including but not limited to the following:

- Contractor's camp, recreational and canteen facilities;
- Material lay down areas;
- Liquid and solid waste storage facilities (general, hazardous, recycling and scrap);
- Workshops;
- Oil traps;
- Wash bays;
- Construction work area;
- Spray Booths;
- Haul roads;
- No-go areas;
- Storm water drains;
- Any other construction area for which the SHE Officer is responsible.

At each of these sites, the Contractor's Environmental Officer will be required on a daily basis to check for the following, where relevant:

By observation:

- Litter;
- Separation of solid waste as per system;
- Hydrocarbon spills;
- Effectiveness of dust control measures;
- Illegal washing out of containers in drains;
- Wash bay drainage systems are working;
- Correct usage of drip trays;
- Effectiveness of oil separators;
- Water use and wastage;
- Pollution of rivers and sea;
- Provision and use of toilet facilities;
- Any other illegal activities.

By document check:

- Removal of oil for recycling as per schedule;
- Removal of packaging as per agreements with suppliers;
- Removal of hazardous waste by specialist Contractors as per schedule;
- Correct placement of environmental signage and posters;
- Document board listing emergency numbers, hazmat info sheets, etc.

The following records must also be kept up to date (information must include that of sub-contractors where relevant):

- Fuel consumption for entire contract measured in litres (including plant, generators, other equipment, vehicles etc.);
- Electricity consumption for entire contract measured in Watt hours;
- Quantities of general waste submitted for recycling measured in kilograms;
- Quantities of general waste disposed of to landfill measured in kilograms;
- Quantities of hazardous waste submitted for recycling measured in kilograms;
- Quantities of hazardous waste disposed of to landfill measured in kilograms;
- Water consumption, including water used for construction and human consumption measured in litres.

13.2.2 Construction Site Audits

The Transnet Environmental Officer will be required to conduct monthly inspections and audits of the entire construction site, which may involve more than one Contractor and may include, but not be limited to the following:

- Entire site
- Fencing
- Environmentally sensitive areas
- Contractor's camp, recreational and canteen facilities
- Material lay down areas
- Scrap yard
- Workshops
- Oil traps
- Wash bays
- Sewage plant
- Quarries and borrow pits used for fill and construction material
- Spoil dumping areas
- Solid waste disposal areas
- Liquid waste disposal areas
- Bioremediation site
- Area for the temporary storage of hazardous waste
- Fuel depot and hydrocarbon storage areas
- Construction work area
- Concrete batching plant
- Spray booths
- Haul roads
- No-go areas
- Storm water drains
- And any other construction areas not listed

At each of these sites, the Transnet Environmental Officer will be required to check for the following, where relevant:

By observation:

- Litter;
- Separation of solid waste as per system;
- Hydrocarbon spills;

- Use of bunding, hard standing and other protection measures;
- Illegal dumping;
- Effectiveness of dust control measures;
- Illegal washing out of containers in drains;
- Wash bay drainage systems are working;
- Correct usage of drip trays;
- Effectiveness of oil separators;
- Illegal use of tracks and off-road driving in no-go areas;
- Correct procedures are followed for topsoil removal and stockpiling;
- Effectiveness of erosion protection measures;
- Excess noise and vibration;
- Water use and wastage;
- Pollution of the Coega River and Sea;
- Provision and use of toilet facilities;
- Any other illegal activities;

By document check:

- All receipts for the collection of old oil, general recycled waste and hazardous waste;
- Correct placement of environmental signage and posters;
- Document board listing emergency numbers, hazmat info sheets, etc.;
- Complete and accurate record of Contractor's Environmental File.

By measurement:

- Amount of water used by each Contractor (where practical);
- Amount of topsoil removed and stockpiled;
- Amount of land stabilisation completed;
- Area re-vegetated;
- Amount of waste recycled, sent to scrap yard or disposed in dump;
- Amount of material treated in the bioremediation site.

By monitoring:

- Effectiveness of dust control systems;
- Effectiveness of pollution control systems;
- Effectiveness of rehabilitation and re-vegetation programmes;
- Effectiveness of erosion control methods;
- Effectiveness of noise control barriers.

A site-specific inspection checklist will be provided to the Transnet Environmental Officer prior to site establishment.

13.2.3 Construction Site and Documentation Compliance Audit

The Transnet Environmental Specialist: Assurance will conduct quarterly audits of the entire construction site and documentation system, which may include, but not be limited to the following:

- Site entrance;
- No-go areas;
- Environmentally sensitive areas;
- All work areas;
- Liquid and Solid waste storage facilities;
- All workshops;
- Refuelling depots;
- Contractor's camp area and lay down place;
- Any other place which needs to be audited.

By observation:

- Litter;
- Liquid and Solid waste storage facilities;
- Hydrocarbon spills;
- Use of bunding, hard standing and other protection measures;
- Illegal dumping;
- Effectiveness of dust control measures;
- Illegal washing out of containers in drains;
- Wash bay drainage systems are working;
- Correct usage of drip trays;
- Effectiveness of oil separators;
- Illegal use of tracks and off-road driving in no-go areas;
- Correct procedures are followed for topsoil removal and stockpiling;
- Effectiveness of erosion protection measures;
- Excess noise and vibration;
- Water use and wastage;
- Pollution of rivers and sea;
- Provision and use of toilet facilities;
- Any other illegal activities.

By document check:

- Complaints register is available and up to date;
- Method Statements are filed correctly and up to date;
- All environmental permits are available;
- Copy of the EA is available on site;
- Copies of the CEMP, SES and PES are available on site;
- Copies of all daily, weekly inspections and audits, monthly reports, minutes, incident reports and corrective action reports are filed correctly;
- Copies of all close-out reports are available;
- The monitoring programme is being adhered to and the monitoring results are no more than one month late;
- Chains of custody for samples can be provided on request;
- Sampling protocols are followed;
- Emergency numbers and procedures are clearly displayed;
- Photographic record;
- Records of Environmental Awareness Training of Contractor's staff;

- Any other documentation necessary to ensure effective environmental management of the site.

By verification (if necessary):

- Spot samples to check water quality (e.g. storm water runoff);
- Map/plan measurements to check areas disturbed/re-vegetated;
- Check dust collection buckets are working;
- Check oil separators;
- Any other aspect which gives cause for concern.

By interview:

- Transnet Environmental Officer;
- Contractor's Environmental Officer;
- Contractor's staff at random.

A specific site audit protocol will be formulated prior to the first audit and sent to the Transnet PEM two weeks in advance of the quarterly audit.

13.3 Environmental Audits

Environmental audits will be undertaken to determine compliance with the CEMPr and the project environmental authorisation. These audits will identify how non-compliances can be adequately corrected and will provide feedback on how to improve construction related activities where required. Environmental Audits shall be conducted at regular intervals to verify compliance with the CEMPr.

The following shall be checked as a minimum:

- Compliance with the project environmental authorisation;
- Compliance with the requirements of relevant environmental legislation;
- Compliance with conditions of other relevant permits and licenses;
- Adequacy and effectiveness of monitoring programmes;
- That environmental procedures are implemented and adhered to;
- That environmental training records are up to date and in order;
- That environmental reporting systems are in place;
- That environmental incidents are recorded and corrective actions implemented;
- That environmental targets are being achieved.

Findings of audits and required changes and responses to the findings shall be discussed and the implementation thereof agreed upon at scheduled meetings. All inspection and audit reports shall be documented and recorded. Relevant parties shall be required to respond to and address issues identified through site inspections, monitoring and auditing processes.

13.3.1 Independent Environmental Audit

Bi-annual environmental compliance audits will be undertaken by the appointed independent Environmental Control Officer to verify Transnet's compliance with the conditions of the project environmental authorisation, CEMPr and other relevant environmental legislative requirements. Audit findings will be reported to the Coega Environmental Monitoring Committee and the relevant DFFE Directorate.

13.3.2 Final Environmental Compliance Audit and Reporting

Transnet shall ensure that a final independent environmental compliance audit is undertaken and an environmental audit report submitted to the relevant DFFE Directorate within 30 days of completion of the construction phase of the project and within 30 days of completion of rehabilitation activities. The environmental audit report shall indicate the date of the audit, name of the auditor and the findings of the audit in terms of compliance with the environmental authorization conditions and the CEMPr.

A Final Environmental Compliance Report shall be compiled by the Transnet Environmental Officer for submission to the Transnet Project Manager at the end of the construction phase of the project. The report will include details of:

- The completion of all environmental conditions and mitigation measures listed in the CEMPr;
- All environmental incidents and completed corrective actions;
- The findings of the Environmental Audits;
- Conclusions as to whether environmental constraints, guidelines, norms and stipulations have been met and, if not, reasons why they have not been met;
- An indication of the outcomes of the environmental monitoring conducted;
- All Monthly Environmental Monitoring Reports (as an attachment);
- A copy of all Method Statements (as an attachment);
- A copy of the environmental Incident and NCR Registers; and
- A copy of the Communications Register.

13.4 Environmental Performance Criteria

Contractors must achieve the minimum requirement for environmental audits. The standard/minimum requirement for all environmental audits is 80% and where a compliance score of less than 80% has been achieved, non-conformance reports (NCRs) will be issued to the Contractor.

13.5 Environmental Non-Conformance Reports

Transnet can institute a non-conformance for any non-compliance with the requirements of the CEMPr. The timeframe for mitigating a non-conformance shall be determined by the severity of

the non-conformance. All non-conformances will be recorded in a register and made available for audit purposes. Where non-conformances are not appropriately responded to, Transnet may have the situation remedied by an outside service provider and back charge the cost of the work to the responsible contractor(s).

In the event of a non-conformance being issued, the following recommended process shall be followed:

- Transnet shall issue a notice of non-conformance to the responsible party, stating the nature and magnitude of the non-compliance;
- The responsible party shall be required to correct the non-conformance within the required timeframe or within a period that may be specified within the notice;
- The responsible party shall provide Transnet with a written statement describing the actions that will be implemented to rectify the non-conformance, the actions taken to mitigate its effects and the expected results of the actions.

Transnet shall have the right to stop work and/or certain activities in the case of non-compliance or failure to implement corrective actions, and deal with any non-compliance and/or non-conformance in terms of the applicable mechanisms and legislation. All delays resulting from such suspension of works shall be at the Contractor's expense.

A non-conformance may be issued to the Contractor by the Transnet Construction Manager/Environmental Officer where:

- The incident response procedure (including administrative requirements) were not successfully implemented; or
- There are repeated incidents because of inadequate environmental practices on site;
- Documentation required to comply with the CEMPr is not prepared or maintained adequately on site; or
- Any non-compliances with the requirements of the Environmental Authorisation and the CEMPr are identified.

14. Forms and Templates

Applicable Forms and Templates will be developed as part of the Construction Environmental Management System for the Project for implementation by appointed Contractors. These forms and templates will be maintained by the Transnet Document Management Department and will be revised as and when required.

15. Records

All environmental records and documents generated as part of the construction phase of the Project will be managed in accordance with the Transnet Document Management Procedure for the retention of Records.

Annexure A

Contents for Contractors Environmental Files

Annexure B

Declaration of Understanding

Annexure C:

Contractor Environmental Officer Appointment

To Whom It May Concern,**CERTIFICATE OF INSURANCE: TRANSNET (SOC) LIMITED – PRINCIPAL CONTROLLED INSURANCE**

In our capacity as Insurance Brokers to the Transnet Group of Companies, we hereby certify that the undermentioned insurances are currently in place:

INSURED: Transnet (SOC) Limited

PERIOD: 1 April 2022 to 31 March 2023 (Both days inclusive)

DIVISION: Transnet Freight Rail, Transnet Engineering, Transnet Properties, Transnet Pipelines, Transnet National Ports Authority and Transnet Port Terminals

THE INSURED'S VAT NO: 4720103177

THE INSURED'S COMPANY REGISTRATION NO: 1990/000900/30

POSTAL ADDRESS (Head Office) P O Box 72501, Parkview, 2122

CONTRACT WORKS INSURANCE

Cover Provided : Contract Works - Physical loss or damage to the Property Insured which being materials, plant and other things for incorporation into the permanent works.

Insurer : Mirabilis (Santam Limited)

Policy Number : MZAR35023-CAR

The Contract Site : Any location within the Territorial Limits upon which The Insured Contract is to be executed or carried out as more fully defined in The Insured Contract documents together with so much of the surrounding area as may be required or designated for the performance of The Insured Contract.

Territorial Limits : The Republic of South Africa.

Additional Co-Insureds:

The Contractor: All Contractors undertaking work in connection with The Insured Contract including the Employer to the extent that the Employer undertakes work in connection with The Insured Contract;

Sub-Contractors: All Sub-Contractors employed by the Contractor and all other Sub- Contractors (whether nominated or otherwise) engaged in fulfilment of The Insured Contract; and to the extent required by any contract or agreement;

transporters and persons providing a storage facility, plant owners and/or operators in respect of liability loss or damage arising out of The Insured Contract; project managers, architects, land surveyors, quantity surveyors, engineers and other advisors or consultants or sub-consultants appointed in the performance of the Insured Contract activities arising at the Contract Site provided always that any such person shall not be insured hereunder in respect of liability loss or damage arising out of such person's error or omission in the performance of the professional services for which he was appointed;

Provincial & Government: any Local Provincial or Government Department with which the Insured enters into any contract or agreement for the performance of The Insured Contract; all for their respective rights and interests.

Insured Contracts : All Contracts (including any undertaking awarded or commenced prior to Inception of the Period of Insurance) involving design, construction, Performance Testing and Commissioning in respect of the Works and shall Include capital expenditure, upgrade, modification, maintenance or overhaul, refurbishment, renovation, retrofitting or alterations and additions to existing facilities undertaken by the Insured or other Insured Parties acting on their behalf but **excluding**;

- a) contracts which at award stage have a value in excess of R 1,000,000,000;
- b) contracts with an estimated construction period exceeding 48 months but increasing to 60 months in respect of rail maintenance contracts and Transnet Freight and Rail contracts for logistical support for inline inspections and identification of defects over a 5 year period in respect of Transnet's pipeline assets (excluding Defects Liability/Maintenance period);
- c) contracts involving construction or erection of petrochemical manufacturing plant(s) but this exclusion shall not apply to pipelines and other associated works undertaken by or on behalf of the Insured;
- d) contracts in or on any aircraft;
- e) Off-shore contracts;
- f) Wet Risk Contracts which at award exceeds R500,000,000;
- g) Dam Contracts
- h) Tunnel contracts which at award exceeds R50,000,000;
- i) Tunnel contracts using tunnel boring machines;
- j) Underground Mining Contracts;
- k) Horizontal Directional Drilling Contracts which at award exceeds R50,000,000;
- l) Horizontal Directional Drilling Contracts where total drilling exceeds 1 km;
- m) Horizontal Directional Drilling Contracts for pipe diameters greater than 76 cm.

Definitions

1. "Off-shore contracts" means all works and installations in the sea or on the seabed including dredging which are accessible only by ship boat barge or helicopter and do not constitute normal wet works like harbours moles bridges wharves or sewage or cooling water intake or outlet facilities. "OffShore Contracts" shall include oilrigs and oil platforms (but not including oil platforms when connected to the land on completion). The term shall not apply to pre-fabrication works on land associated with an Off-Shore Contract.

- 2 *"Wet Risk Contracts" shall mean any Contract and/or Works where more than thirty-five (35) percentile of its value is in a permanent body of water or is below the high water mark of any tidal body of water. The term shall include contracts for the construction of wharves, piers, marinas, causeways, breakwaters, jetties, dry docks and offshore pipelines when connected directly to on-shore facilities and canal developments. Wet Risks shall exclude Off- Shore Contracts;*
- 3 *"Dam Contracts", which term shall include weirs and hydroelectric projects involving the construction of dams or weirs;*
- 4 *"Horizontal Directional Drilling Contracts", means micro-tunnelling work for the construction of tunnels utilising surface based horizontal directional drilling equipment.*
- 5 *Tunnels" means Tunnels (Including declines) involving all of the following;*
 - (a) Works below ground level; and
 - (b) Tunnelling machinery below ground level; and
 - (c) A tunnelling crew operating the machinery below ground level;
 - (d) But shall not include Horizontal Directional Drilling Contracts
- 6 *"Horizontal Directional Drilling Contracts", means micro-tunnelling work for the construction of tunnels utilising surface based horizontal directional drilling equipment.*
- 7 *"Underground Mining Contracts", which shall mean any contract involving underground mining.*

Testing Period: 120 Days not consecutive.

Maintenance Period : 12 Months

Main Policy Extensions :

- Costs & Expenses - Limited to maximum of R50,000,000.
- Expediting Measures – Limited to a maximum of R50,000,000.
- Professional Fees In Reinstatement Of Property Insured - Limited to a maximum of R50,000,000.
- Surrounding Property in care custody or control of the contractor – Limited to a maximum of R55,000,000.
- Fire Brigade & Public Authorities - Limited to a maximum of R10,000,000.
- Public Authority Reinstatement Costs - Limited to a maximum of R20,000,000
- Public Relationship Costs - Limited to a maximum of R1,000,000.
- Records - Limited to a maximum of R2,000,000.
- Removal to Gain Access - Limited to a maximum of R20,000,000
- Road Reserve and Servitude Extensions - Limited to a maximum of R10,000,000

- Search & Locate Costs - Limited to a maximum of R20,000,000.
- Borrowing Of Plant For Commissioning Purposes - Limited to a maximum of R10,000,000
- Escalation during Construction – 30%
- Marine Contribution Clause
- Claim Preparation Costs – Limited to a maximum of R10,000,000

Main Policy Exclusions :

- War
- Nuclear Energy Risks
- Terrorism
- Computer Loss General Exception
- DE4 (All types of Works) for defective material workmanship design plan or specification.
- LEG 3 (Mechanical or Electrical Engineering Works only) for defective material workmanship design plan or specification. Limited to maximum of 15% of the total estimated contract value.
- Loss or damage arising during air transit or any ocean voyage or whilst in storage thereafter.
- Occurring during any defects/maintenance period unless cause occurred prior to such defects/maintenance period
- Disappearance or by shortage revealed during routine inventory or periodic stocktaking.
- Consequential loss of whatsoever nature.
- Normal wear and tear, normal atmospheric conditions, rust, erosion, corrosion or oxidation.
- Due to its own explosion breakdown or derangement occurring after the Testing Period which has operated under load conditions.
- Second hand property due to its own electrical or mechanical breakdown or explosion.
- Communicable diseases

Deductibles:

In respect of loss or damage:

Major Perils shall mean damage caused by storm, rain, tempest, wind, flood, theft, malicious damage, subsidence, collapse, earthquake, testing or commissioning and the consequences of defective design, specification, materials or workmanship (DE4).

Minor Perils shall mean damage caused by a peril not defined as Major Perils defined above.

Contracts with a contract value :	Major perils	Minor perils
0 to R100,000,000	R25,000	R 15,000
R100,000,001 to R250,000,000	R50,000	R15,000
R250,000,001 to R500,000,000	R100,000	R25,000

R500,000,001 to R1,000,000,000 R150,000 R25,000

Minimum wet risk deductible of R100,000 per occurrence to apply.

LEG 3 Deductible (Only in respect of Mechanical and Electrical contracts);

Contracts with a contract value	Deductible
0 to R500,000,000	R1,000,000 per occurrence
R500,000,001 to R1,000,000,000	R1,500,000 per occurrence

PUBLIC LIABILITY

Cover Provided : Contract Works Public Liability – cover the Insured's legal liability in respect of loss or damage or injury to third parties arising out of work performed in respect of the Insured Contracts.

Insurer : Stalker Hutchinson (Santam Limited)

Policy Number: 6000/132335

Territorial Limits : The Republic of South Africa.

Insured Contracts: All projects (including any undertaking awarded or commenced prior to inception of the period of Insurance) involving design, construction, performance testing and commissioning in respect of the works and shall include capital expenditure, upgrade, modification, maintenance or overhaul, refurbishment, renovation, retrofitting or alterations and additions to existing facilities undertaken by the Insured or other Insured Parties acting on their behalf but **Excluding project works;**

- a) which at award stage have a value in excess of R 1,000,000,000.
- b) Contracts with an estimated construction period at award exceeding 48 months but 60 months in respect of contracts awarded prior to 1 April 2020 for rail maintenance contracts For Transnet Freight & Rail and for Transnet Pipeline's logistical support for inline inspections and identification of defects in respect of Transnet's pipeline assets (all excluding Defects Liability/Maintenance period).
- c) Contracts with a Contractual Defects Liability Maintenance Period exceeding 24 months.
- d) involving construction or erection of petrochemical manufacturing plant(s) but this exclusion shall not apply to pipelines and other associated works undertaken by or on behalf of the Insured.
- e) in or on any aircraft; and
- f) being Off-shore contracts

“Off-shore contracts” means all works and installations in the sea or on the seabed and do not constitute normal Wet Risk Contracts like harbours, moles, bridges, wharves or sewage or cooling water intake or outlet facilities, piers, marinas, causeways, breakwaters, jetties, dry docks and offshore pipelines when connected

directly to onshore facilities and canal developments. "Off-Shore contracts" shall include oilrigs and oil platforms.

Policy Limits:

Contractors Public Liability	R100,000,000 any one occurrence / unlimited during the Period of Insurance
Contractors Negligent Removal or weakening of Support	R100 000 000 any one occurrence and R100,000,000 per site in the aggregate during the Period of Insurance.
Statutory Legal Defence Costs	*R5 000 000 in the aggregate during the Period of Insurance.
Arrest / Assault / Defamation	*R5 000 000 in the aggregate during the Period of Insurance.
Emergency Medical Expenses	R5 000 000 any one occurrence
Prevention of Access	*R5 000 000 in the aggregate during the Period of Insurance.
Trespass / Nuisance	*R5 000 000 in the aggregate during the Period of Insurance.
Claims Preparation Costs	R5 000 000 any one occurrence

*Where the limits are noted as in the aggregate during the policy period of insurance, that such aggregated limit is applicable to all Transnet Insured Contracts collectively and in total and does not apply to each contract separately.

Deductible(s) : R50,000 per occurrence but increased to R5,000,000 in respect of Spread of Fire and/or Hot Works and R250,000 in respect of Sudden and Accidental Pollution and/or Goods on the Hook and R150 000 Removal of Support.

Main Policy Exclusions :

The policy does not cover:

- deliberate, conscious and intentional disregard to take reasonable precautions.
- fines, penalties, punitive and exemplary damages.
- Pollution unless caused by a sudden, unintended and unexpected occurrence.
- cost of removing, nullifying or cleaning up the effects of pollution unless caused by a sudden, unintended and unexpected occurrence.
- the hazardous nature of asbestos.
- War And Terrorism Risks.
- Nuclear Risks.
- Actual or alleged unlawful competition, unfair practices, abuse of monopoly power, cartel activities
- Compulsory Insurance
- Loss or damage and any consequence therefrom to any Data. •
- Sanctions Exclusion
- Excluding unfair dismissal
- Data exclusion
- COVID Exclusion

PROFESSIONAL INDEMNITY

Professional Indemnity

- a) In respect of damages which the Insured shall become legally liable to pay in consequence of neglect, error or omission by or on behalf of the Insured in the conduct or execution of their Professional Activities and Duties as defined.
- b) Prior To Handover/Rectification - against loss arising out of any defect in the works discovered prior to the issue of any practical completion or take-over certificate provided that any such defects are caused by a negligent breach of a Professional Activity or Duty by the Insured in consequence of neglect, error or omission by or on behalf of the Insured.

Insurer : Stalker Hutchinson (Santam Limited)

Policy Number: 6000/132337

Jurisdiction : Worldwide excluding North America

Insured Contracts: All projects (including any undertaking awarded or commenced prior to inception of the period of Insurance) involving design, construction, performance testing and commissioning in respect of the works and shall include capital expenditure, upgrade, modification, maintenance or overhaul, refurbishment, renovation, retrofitting or alterations and additions to existing facilities undertaken by the Insured or other Insured Parties acting on their behalf but **Excluding project works:**

- a) Contracts which at award stage have a value in excess of R 1,000,000,000.
- b) Contracts with an estimated construction period at award exceeding 48 months (excluding Defects Liability/Maintenance period).
- c) Contracts with a Contractual Defects Liability Maintenance Period exceeding 24 months.
- d) involving construction or erection of petrochemical manufacturing plant(s) but this exclusion shall not apply to pipelines and other associated works undertaken by or on behalf of the Insured.
- e) in or on any aircraft.
- f) Being Off-shore contracts

"Off-shore contracts" means all works and installations in the sea or on the seabed and do not constitute normal Wet Risk Contracts like harbours, moles, bridges, wharves or sewage or cooling water intake or outlet facilities, piers, marinas, causeways, breakwaters, jetties, dry docks and offshore pipelines when connected directly to onshore facilities and canal developments. "Off-Shore contracts" shall include oilrigs and oil platforms.

Limit Of Indemnity: Professional Indemnity - *R100,000,000 in the aggregate during the policy period of insurance.

*Where the limit is noted as in the aggregate during the policy period of insurance, that such aggregated limit is applicable to all Transnet Insured Contracts collectively and in total and does not apply to each contract separately.

**Policy Extension
Limits Of Indemnity:**

Claims Preparation Costs -	*R7,500,000 in the aggregate during the policy period of insurance.
Loss of Documents -	*R2,000,000 in the aggregate during the policy period of insurance.
Statutory Defence Costs -	*R5,000,000 in the aggregate during the policy period of insurance.
Defamation -	*R5,000,000 in the aggregate during the policy period of insurance.
Infringement of Copyright -	*R5,000,000 in the aggregate during the policy period of insurance.

*Where the limits are noted as in the aggregate during the policy period of insurance, that such aggregated limit is applicable to all Transnet Insured Contracts collectively and in total and does not apply to each contract separately.

Deductibles:

R5,000,000 each and every but R10,000 in respect of Claims Preparation Costs, Loss of Documents, Statutory Defence Costs, Defamation and Infringement Of Copyright.

Policy Special Conditions :

Condition precedent to liability that the Insured is fully qualified and registered with the relevant Industry Body/Association in terms of legislation as applicable.

Prior to hand over/rectification – the insured must give prior written notice to the Insurers of the intention to take remedial action to rectify such defect and obtain the Insurers' written agreement to such action being taken and the costs and expenses expected to be expended.

Policy Main Exclusions:

- Excludes all consequential loss other than cost of re-design, rectification and replacement as a consequence of the defect.
- Excludes Supervision.
- Excludes liability arising out of environmental impairment / pollution
- Excludes the cost of removing, nullifying or cleaning-up the effects of environmental impairment/ pollution.
- Excludes war, invasion, acts of foreign enemies, hostilities or warlike operations (whether war be declared or not), civil war, rebellion, revolution, insurrection, civil commotion assuming the proportions of or amounting to an uprising, military or usurped power, any act of terrorism and nuclear risks.
- Excludes fines, penalties, punitive and exemplary damages, multiplication of compensatory damages and/or any other noncompensating damages of any kind.
- Excludes liability from the hazardous nature of asbestos.
- Excludes medical malpractice.
- Excludes failure to meet contractual requirements relating to efficiency, output or durability.
- Excludes failure to meet completion dates
- Excludes the estimation of probable costs other than cost advice and cost planning services normally provided by a Quantity Surveyor or Project manager.
- Excludes incorrect authorisation of payment.



- Excludes breach of any statutory regulation.
- Excludes liability from the insolvency, liquidation or judicial management of the Insured.
- Excludes the certification of value of work executed by any contractor where the Insured has an equity interest in such contractor;
- Excludes liability due to unlawful competition, unfair practices, abuse of monopoly power, cartel activities or breach of a competitions ac
- Sanctions Exclusion
- Data exclusion
- State Capture exclusion
- COVID exclusion
- Directors & Officers Exclusion

This certificate of the insurance cover arranged is issued as a matter of information only and confers no rights upon the certificate holder. This certificate does not amend, extend or alter the coverage afforded by the policies issued by Insurers.

Dennis Govender

Chief Broking Officer



Transnet

**Principal Controlled Insurance Manual
(PCI)**

Contract Works

Contractors Public Liability

Professional Indemnity

To be used for construction related projects with a value of less than R1 billion.

For use by the Insured parties

Updated 2022 2023

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1 Introduction

Transnet SOC Limited insures all Projects / Contracts on a Principal Controlled Insurance Programme basis (including the Assembly and/or Erection of Plant and Machinery) in respect of Contract Works, Contractor's Public Liability and Contract Professional Indemnity and cover extends to Contractors and/or Consultants to the extent that Transnet contractually undertakes to arrange such insurance for their benefit.

The program is designed to effectively manage insurable construction risks.

Please note that this manual serves as a reference only, and does not in any way override, derogate or supersede the conditions of contracts or other agreements entered into, or the terms and conditions of the policies of insurance, which have been arranged by or on behalf of Transnet SOC. This manual must not be regarded as a substitute for the policy documents nor be construed as a legal interpretation of the protection afforded.

1.1 Benefits of the PCI Insurance Program

- 1.1.1 Transnet and its Operating Divisions wish to control the risk exposures in the case of Construction Insurance.
- 1.1.2 Transnet, as a large organization, bulk-buys insurance resulting in preferential rates and comprehensive cover.
- 1.1.3 Eliminates potential problems, which usually occur when individual Contractors are responsible to arrange separate insurance.
- 1.1.4 Includes the Contractor/s and/or Subcontractor/s and/or Consultant/s as insured parties where Transnet contractually undertake to arrange cover on their behalf.

1.2 Administrative Arrangements

1.2.1 Projects falling outside the scope of PCI

- a) The Operating Divisions must declare projects, which are excluded from the PCI programme, prior to the commencement of such contract.
- b) This declaration must be made to Group Insurance and the Transnet broker.

- c) To declare the value of a contract for contracts involving assembly or erection of plant and machinery or repairs maintenance or overhaul thereto, THE FULL NEW REPLACEMENT VALUE OF THE PLANT/MACHINERY involved must be declared AND NOT ONLY THE CONTRACT VALUE, for example:
 - Cranes (repairs or final assembly)
 - Machinery being moved
 - Maintenance or new works on existing Transnet National Port Authority Vessels whilst moored or in dry dock.
- d) Contract value must include the replacement value of any Free Issue Material provided.

1.2.2 Tender Stage of Contracts

- a) It is important that Tender documents and finalised contract documents reflect the fact that Transnet as the Principal/Employer arranges certain covers which incorporates cover on behalf of Contractors and / or Subcontractors and/or Consultants.
- b) The arrangement of PCI Insurance by Transnet does not relieve the contracting parties of their contractual obligations such as care of the works and liabilities to third parties.
- c) The cover provided, including limits of insurance purchased, should be clearly spelt out in the Tender documents and finalised. Contract documentation including the deductible(s) that are applicable and the fact that Contractor and/or Subcontractor and/or Consultants are responsible for the payment of such deductible(s).

1.2.3 Contracting outside the Territorial Limits

- a) If Contracts are to take place in any territories outside of South Africa, the broker needs to be advised of the same at feasibility stage.
- b) Due to the more stringent legislation regarding insurance in African countries, that the majority of territories within Africa make it compulsory to insure in country with an admitted insurer, in such territory as approved by the local insurance commissioner.

1.2.4 Additional Insurances that can be included in the PCI CW policy if needed (Optional)

Marine Transit Cover	Covering imports until delivered and checked on site
Removal of Lateral Support	Covering legal liability incurred as result removal of, weakening of, or interference with support to land or property or buildings adjacent to, on or in the vicinity of the Contract site.

1.2.5 Information to be shared with all Insured parties

a) **Warranties** (refer to relevant section in this manual)

It is essential that the Warranties be brought to the attention of the contractor and their sub-contractors as well as any other party involved in the contract/project being undertaken.

Where the special conditions concerning the warranties are not practical, specific arrangements for cover can be made with underwriters. It will require detailed underwriting information and an additional premium may be charged.

If any insured party does not conform to any of the insurers Warranties, then cover provided by the policy will be forfeited.

b) **Deductibles** (refer to relevant section in this manual)

The deductible is payable by the contractor as per the contract between Transnet and the Contractor.

The deductibles may change from time to time and it is the contractor's responsibility to obtain the latest deductible structure.

c) **Claims Management** (refer to relevant section in this manual)

Incidents that might lead to an insurance claim must be reported as soon as possible.

Claims must be notified within 30 Days after incident.

Claims must be notified to the Projects Manager, OD Insurance office and broker.

2 PCI Insurances Arranged by Transnet

2.1 Insurance Cover Applicable to All Contracts other than Excluded Contracts

2.1.1	Contract Works Cover	Covering physical loss or damage to the works, temporary works and materials for incorporation into the works whilst in transit, temporary storage and whilst in the course of erection at the contract site within the Republic of South Africa.
2.1.2	Contractors Public Liability Cover	Covering legal liability for damage to third party property and/or injury to or death of third party persons arising out of or in connection with the performance of the works on the contract site or sites designated for purposes of the performance of the contract.
2.1.3	Professional Indemnity	Covering legal liability as a result of neglect, error or omission of the insured in the execution of their professional activities.
2.1.4	Riot / Strike/ Terrorism Cover (Contract Works)	Provided by SASRIA (South African Special Risks Insurance Association) in respect of risks within the Republic of South Africa.

3 Claims Administration

All incidents that could give rise to claim under the Principal Controlled Insurances have to be reported to the Broker / Insurer within a **30 (Thirty) day** period. Failing this, claims will not be entertained.

3.1 Engagement of Nominated Loss Adjusters for Contract Works Claims

The broker is authorised to appoint a Nominated Loss Adjuster to investigate and quantify losses that are potentially indemnifiable under the Policy.

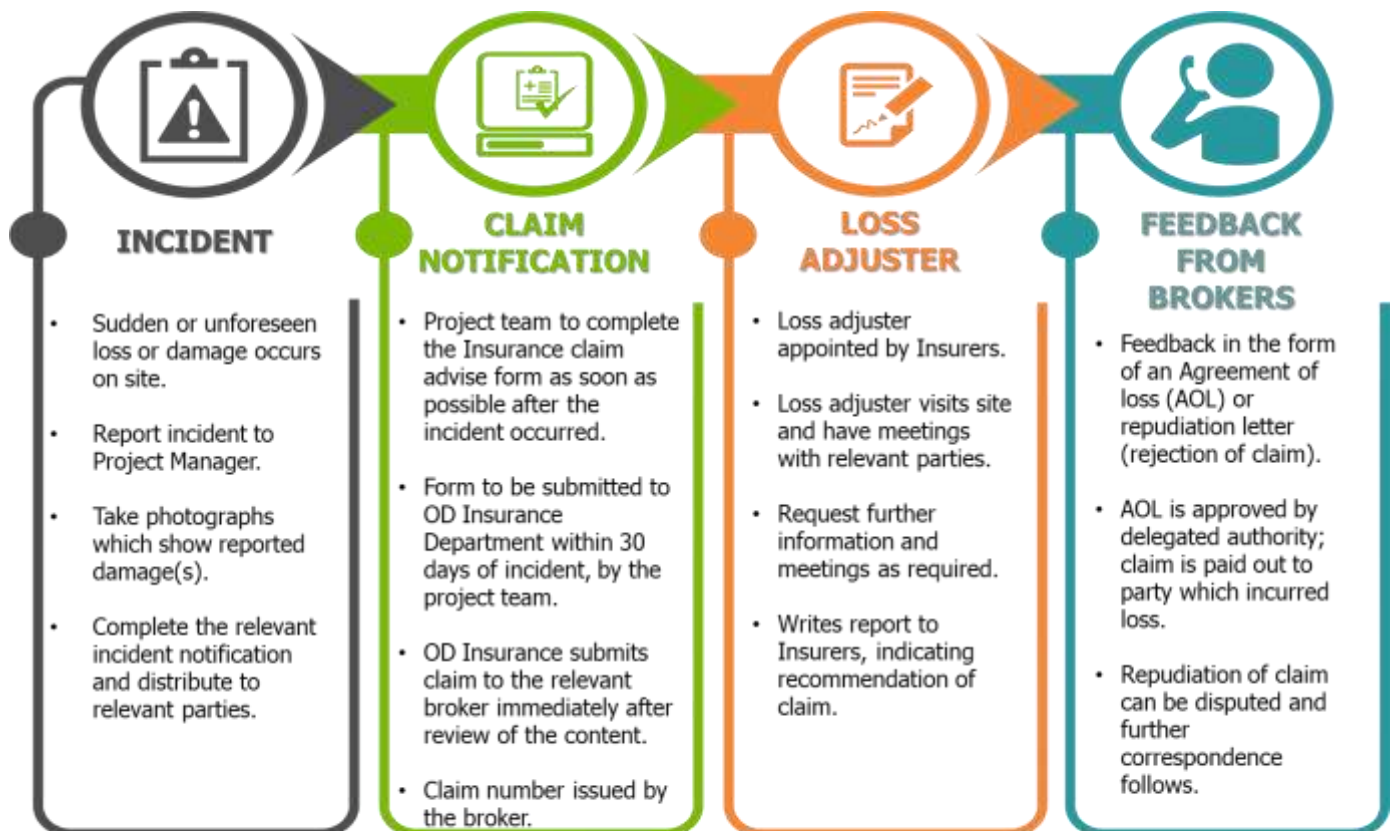
3.2 Insurance Claims Principals

- 3.2.1 Losses involving theft or malicious damage must be reported to the police and a police case number obtained and recorded.
- 3.2.2 The Employer, Contactor(s) or Sub-Contractor(s) shall allow free access for Insurers' Loss Adjuster(s) and / or Employer's Insurance Broker for the purpose of investigation and assessing the loss or damage.
- 3.2.3 The Employer, Contractor(s) or subcontractors shall not deal directly with the Insurers other than by co-operating with their Loss Adjuster(s) and / or the Employers Insurance Broker's request.
- 3.2.4 The Employer, Contractor or Sub-Contractor shall make no Admission of Liability in the event of damage, loss or injury to third party property or persons.
- 3.2.5 Letters of demand or summonses from claimants should be forwarded to the Transnet Broker through the Group Insurance office immediately upon receipt.
- 3.2.6 In the event of immediate repairs being necessary in the interest of safety, the Contractors may with the Employer's permission proceed with such repairs.
- 3.2.7 Other than, in the circumstances described above the Contractor shall not proceed with the making good of any loss without the prior authorization of the Employer who shall advise the Insurer's appointed Loss Adjuster(s) and the Transnet brokers.
- 3.2.8 Upon commencement of the making good of any loss, the Contractor shall keep separate records of the costs involved in making good such loss and these records must be authenticated by the Employer for submission to the Insurer's or their Loss Adjuster(s). Such records shall include, inter alia, the entire cost of labor, materials, transport and equipment.
- 3.2.9 Upon the amount of the loss or damage being agreed upon by the Loss Adjuster(s) and

Transnet / the Contractor, the Contractor and Transnet will sign an "Agreement of Loss" (AOL) form.

- 3.2.10 The amount agreed upon by the Insurers, the Insurers shall pay the Contractor and the Employer to the Employer net of the deductible, who will arrange for the payment to be made to the Contractor as appropriate after deduction of the first amount payable.

3.3 Insurance Claims Process



4 Summary of Contract Works Insurance

4.1 Scope of Cover: Contract Works

Physical loss or damage to the Property Insured which being materials, plant and other things for incorporation into the permanent works and as may be more fully described in the Policy.

4.2 The Insured Party (ies)

4.2.1 As Employer and Named Insured:

Transnet (SOC) Limited, and their subsidiary and associated companies and/or Joint Venture Partners as required and for whom they have instructions to insure or they have or assume a responsibility to insure whether contractually or otherwise as their respective rights and interests may appear;

4.2.2 The Contractor:

- a) All Contractors undertaking work in connection with The Insured Contract
- b) The Employer to the extent that the Employer undertakes work in connection with The Insured Contract;

4.2.3 Sub-Contractors:

- a) All Sub-Contractors employed by the Contractor and all other Sub-Contractors (whether nominated or otherwise) engaged in fulfilment of The Insured Contract); and

4.2.4 To the extent required by any contract or agreement;

- a) transporters, suppliers, manufacturers, vendors, other persons, persons providing storage facilities, plant owners and/or operators in respect of liability loss or damage arising out of The Insured Contract;
- b) project managers, architects, land surveyors, quantity surveyors, engineers and other advisors or consultants or sub-consultants appointed in the performance of the Insured Contract activities arising at the Contract Site provided always that any such person shall not be insured in respect of liability loss or damage arising out of such person's error or omission in the performance of the professional services for which he was appointed;
- c) any Local Provincial or Government Department with which the Insured enters into any contract or agreement for the performance of The Insured Contract;
- d) all for their respective rights and interests

4.3 The Contract Site

Any location within the Territorial Limits upon which The Insured Contract is to be executed or carried out as more fully defined in The Insured Contract documents together with so much of the surrounding area as may be required or designated for the performance of The Insured Contract.

4.4 Territorial Limits

The Republic of South Africa.

4.5 Insured Contracts

All Contracts (including any undertaking awarded or commenced prior to Inception of the Period of Insurance) involving design, construction, Performance Testing and Commissioning in respect of the Works and shall Include capital expenditure, upgrade, modification, maintenance or overhaul, refurbishment, renovation, retrofitting or alterations and additions to existing facilities undertaken by the Insured or other Insured Parties acting on their behalf but

Excluding:

- a) contracts which at award stage have a value in excess of R 1,000,000,000;
- b) contracts with an estimated construction period exceeding 48 months but increasing to 60 months in respect of rail maintenance contracts and Transnet Freight and Rail contracts for logistical support for inline inspections and identification of defects over a 5 year period in respect of Transnet's pipeline assets (excluding Defects Liability/Maintenance period);
- c) contracts involving construction or erection of petrochemical manufacturing plant(s) but this exclusion shall not apply to pipelines and other associated works undertaken by or on behalf of the Insured;
- d) contracts in or on any aircraft;
- e) Off-shore contracts;
- f) Wet Risk Contracts which at award exceeds R500,000,000;
- g) Dam Contracts
- h) Tunnel contracts which at award exceeds R50,000,000;
- i) Tunnel contracts using tunnel boring machines;
- j) Underground Mining Contracts;
- k) Horizontal Directional Drilling Contracts which at award exceeds R500,000;
- l) Horizontal Directional Drilling Contracts where total drilling exceeds 1 km;
- m) Horizontal Directional Drilling Contracts for pipe diameters greater than 76 cm.

4.6 Definitions

- 4.6.1 **"Off-shore contracts"** means all works and installations in the sea or on the seabed including dredging which are accessible only by ship boat barge or helicopter and do not constitute normal wet works like harbours moles bridges wharves or sewage or cooling water intake or outlet facilities. "Off-Shore Contracts" shall include oilrigs and oil platforms (but not including oil platforms when connected to the land on completion). The term shall not apply to pre- fabrication works on land associated with an Off-Shore Contract.
- 4.6.2 **"Wet Risk Contracts"** shall mean any Contract and/or Works where more than thirty-five (35) percentile of its value is in a permanent body of water or is below the high water mark of any tidal body of water. The term shall include contracts for the construction of wharves, piers, marinas, causeways, breakwaters, jetties, dry docks and offshore pipelines when connected directly to on-shore facilities and canal developments. Wet Risks shall exclude Off-Shore Contracts;
- 4.6.3 **"Dam Contracts"**, which term shall include weirs and hydroelectric projects involving the construction of dams or weirs;
- 4.6.4 **"Horizontal Directional Drilling Contracts"**, means micro-tunneling work for the construction of tunnels utilising surface based horizontal directional drilling equipment.
- 4.6.5 **"Tunnels"** means Tunnels (Including declines) involving all of the following;
- a) Works below ground level; and
 - b) tunneling machinery below ground level; and
 - c) a tunneling crew operating the machinery below ground level;
 - d) But shall not include Horizontal Directional Drilling Contracts.
- 4.6.6 **"Horizontal Directional Drilling Contracts"**, means micro-tunneling work for the construction of tunnels utilising surface based horizontal directional drilling equipment.
- 4.6.7 **"Underground Mining Contracts"**, which shall mean any contract involving underground mining.
- 4.6.8 **"normal action of the sea"**, Normal action of the sea means the state of the sea, which manifests itself up to No. 8 on the Beaufort scale, or the state of the tides, current and wave action of the sea, which must be statistically expected to occur once during a 10 year period, whichever is the more onerous.
- 4.6.9 **Major Perils** shall mean damage caused by storm, rain, tempest, wind, flood, theft, malicious

damage, subsidence, collapse, earthquake, testing or commissioning and the consequences of defective design, specification, materials or workmanship (DE4).

- 4.6.10 **Minor Perils** shall mean damage caused by a peril no defined as Major Perils defined above.
- 4.6.11 The Deductible (excess) is the amount, which the Contractor and/or Sub-Contractor and/or Professional (i.e. Consulting Engineer, Architects and Other Professionals) are responsible, this obligation must be reflected in the Tender and/or Contract Documents, and the responsibility for same made clear.

4.7 Testing Period

Limited to 120 Days (not necessarily consecutive).

4.8 Maintenance/Defects Liability Period

Limited to a maximum of 24 Months

4.9 Main Policy Extensions

- a) Costs & Expenses - Limited to maximum of R50,000,000.
- b) Expediting Measures – Limited to a maximum of R50,000,000.
- c) Professional Fees In Reinstatement Of Property Insured - Limited to a maximum of R50,000,000.
- d) Costs & Expenses For Removal Of Debris No Damage - Limited to a maximum of R50,000,000.
- e) Surrounding Property in care custody or control of the contractor – Limited to a maximum of R55,000,000.
- f) Fire Brigade & Public Authorities - Limited to a maximum of R10,000,000.
- g) Public Authority Reinstatement Costs - Limited to a maximum of R20,000,000.
- h) Public Relationship Costs - Limited to a maximum of R1,000,000.
- i) Records - Limited to a maximum of R2,000,000.
- j) Removal to Gain Access - Limited to a maximum of R20,000,000
- k) Road Reserve and Servitude Extensions - Limited to a maximum of R10,000,000
- l) Search & Locate Costs - Limited to a maximum of R20,000,000.
- m) Borrowing Of Plant For Commissioning Purposes - Limited to a maximum of R10,000,000
- n) Escalation during Construction – 30%
- o) Marine Contribution Clause
- p) Claim Preparation Costs – Limited to a maximum of R10,000,000

4.10 Special Conditions/Warranties

4.10.1 Open Trench Limitation

Open trench is defined as any trench and / or material therein until compacted to top of trench level.

Open Trench limitation - loss or damage to open trench work is limited to the cost of the equivalent of 5,000 meters of such open trench. If the length of such open trench exceeds the above limitation of 5,000 meters then the Insurer shall only be liable to indemnify the Insured for a maximum of 5,000 meters.

In addition to the above, the following additional deductibles will apply over and above the deductibles stated in The Schedule in respect of the cost of that portion of any claim relative to open trench.

- a) Exposed length exceeding 1,000 meters but not exceeding 3,000 meters – an additional amount of 20% of loss subject to minimum of R50, 000.
- b) Exposed length exceeding 1,000 meters but up to a maximum of 5,000 meters –an additional amount of 20% of the loss subject to a minimum of R100,000,

As demonstrated below:

Up to 1,000 meters	deductible as stated in The Schedule.
Up to 3,000 meters	deductible as stated in The Schedule plus in excess of 1,000 meters up to a maximum of 3,000 meters an additional 20% of loss minimum R50,000
Up to 5,000 meters	deductible as stated in The Schedule plus in excess of 1,000 meters up to a maximum of 5,000 meters an additional 20% of loss minimum R100,000.

- 4.10.2 **Unsealed/ Un-Primed Base Course Limitation** -loss or damage to unsealed or unprimed base course is limited to the cost of the equivalent of 5,000 meters of such unsealed or unprimed base course. If the length of such unsealed or unprimed base course exceeds the above limitation of 5,000 meters then the Insurer shall only be liable to indemnify the Insured for a maximum of 5,000 meters.

In addition to the above, the following additional deductibles will apply over and above the deductibles stated in The Schedule in respect of the cost of that portion of any claim relative to unsealed or unprimed base course.

- a) Exposed length exceeding 1,000 meters but not exceeding 3,000 meters – an additional amount of 20% of loss subject to minimum of R50,000.
- b) Exposed length exceeding 1,000 meters but up to a maximum of 5,000 meters – an additional amount of 20% of the loss subject to a minimum of R100,000

4.11 Main Policy Exclusions

The Policy Excludes:

- a) War
- b) Nuclear Energy Risks
- c) Terrorism
- d) Computer Loss General Exception
- e) DE4 (All types of Works) for defective material workmanship design plan or specification.
- f) LEG 3 (Mechanical or Electrical Engineering Works only) for defective material workmanship design plan or specification. Limited to maximum of 15% of the total estimated contract value.
- g) Loss or damage arising during air transit or any ocean voyage or whilst in storage thereafter.
- h) occurring during any defects/maintenance period unless cause occurred prior to such defects/maintenance period
- i) Disappearance or by shortage revealed during routine inventory or periodic stocktaking.
- j) Consequential loss of whatsoever nature.
- k) Normal wear and tear, normal atmospheric conditions, rust, erosion, corrosion or oxidisation.
- l) Due to its own explosion breakdown or derangement occurring after the Testing Period, which has operated under load conditions.
- m) Second hand property due to its own electrical or mechanical breakdown or explosion.
- n) Covid 19 and infectious diseases.

4.12 Deductibles

The following Deductibles apply per occurrence. In respect of loss or damage:

Contracts with a contract value:	Major perils	Minor perils
0 to R100,000,000	R25,000	R 15,000
R100,000,001 to R250,000,000	R50,000	R15,000
R250,000,001 to R500,000,000	R100,000	R25,000
R500,000,001 to R1,000,000,000	R150,000	R25,000

4.12.1 Minimum wet risk deductible of R100,000 per occurrence to apply.

4.12.2 LEG 3 Deductible (Only in respect of Mechanical and Electrical contracts);

Contracts with a contract value	Deductible
0 to R500,000,000	R1,000,000 per occurrence
R500,000,001 to R1,000,000,000	R1,500,000 per occurrence

4.13 Synopsis of Contract Works Cover

The insurers will indemnify the Insured against physical loss of or damage to any part of the Property Insured:

- a) during dismantling of property in connection with the Insured Contract;
- b) during transit including loading, unloading and temporary storage;
- c) during preparation of the Contract Site and while the Property Insured is on the Contract Site until completion of and transfer of risk in the whole of the permanent works under the Insured Contract to the Employer.
- Where testing and commissioning of the Property Insured is conducted by the Employer "completion" for purposes of this insurance shall be deemed to occur only after successful completion of all testing and commissioning of the whole of the permanent works under the Insured Contract.
- To the extent that the permanent property insurances arranged by the Employer indemnify the Insured for completed portions of the Property Insured prior to completion of the whole of the permanent works under the Insured Contract, this

insurance in respect of such completed portions of the Property Insured shall cease except as provided below.

- Work uncompleted or outstanding in terms of any certificate of completion, certificate of handover or similar document shall continue to be insured until its completion and the inception of the maintenance or defects liability period (as may be described in the Insured Contract) for such uncompleted or outstanding work where after the provisions of 4 below shall apply in respect of such work;
- d) during the maintenance or defects liability period (as may be described in the Insured Contract) pertaining to any part of the permanent works but only in respect of loss or damage:
- arising from a cause occurring prior to commencement of such period of maintenance or defects liability period; or
 - arising from any act or omission of the Insured their servants agents suppliers or sub-contractors in pursuance of the Insureds obligations; or
 - For which the Insured Contractor is responsible under the Insured Contract.
- This limitation of cover shall only apply to the particular contractor who has handed over any part of the permanent works.
- e) Where any of the Property Insured is replaced or renewed during any maintenance or defects liability period the maintenance or defects liability Period of Insurance in respect of such replaced or renewed Property Insured shall be deemed to be extended to include any extended period for which the Insured is responsible.
- f) Where the Insured Contract does not set out specific maintenance provisions, the Employer shall be deemed for purposes of this Section to be indemnified for loss or damage:
- having its cause prior to the commencement of the deemed maintenance or defects liability period, or
 - Occurring in the course of or in connection with repair reinstatement or replacement of property during such period or any act or omission of the Insured in the course of work carried out in pursuance of any obligations under the Insured Contract.

Provided that such deemed period does not exceed 24 months.

4.14 Cover Limitations/ Warranties/ Special Conditions under the Contract Works Policy

4.14.1 Laid Pipes Warranty

- a) Pipes with a diameter not exceeding 500mm are to be end capped on the termination of each day's work to avoid ingress of mud, silt, water, debris, detritus and the like.
- b) Pipes with a diameter exceeding 500mm are to be capped on the termination of each day's work with steel mesh to allow ingress of water to avoid floatation but avoiding ingress of large debris or detritus.

4.14.2 Rail Track Re-Profiling Warranty

- a) The maximum speed of any grinding unit shall not exceed 11.00km per hour.
- b) All Guards, Curtains, Spark Deflectors are to be in place and correctly positioned prior to the commencement of each grind.
- c) Maximum grinding distance in any one execution shall not exceed 10,000 meters.
- d) Any changes in prevailing weather conditions must be recorded and appropriate remedial action taken.
- e) The Insured Parties are to comply with all Fire Fighting requirements as set out in the Project Specification for Track Maintenance with an on Track Grinding / Profiling Machine and any amendments / deviations to this Project Specification are to be advised to the Insurer prior to work being undertaken.

4.15 Used Plant – Basis of Loss Settlement

In respect of Property Insured which has operated under service conditions prior to attachment of indemnity hereunder being lost or damaged the basis upon which the loss shall be settled shall be the cost of repair reinstatement or replacement of the Property Insured except that in respect of such property exceeding five years of age the basis of loss settlement shall not exceed the Agreed Value of such property which shall be calculated on the basis that for each year of life (or part thereof) the present day New Replacement Value of an identical machine or structure is reduced proportionately over a period of 20 (twenty) years subject to a residual indemnification of 20% (twenty percent).

4.16 Special Conditions Concerning the Construction of "Wet Risks"

Insurers shall not indemnify the Insured in respect of the expenses incurred for the following:

- 4.16.1 Loss or damage to berths, wharves, jetties and the like caused by their subsidence or sinking. However, this exclusion shall apply only to those works, which have been incorrectly executed. The burden of proof to show that said works have been correctly executed shall be on the Insured;
- 4.16.2 normal action of the river / *sea;
- 4.16.3 loss of or damage to more than 400m of uncompleted or unprotected seawall, quay or other marine structure;
- 4.16.4 loss damage or liability due to soil erosion, dredging or re-dredging unless necessary to reinstate indemnifiable loss or damage;
- 4.16.5 lost or damaged fill material;
- 4.16.6 replacing or rectifying piles or retaining wall elements;
 - a) which have become misplaced or misaligned or jammed during their construction;
 - b) which are lost or abandoned or damaged during driving or extraction;
 - c) which have become obstructed by jammed or damaged piling equipment or casings.
- 4.16.7 rectifying disconnected or de-clutched sheet piles;
- 4.16.8 any leakage or infiltration of material of any kind;
- 4.16.9 as a result of piles or foundation elements having failed to pass a load bearing test or otherwise not having reached their designed load bearing capacity;
- 4.16.10 for reinstating profiles or dimensions unless necessary to reinstate indemnifiable loss or damage;
- 4.16.11 loss or damage to any floating and other equipment such as caissons, barges and the like and liabilities therefrom;
- 4.16.12 any mobilisation / demobilisation and / or other costs which arise for standby / waiting on weather or offshore construction equipment, except costs exceeding R2,500,000 which arise following physical loss or damage to insured works;
- 4.16.13 loss or damage to pulling wires, anchors, chains and buoys;

- 4.16.14 loss or damage due to impact of shipping unless the Insured cannot obtain an admission of liability from the insurer of the ship owners or identify the responsible vessel, in which case this policy will be obligated to indemnify the Insured;
- 4.16.15 Marine liability.

4.17 Warranties relating to the Construction of "Wet Risks"

The insured shall where practical:

- 4.17.1 receive daily weather updates from the local meteorological office during the period of insurance and make continuous contact to the local meteorological office within 12 hours' notice of an imminent storm; and
- 4.17.2 Make navigation distance for public traffic to work site minimum 200m.

4.18 Special Conditions Concerning Piling Works

The Insurers shall not indemnify the Insured in respect of expenses incurred:

- 4.18.1 for replacing or rectifying piles or retaining wall elements
- which have become misplaced or misaligned or jammed during their construction,
 - which are lost or abandoned or damaged during driving or extraction, or
 - which have become obstructed by jammed or damaged piling equipment or casings,
- 4.18.2 for rectifying disconnected or declutched sheet piles,
- 4.18.3 for rectifying any leakage or infiltration of material of any kind,
- 4.18.4 for filling voids or for replacing lost bentonite,
- 4.18.5 as a result of any piles or foundation elements having failed to pass a load bearing test or otherwise not having reached their designed load bearing capacity,
- 4.18.6 for reinstating profiles or dimensions unless necessary to reinstate indemnifiable loss or damage

The above shall not apply to loss or damage caused by natural hazards.

4.19 Serial Losses in respect of Locomotives and Rolling Stock

If the development of a defect in any electrical or mechanical plant manufactured by or for the Insured for Locomotives or Rolling Stock shall indicate or suggest that a similar defect exists in any other item of such plant insured under this policy the Insurers reserve the right to suspend the insurance in respect of loss or damage due to or arising out of the said defect unless the Insured shall forthwith investigate and if necessary rectify as soon as is reasonably practical the defect in such property at his own expense.

4.20 Cessation of Work

If from any cause work ceases on the site of the Contract for a continuous period in excess of 90 (Ninety) days immediate notice in writing must be given to the Insurer(s) with the details of completed and outstanding work and the Insurer(s) on the receipt of such notice may at its discretion agree continuation of this insurance at special terms to be agreed.

5 Contract Works SASRIA Summary

5.1 Indemnity

The Contract Works SASRIA cover is subject to the Underlying Contract Works policy being current and valid at the effective date as stated in the Schedule Sasria will by payment or at its option by reinstatement or repair indemnify the insured during the period of insurance up to an amount not exceeding the total sum insured or R500 000 000 (five hundred million Rand) (Including VAT) in the aggregate whichever is less against loss of or damage to the property insured directly related to or caused by :

- i. any act calculated or directed to overthrow or influence any State or government, or any provincial, local or tribal authority with force, or by means of fear, terrorism or violence;
- ii. any act which is calculated or directed to bring about loss or damage in order to further any political aim, objective or cause, or to bring about any social or economic change, or in protest against any State or government, or any provincial, local or tribal authority, or for the purpose of inspiring fear in the public, or any section thereof;
- iii. any riot, strike or public disorder, or any act or activity which is calculated or directed to bring about a riot, strike or public disorder;
- iv. any attempt to perform any act referred to in clause (i), (ii) or (iii) above;
- v. the act of any lawfully established authority in controlling, preventing, suppressing or in any way dealing with any occurrence referred to in clause (i), (ii), (iii) or (iv) above.

5.2 Policy Exceptions

The policy does not cover:

- 5.2.1 consequential or indirect loss or damage of any kind or description whatsoever, other than loss of rent if specifically insured, which shall be limited to a period not exceeding that required to render the building tenantable;
- 5.2.2 loss or damage resulting from total or partial cessation of work, or the retardation or interruption of cessation of any process or operation;
- 5.2.3 loss or damage occasioned by permanent or temporary dispossession resulting from confiscation, commandeering or requisitioning by any lawfully constituted authority;
- 5.2.4 In respect of the Contract Works and Materials:
The first amount payable by the Insured, arrived at by calculating 0,100% of the Contract Value of the specific contract for which a claim is made with a maximum first amount payable of R25,000 and will apply to each and every theft loss.
- 5.2.5 Nuclear/Chemical/Biological Terrorism Exclusion where the policy does not cover loss (es) in

any way caused or contributed to by an act of terrorism involving the use or release or the threat thereof of any nuclear weapon or device or chemical or biological agent.

5.3 Special Conditions

All the terms, conditions, exclusions, exceptions and warranties applicable to the Underlying Policy, other than:

- a) Exception A(ii), A(iii)(b), A(iv), A(v) and A(vii) to the extent that A(vii) refers to A(i); A(iii))b), A(iv), A(v) and A(vi); and
- b) The Burden of Proof Clause set out in Exception A to the extent that such Clause refers to the
- c) The Sasria Coupon incorporates the Terms, Conditions, Exceptions, Exclusions and Warranties of the underlying Policy to which it attaches. It does not automatically incorporate the Extensions.

The following extensions and limits will apply to the SASRIA cover noting that these limits are not in addition to the maximum limit of indemnity of R500 million in the aggregate during the policy period:

Costs & Expenses	R 50,000,000
Surrounding Property	R 55,000,000
Surrounding Property - Worked Upon	R 55,000,000
Professional Fees	R 50,000,000
Expediting Expenses	R 50,000,000
Surrounding Property - Watercraft	R 55,000,000
Fire Brigade/Public Authorities	R 20,000,000
Public Authorities Reinstatement	R 10,000,000
Road Reserve & Servitude Extension	R 10,000,000
Documentation	R 2,000,000
Claims Preparation Costs	R 10,000,000
Public Relations Expenses	R 1,000,000
Security/Protection Costs	R 8,695,652

5.4 Additional Contract Works Excess of Loss Cover

In addition to the R500 million (VAT Inclusive) limit of indemnity provided by the above primary Contract Works SASRIA cover, Transnet have purchased an additional Excess Of Loss coupon from SASRIA for a limit of indemnity of R1 billion (VAT Inclusive) in the aggregate in excess of the primary R500 million (VAT Inclusive) limit of indemnity.

6 Contractors Public Liability Insurance Summary

6.1 Cover Provided

Legal Liability to pay as compensation for and in consequence of:

- a) Death of, injury to, illness, or disease contracted by any person.
- b) Loss of / or physical damage to tangible property.

Occurring during the period of insurance and arising out of or in connection with the performance of the Insured Contracts.

6.2 The Insured

6.2.1 As Employer and Named Insured:

Transnet (SOC) Limited, and their subsidiary and associated companies and/or Joint Venture Partners as required and for whom they have instructions to insure or they have or assume a responsibility to insure whether contractually or otherwise as their respective rights and interests may appear;

6.2.2 The Contractor:

- a) All Contractors undertaking work in connection with The Insured Contract
- b) The Employer to the extent that the Employer undertakes work in connection with The Insured Contract;

6.2.3 Sub-Contractors:

- a) All Sub-Contractors employed by the Contractor and all other Sub-Contractors (whether nominated or otherwise) engaged in fulfilment of The Insured Contract); and

6.2.4 to the extent required by any contract or agreement;

- a) transporters, suppliers, manufacturers, vendors, other persons, persons providing storage facilities, plant owners and/or operators in respect of liability loss or damage arising out of The Insured Contract;
- b) project managers, architects, land surveyors, quantity surveyors, engineers and other advisors or consultants or sub-consultants appointed in the performance of the Insured Contract activities;

all for their respective rights and interests.

6.3 Territorial Limits

The Republic of South Africa.

6.4 Insured Contracts

All contracts (including any undertaking awarded or commenced prior to inception of the period of Insurance) involving design, construction, performance testing and commissioning in respect of the works and shall include capital expenditure, upgrade, modification, maintenance or overhaul, refurbishment, renovation, retrofitting or alterations and additions to existing facilities undertaken by the Insured or other Insured Parties acting on their behalf but

Excluding:

- a) Contracts, which at award stage have a value in excess of R 1,000,000,000.
- b) Contracts with an estimated construction period at award exceeding 48 months but 60 months in respect of contracts awarded prior to 1 April 2020 for rail maintenance contracts For Transnet Freight & Rail and for Transnet Pipeline's logistical support for inline inspections and identification of defects in respect of Transnet's pipeline assets (all excluding Defects Liability/Maintenance period).
- c) Contracts with a Contractual Defects Liability Maintenance Period exceeding 24 months.
- d) Contracts involving construction or erection of petrochemical manufacturing plant(s) but this exclusion shall not apply to pipelines and other associated works undertaken by or on behalf of the Insured.
- e) Contracts in or on any aircraft.
- f) Off-shore contracts - "Off-shore contracts" means all works and installations in the sea or on the seabed and do not constitute normal Wet Risk Contracts like harbours, moles, bridges, wharves or sewage or cooling water intake or outlet facilities, piers, marinas, causeways, breakwaters, jetties, dry docks and offshore pipelines when connected directly to onshore facilities and canal developments. "Off-Shore contracts" shall include oilrigs and oil platforms.

6.5 Policy Limits

Contractors Public Liability	R100,000,000 any one occurrence / unlimited during the Period of Insurance
Contractors Negligent Removal or weakening of Support	R100 000 000 any one occurrence and R100,000,000 per site in the aggregate during the Period of Insurance.

Statutory Legal Defense Costs	*R5 000 000 in the aggregate during the Period of Insurance.
Arrest / Assault / Defamation	*R5 000 000 in the aggregate during the Period of Insurance.
Emergency Medical Expenses	R5 000 000 any one occurrence
Prevention of Access	*R5 000 000 in the aggregate during the Period of Insurance.
Trespass / Nuisance	*R5 000 000 in the aggregate during the Period of Insurance.
Claims Preparation Costs	R5 000 000 any one occurrence

*Where the limits are noted as in the aggregate during the policy period of insurance, that such aggregated limit is applicable to all Transnet Insured Contracts collectively and in total and does not apply to each contract separately.

6.6 Deductible(s)

R50,000 per occurrence but increased to R5,000,000 in respect of Spread of Fire and/or Hot Works and R250,000 in respect of Sudden and Accidental Pollution and/or Goods on the Hook.

6.7 Main Policy Exceptions

- 6.7.1 The amount of the policy deductible;
- 6.7.2 Death or injury to own employees;
- 6.7.3 Motor vehicle liabilities under legislation or as defined in Multi-lateral Motor Vehicles Accident Fund No. 93 of 1989 as amended;
- 6.7.4 Arising out of the ownership, hire leasing or operation of any airport, airstrip or helicopter pad;
- 6.7.5 Property belonging to the Insured or in his care custody and control;
- 6.7.6 Property forming part of Contract Works;
- 6.7.7 Fines, penalties, punitive and exemplary damages;
- 6.7.8 Rectification of the works arising out of design, formula, specification, supervision, treatment or advice given for a fee;
- 6.7.9 Gradual pollution and contamination;
- 6.7.10 Ownership hiring or leasing of any aircraft, watercraft or hovercraft;
- 6.7.11 War, terrorism, asbestos and nuclear risks; and
- 6.7.12 Professional Indemnity.
- 6.7.13 Covid 19 and infectious diseases.

7 Project Professional Indemnity Insurance Summary

7.1 Cover Provided

Professional Indemnity

- a) In respect of damages, which the Insured shall become legally liable, to pay in consequence of neglect, error or omission by or on behalf of the Insured in the conduct or execution of their Professional Activities and Duties as defined.
- b) Prior To Handover/Rectification - against loss arising out of any defect in the works discovered prior to the issue of any practical completion or take-over certificate provided that any such defects are caused by a negligent breach of a Professional Activity or Duty by the Insured in consequence of neglect, error or omission by or on behalf of the Insured.

7.2 The Insured

7.2.1 As Employer and Named Insured:

Transnet (SOC) Limited and their subsidiary and associated companies and/or Joint Venture Partners as required and for whom they have instructions to insure or they have or assume a responsibility to insure whether contractually or otherwise as their respective rights and interests may appear;

7.2.2 The Contractor:

- a) All Contractors undertaking work in connection with The Insured Contract
- b) The Employer to the extent that the Employer undertakes work in connection with The Insured Contract;

7.2.3 Sub-Contractors:

All Sub-Contractors employed by the Contractor and all other Sub-Contractors (whether nominated or otherwise) engaged in fulfilment of The Insured Contract); and

7.2.4 to the extent required by any contract or agreement;

All project managers; architects; land surveyors; quantity surveyors; engineers and other advisors or consultants or sub-consultants appointed in the performance of the Insured Contract activities

all for their respective rights and interests

7.3 Jurisdiction

Worldwide excluding North America

7.4 Insured Contracts

All contracts (including any undertaking awarded or commenced prior to inception of the period of Insurance) involving design, construction, performance testing and commissioning in respect of the works and shall include capital expenditure, upgrade, modification, maintenance or overhaul, refurbishment, renovation, retrofitting or alterations and additions to existing facilities undertaken by the Insured or other Insured Parties acting on their behalf but Excluding:

- a) Contracts, which at award stage have a value in excess of R 1,000,000,000.
- b) Contracts with an estimated construction period at award exceeding 48 months but 60 months in respect of contracts awarded prior to 1 April 2020 for rail maintenance contracts For Transnet Freight & Rail and for Transnet Pipeline's logistical support for inline inspections and identification of defects in respect of Transnet's pipeline assets (all excluding Defects Liability/Maintenance period).
- c) Contracts with a Contractual Defects Liability Maintenance Period exceeding 24 months.
- d) Contracts involving construction or erection of petrochemical manufacturing plant(s) but this exclusion shall not apply to pipelines and other associated works undertaken by or on behalf of the Insured.
- e) Contracts in or on any aircraft.
- f) Off-shore contracts - "Off-shore contracts" means all works and installations in the sea or on the seabed and do not constitute normal Wet Risk Contracts like harbours, moles, bridges, wharves or sewage or cooling water intake or outlet facilities, piers, marinas, causeways, breakwaters, jetties, dry docks and offshore pipelines when connected directly to onshore facilities and canal developments. "Off-Shore contracts" shall include oilrigs and oil platforms.

7.5 Policy Retroactive Dates

- 1 July 1995 Transnet Limited
- 16 January 2006 HMG Joint Venture
- 1 April 2008 Limit of Indemnity R200 000 000 per occurrence but R400 000 000 in the aggregate
- 1 April 2010 Deductible R1 000 000 (R300 000 prior to 1 April 2010)
- 1 April 2014 Deductible R2 000 000

7.6 Limit of Indemnity

Professional Indemnity - *R100,000,000 in the aggregate during the policy period of insurance.

*Where the limit is noted as in the aggregate during the policy period of insurance, that such aggregated limit is applicable to all Transnet Insured Contracts collectively and in total and does not apply to each contract separately.

7.7 Policy Extension

Limits of Indemnity

Claims Preparation Costs	*R7,500,000 in the aggregate during the policy period of insurance
Loss of Documents	*R2,000,000 in the aggregate during the policy period of insurance
Statutory Defence Costs	*R5,000,000 in the aggregate during the policy period of insurance
Defamation	*R5,000,000 in the aggregate during the policy period of insurance
Infringement of Copyright	*R5,000,000 in the aggregate during the policy period of insurance

*Where the limits are noted as in the aggregate during the policy period of insurance, that such aggregated limit is applicable to all Transnet Insured Contracts collectively and in total and does not apply to each contract separately.

7.8 Deductibles

7.8.1 The deductibles are noted as follows:

R5,000,000 each and every claim but R10,000 in respect of Claims Preparation Costs, Loss of Documents, Statutory Defense Costs, Defamation and Infringement of Copyright.

7.9 Policy Special Conditions

Condition precedent to liability that the Insured is fully qualified and registered with the relevant Industry Body/Association in terms of legislation as applicable.

Prior to hand over/rectification – the insured must give prior written notice to the Insurers of the intention to take remedial action to rectify such defect and obtain the Insurers' written agreement to such action being taken and the costs and expenses expected to be expended.

7.10 Policy Main Exclusions

- 7.10.1 Excludes all consequential loss other than cost of re-design, rectification and replacement as a consequence of the defect.
- 7.10.2 Excludes Supervision.
- 7.10.3 Excludes liability arising out of environmental impairment / pollution
- 7.10.4 Excludes the cost of removing, nullifying or cleaning-up the effects of environmental impairment/ pollution.
- 7.10.5 Excludes war, invasion, acts of foreign enemies, hostilities or warlike operations (whether war be declared or not), civil war, rebellion, revolution, insurrection, civil commotion assuming the proportions of or amounting to an uprising, military or usurped power, any act of terrorism and nuclear risks
- 7.10.6 Excludes fines, penalties, punitive and exemplary damages, multiplication of compensatory damages and/or any other non-compensating damages of any kind.
- 7.10.7 Excludes liability from the hazardous nature of asbestos.
- 7.10.8 Excludes medical malpractice.
- 7.10.9 Excludes failure to meet contractual requirements relating to efficiency, output or durability.
- 7.10.10 Excludes failure to meet completion dates
- 7.10.11 Excludes the estimation of probable costs other than cost advice and cost planning services normally provided by a Quantity Surveyor or Project manager.
- 7.10.12 Excludes incorrect authorisation of payment.
- 7.10.13 Excludes breach of any statutory regulation.
- 7.10.14 Excludes liability from the insolvency, liquidation or judicial management of the Insured.
- 7.10.15 Excludes the certification of value of work executed by any contractor where the Insured has an equity interest in such contractor;
- 7.10.16 Excludes liability due to unlawful competition, unfair practices, abuse of monopoly power, cartel activities or breach of a competitions act
- 7.10.17 Sanctions Exclusion
- 7.10.18 Covid 19 and infectious diseases.

Annexure 1 – Incident Advice Form

All incidents have to be reported within 10 days of occurrence

SEND A COPY OF THIS DOCUMENT TO THE INSURANCE DEPARTMENT WITHIN YOUR OD/ SPECIALIST UNIT.

Insurance claim advice form

Principled Controlled Insurance 2022-2023

DETAILS OF PROJECT / CONTRACT

Project number: _____

Project Name: _____

Site Physical Address: _____

Name and contact details of Project Manager: _____

Name and contact details of person who can be contacted in regards to this claim:

Main Contractor or Sub-Contractor: _____

Value of the Project / Contract at time of award: _____

Free issue material value (if not included in the value above): _____

Project / Contract Start Date: _____

Estimated End Date: _____

LOSS / DAMAGE OF PROPERTY CLAIMS (CONSTRUCTION WORK)

Date of Incident: _____

Description of loss or damage: _____

Possible cause of the loss / Party responsible for the loss: _____

Estimated value of the loss: _____

In the event of theft – Police case number and name of Police Station incident was reported to:

PUBLIC LIABILITY CLAIM (I.E. 3RD PARTY INVOLVED IN THE INCIDENT)

Describe the incident, which might lead to a public liability claim:

Estimated value of the claim: _____

Details of third party (list all possible details of third party i.e. name, contact details, company name etc.)

Attach the Following to this claim submission:

- 1 Cost breakdown of the estimated claim amount (even if it is only a guestimate at reporting time)
- 2 Documentation supporting the claim e.g. photos, reports etc.

I/We warrant that the foregoing information provided is true and correct and that no information has been withheld in respect of the incident. I/We undertake to advise the Insurance office in writing in the event of any changes to supplied information and in the event of recovery of any part of the property forming the subject of this claim.

Signature _____ Name _____

Capacity: _____ Date _____

Claim form to be submitted to the Insurance Office of the relevant Operating Division or Specialist Unit.

Note:

Claim must be notified within 30 days of the incident. Attach additional pages if space provided is not sufficient.

Supply as much detailed information as possible during notification. If information is not available indicate such on the form.

INSURANCE ADMINISTRATION

Unique Claim Number: _____

TOMS: _____

Broker Claim Number: _____

Date Received from Project: _____

Date Submitted to Broker: _____

Loss Adjuster: _____

Agreement of Loss Date and Value: _____