
Transnet Port Terminals

an Operating Division **TRANSNET SOC LTD**

[Registration Number 1990/000900/30]

REQUEST FOR PROPOSAL (RFP)

FOR THE DESIGN, SUPPLY, DELIVERY, INSTALLATION AND COMMISSIONING OF BBC PERIMETER FENCE FOR TRANSNET SOCLTD (REG.NO 1990/000900/30) OPERATING AS TRANSNET PORT TERMINALS (HEREINAFTER REFERRED TO AS "TPT") AT THE PORT OF DURBAN POINT CAR TERMINAL (MPT), AGRI-PORT TERMINAL AND MAYDON WHARF TERMINAL

RFP NUMBER	: ICLM HQ 641/TPT
ISSUE DATE	: 10 May 2024
CLOSING DATE	: 10 June 2024
CLOSING TIME	: 12h00pm
TENDER VALIDITY PERIOD	: 12 weeks from closing date

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TRANSNET PORT TERMINALS
TENDER NUMBER: ICLM HQ 641/TPT
DESCRIPTION OF THE WORKS: DESIGN, SUPPLY, DELIVERY, INSTALLATION AND COMMISSIONING OF BBC PERIMETER FENCE FOR TRANSNET SOCLTD (REG.NO 1990/000900/30) OPERATING AS TRANSNET PORT TERMINALS (HEREINAFTER REFERRED TO AS "TPT") AT THE PORT OF DURBAN POINT CAR TERMINAL (MPT), AGRI-PORT TERMINAL AND MAYDON WHARF TERMINAL.

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	DESIGN, SUPPLY, DELIVERY, INSTALLATION AND COMMISSIONING OF BBC PERIMETER FENCE FOR TRANSNET SOCLTD (REG.NO 1990/000900/30) OPERATING AS TRANSNET PORT TERMINALS (HEREINAFTER REFERRED TO AS "TPT") AT THE PORT OF DURBAN POINT CAR TERMINAL (MPT), AGRI-PORT TERMINAL AND MAYDON WHARF TERMINAL.
TENDER DOWNLOADING	This Tender may be downloaded directly from the National Treasury e-Tender Publication Portal at www.etenders.gov.za and the Transnet website at https://transnetetenders.azurewebsites.net (please use Google Chrome to access Transnet link) FREE OF CHARGE.

COMPULSORY TENDER CLARIFICATION MEETING	<p>A Compulsory Tender Clarification Meeting will be conducted at Durban Maydon Wharf and MPT Terminal on the 23rd of May, at 10:00am [10 O'clock] for a period of ± 6 (six) hours. [Tenderers to provide own transportation and accommodation].</p> <p>The Compulsory Tender Clarification Meeting will start punctually and information will not be repeated for the benefit of Tenderers arriving late.</p> <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.
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	<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 this 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>12:00pm on (10/06/2024)</p> <p>Tenderers must ensure that tenders are uploaded timeously onto the system. If a tender is late, it will not be accepted for consideration.</p>

2. TENDER SUBMISSION

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

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

Log on to the Transnet e-Tenders 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.

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- 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 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

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<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:	Kagiso Lande
	Address:	Transnet Port Terminals 202 Anton Lembede Durban 4001
	Tel No.	+27 31 308 8131
	E – mail	Kagiso.Lande@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:

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 - Eligibility in terms of the Construction Industry Development Board:

a) Only those tenderers who are registered with the CIDB, or are capable of being so prior to the evaluation of submissions, in a contractor grading designation equal to or higher than a contractor grading designation determined in accordance with the sum tendered or a value determined in accordance with Regulation 25 (1B) or 25(7A) of the Construction Industry Development Regulations, designation of **6SQ or 6CE 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:

1. every member of the joint venture is registered with the CIDB.
2. the lead partner has a contractor grading designation of not lower than one level below the required class of construction works under consideration and possesses the required recognition status; and
3. the combined Contractor grading designation calculated in accordance with the Construction Industry Development Regulations is equal to or higher than a contractor grading designation determined in accordance with the sum tendered for a **6SQ or 6CE** 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

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

Functionality criteria	Sub-criteria	Sub-criteria weight	Number of points Scored
	These Criteria must be read in conjunction with returnable T2.2-04. The tenderer shall indicate compliance by indicating YES/NO and attach evidence.		
	Tenderers are to list in this schedule compliance to the Eligibility Criteria for the Palisade Fencing & High Security Fence. For Evidence tenderer's are to submit proof in the form of either qualifications, specifications, drawings, data books, brochures, certificates, etc. Proof to be attached as part of this returnable. Failure to comply with eligibility criteria i.e., a "No" answer / response and No attachment will lead to disqualification.		
T2.2-04 Eligibility Criteria	The Civil / Structural and design Engineers must be professionally registered (Pr. Tech. Eng. or Pr. Eng.), for final sign off and provision of relevant compliance certifications (Attach ECSA registration certificate).	Yes/No	
	The Civil / Structural and design Engineers must have a minimum of 2 years' experience in design post registration (Attach CV and qualifications).	Yes/No	
	Tenderer to have CIDB rating of 6SQ or 6CE (Attach a copy of CIDB grading).	Yes/No	
	Corrosion protection guarantee/ warrantee on both high security fence and palisade fence > or = 7 years (Attach guarantee/ warrantee certificate or brochure from the manufacture).	Yes/No	

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

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.

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:

Identification details:

The tender documents must be uploaded with:

- Name of Tenderer: **(insert company name)**
- Contact person and details: **(insert details)**
- The Tender Number: ICLM HQ 641/TPT
- The Tender Description: DESIGN, SUPPLY, DELIVERY, INSTALLATION AND COMMISSIONING OF BBC PERIMETER FENCE FOR TRANSNET SOCLTD (REG.NO 1990/000900/30) OPERATING AS TRANSNET PORT TERMINALS (HEREINAFTER REFERRED TO AS "TPT") AT THE PORT OF DURBAN POINT CAR TERMINAL (MPT), AGRI-PORT TERMINAL AND MAYDON WHARF TERMINAL.

Documents must be marked for the attention of:

Employer's Agent: Kagiso Lande

Address: Transnet Port Terminals

**2nd Floor, 202 Anton Lembede Street,
Durban Central
Durban
4001**

Email: Kagiso.Lande@transnet.net

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: **12:00pm** on the **10 June 2024**

Location: The Transnet e-Tender Submission Portal:

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

NO LATE TENDERS WILL BE ACCEPTED

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

C.2.23 The tenderer is required to submit with his tender:

1. A valid Tax Clearance Certificate issued by the South African Revenue Services.

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 weight	Number of points Scored
	This Criteria must be read in conjunction with returnable T2.2-05. Tenderers should submit a complete and comprehensive Quality Plan that demonstrates the following: $\text{Points} = \frac{\text{Score}}{100} \times \text{Weight}$		
T2.2.05 Quality Management	Score	Weight	
	Project Quality Plan (PQP) based on quality assurance requirements specification (EEAM-Q-009 Quality Management System). Project Quality Plan which satisfies the technical and quality requirements of the works, identifying all procedures, reviews, audits, controls, and records used to control and verify compliance with the Works Information.	6	
	• No PQP submitted = 0		
	• PQP is too general with no project Specifics = 20		
	• PQP is project specific but inadequate to cover project scope = 40		
	• PQP shows adequate understanding of project quality requirements = 60		
	• PQP shows above average understanding of the project quality requirements = 80		
	• Project Quality Plan covers all and above the project quality requirements of the project scope = 100		
	Valid ISO 9001 certificate	4	
	• No ISO 9001 certificate or certificate has expired = 0		
	• ISO 9001 certificate submitted and valid = 100		
Sub Total for Quality Management			10
	This Criteria must be read in conjunction with returnable T2.2-06. The tenderer shall provide the proposed programme (Primavera or Ms. Project), at a minimum Level 3. $\text{Points} = \frac{\text{Score}}{100} \times \text{Weight}$		
T2.2-06 Programme	Score	Weight	
	Ability to execute the works in terms of the Employer's requirements and within the required timeframe indicating, in a logical sequence, the order and timing of the construction that will take place in order to Provide the Works clearly indicating the capacity & capability to achieve the dates stated in the Contract Data.		

	<ul style="list-style-type: none"> The tenderer has submitted no information = 0 	3		
	<ul style="list-style-type: none"> The programme is poor, and it will not satisfy project objectives or requirements. The tenderer has misunderstood the scope of Works and does not deal with the critical aspects of the overall programme = 20 			
	<ul style="list-style-type: none"> The programme is generic, not practical, and unrealistic, therefore is unlikely to satisfy project objectives or Employer's requirements. The tenderer has misunderstood certain aspects of the scope of the Works and does not deal with the critical aspects of the project. = 40 			
	<ul style="list-style-type: none"> The programme is project specific, practical, and realistic, therefore is likely to satisfy project objectives or Employer's requirements. The tenderer has understood certain aspects of the scope of the Works and is dealing with the critical aspects of the project. = 60. 			
	<ul style="list-style-type: none"> The programme addresses certain specific project objectives but does not adequately deal with all the critical characteristics of the project. The programme is complete and decomposed, as demonstrated in the project WBS which fully demonstrates the Provision of the Works and the Scope of Works and is in accordance with the Works Information. The programme is predictive in that it contains minor errors or omissions in critical path. The programme contains minor errors and omissions in logic (i.e., horizontal, and vertical traceability) The programme demonstrates the sequence, methodology and underlying approach to Provision of the Works and the Scope of Works, in line with the requirements of the Contract, as such adequately deals with some but not all the critical characteristics of overall project. = 80. 			
	<ul style="list-style-type: none"> The programme adequately addresses specific project objectives and critical aspects. The programme is complete and adequately decomposed, as demonstrated in the project WBS which fully demonstrates the Provision of the Works and the Scope of Works and is in accordance with the Works Information and /or encompasses project scope as detailed but not limited to the Scope of Works. The programme is adequately predictive in that it provides meaningful critical path(s) and forms an accurate/realistic model of project risk, the latter as demonstrated in activity duration estimates. The programme contains logic that is horizontally, vertically traceable as supported by realistic duration estimates. The programme adequately demonstrates the sequence, methodology, and underlying approach to Provision of the Works and the Scope of Works, in line 			

	with the requirements of the Works information as such adequately deals with the critical characteristics of overall project. = 100.			
	Dates when the Contractor will need access to any part of the Site, submission & approval process & timing for Health & Safety Files, inclusive of construction work permit, Environmental Files and Quality Files. In addition, the Programme must clearly demonstrate the procurement process for all long lead items if applicable. Moreover, the Programme must clearly demonstrate adequate provision for the process and timeframes associated with undertaking inductions, permits and medicals.			
	<ul style="list-style-type: none"> The tenderer has submitted no information = 0 The tenderer poorly addressed critical access requirements. The tenderer has not allowed timing for undertaking deliverables as stipulated within the Works Information. The tenderer has not allowed approval process and timing for Health & Safety, Environmental and Quality pre-requisites/requirements. The tenderer has not demonstrated provision for the process and timeframes associated with undertaking procurement processes, inductions, permits and medicals. = 20 			
	<ul style="list-style-type: none"> The tenderer has addressed some critical but not all access requirements. The tenderer has made an adequate allowance in timing for undertaking deliverables as stipulated within the Works Information. The tenderer has not made an adequate allowance for the approval process and timing for Health & Safety, Environmental and Quality pre-requisites/requirements. The tenderer has not adequately demonstrated provision for the process and timeframes associated with undertaking procurement processes, inductions. = 40 	3		
	<ul style="list-style-type: none"> The tenderer has addressed all access requirements. The tenderer has made an allowance in timing and scope for undertaking deliverables as stipulated within the Works Information and Employer's Scope of Works. The tenderer has made an allowance for the approval process, timing and scope for Health & Safety, Environmental and Quality pre-requisites/requirements. The tenderer has not demonstrated provision for the process and timeframes associated with undertaking procurement processes, inductions, permits and medicals. = 60 			
	<ul style="list-style-type: none"> The tenderer has addressed all access requirements. 			

	<ul style="list-style-type: none"> The tenderer has made an allowance in timing and scope for undertaking deliverables as stipulated within the Works Information and Employer's Scope of Works. The tenderer has made an allowance for the approval process, timing and scope for Health & Safety, Environmental and Quality pre-requisite/requirements. The tenderer has demonstrated provision for the process and timeframes associated with undertaking procurement processes, inductions, permits and medicals i.e., all items considered, and adequate timeframes allowed. = 80 		
	<ul style="list-style-type: none"> The tenderer has adequately addressed all access requirements. The tenderer has made an adequate allowance in timing and scope for undertaking deliverables as stipulated within the Works Information and Employer's Scope of Works. The tenderer has made an adequate allowance for the approval process, timing and scope for Health & Safety, Environmental and Quality pre-requisite/requirements. The tenderer has adequately demonstrated provision for the process and timeframes associated with undertaking procurement processes, inductions, permits and medicals i.e., all items considered, and adequate timeframes allowed. = 100 		
	<p>The Contractor indicates how he plans in achieving the following dates and clearly demonstrates them on the schedule - Starting Date, Planned Completion, Sectional Completion Dates & Completion Date. In addition, the Programme clearly demonstrates adequate provisions for Time Risk Allowance (TRA). Time Risk Allowances are not float, are owned by the Tenderer, can be included in the activity duration and illustrated in the schedule in a code field or as an attachment.</p>		
	<ul style="list-style-type: none"> The tenderer has submitted no information = 0 	3	
	<ul style="list-style-type: none"> The tenderer has poorly addressed some but not all date requirements and submission contain critical logic and sequencing errors which renders it unrealistic / unachievable. The tenderer has poorly demonstrated Time Risk Allowance (TRA). = 20 		
	<ul style="list-style-type: none"> The tenderer has addressed some but not all date requirements and submission contain critical logic and sequencing errors which renders it unrealistic / unachievable. The tenderer has demonstrated Time Risk Allowance (TRA). = 40 		
	<ul style="list-style-type: none"> The tenderer has addressed most date requirements correctly and submission contains logic and 		

	<ul style="list-style-type: none"> sequencing which is accurate and renders the submission realistic and achievable. The tenderer has demonstrated inadequate provision for Time Risk Allowance (TRA) i.e. TRA inadequate quantities, and not assigned to specific activities and/or critical components of the scope which are known to be subject to uncertainty. = 60 		
	<ul style="list-style-type: none"> The tenderer has addressed all date requirements correctly and submission contains logic and sequencing which is accurate and renders the submission realistic and achievable. The tenderer has demonstrated provision for Time Risk Allowance (TRA) i.e. TRA quantities, correctly assigned to specific activities and/or critical components of the scope which are known to be subject to uncertainty = 80 		
	<ul style="list-style-type: none"> The tenderer has adequately addressed all date requirements correctly and submission contains logic and sequencing which is accurate and renders the submission realistic and achievable. The tenderer has demonstrated adequately provision for Time Risk Allowance (TRA) i.e. TRA adequate quantities, correctly assigned to specific activities and/or critical components of the scope which are known to be subject to uncertainty = 100 		
	The Programme shall be aligned to the C3: Works Information and detailed at an appropriate level of decomposition to support the scope and associated duration estimates.		
	<ul style="list-style-type: none"> The tenderer has submitted no information = 0 Poor alignment between programme and the Works Information. = 20 Programme and some Works Information are relatively aligned but the level of decomposition of the programme is not appropriate to support the scope and associated duration estimates for the phase in question and the project overall. = 40 Programme and most Works Information are relatively aligned but the level of decomposition of the programme is appropriate to support the scope and associated duration estimates for the phase in question and the project overall. = 60 Programme and all Works Information are aligned and the level of decomposition of the programme is appropriate to support the scope and associated duration estimates for the phase in question and the project overall. = 80 Programme and all Works Information are adequately aligned and the level of decomposition of the programme is appropriate to support the scope and associated duration estimates for the phase in question and the project overall. = 100 	3	
	The Programme must clearly support and demonstrate alignment to the method statement		

	as contained in T2.2-08 Returnable. In addition, the programme needs to have a basis of a schedule not limited to assumptions, constraints, and approach to providing the Works and construction monitoring as detailed in the programme.			
	<ul style="list-style-type: none"> The tenderer has submitted no information = 0 	3		
	<ul style="list-style-type: none"> Poor alignment between programme and method statement. The Basis of the Schedule document contains poor detail, critical errors and omissions. As such it does not support the programme model. Poor alignment between Basis of Schedule documentation and the programme model. = 20 			
	<ul style="list-style-type: none"> Some critical errors and or omissions in alignment between programme and method statement. The Basis of the Schedule document contains inadequate detail, and critical errors exist. As such the Basis of Schedule does not fully support the programme model. Some critical errors in alignment between Basis of Schedule documentation and the programme model. = 40 			
	<ul style="list-style-type: none"> No critical errors and or omissions in alignment between programme and method statement. The Basis of Schedule document contains adequate detail, however critical aspects of the programme model are substantiated. No errors and or omissions exist in alignment of the Basis of Schedule document and the programme model. = 60 			
	<ul style="list-style-type: none"> Programme and method statement are aligned, and submission contains no critical errors or omissions. The Basis of the Schedule document contains adequate detail, no critical errors or omissions and as such fully supports the programme model. Basis of Schedule document and programme model are aligned. = 80 			
	<ul style="list-style-type: none"> Programme and method statement are adequately aligned, and submission contains no errors or omissions. The Basis of the Schedule document contains adequate details, no errors or omissions and as such fully supports the programme model. Basis of Schedule document and programme model are adequately aligned. = 100 			
	Sub Total for Programme			15
	This Criteria must be read in conjunction with returnable T2.2-07. Tenderers are required to demonstrate their experience, in the delivery of similar projects executed in the past seven years with a list indicating each project value and contact details of client reference.			
	<i>Score</i> <i>Points = 100 x Weight</i>			
	Score	Weight		

T2.2-07 Previous Experience	Previous Experience of Palisade Fencing and/or High Security Fence (refer to guidelines and definitions as Part C3) installation conducted by tenderer, or their partner / subcontractor, in the last 7 years. References to provide letter of reference, to be traceable and contactable to allow verification of track record provided. Adequate references to substantiate experience indicated (Client name and contact details, project description, duration, and contract value).	25		
	• No letter with client name, contact details, project description, duration, and contract value = 0			
	• Letter submitted with 3 client names, contact details, project description, duration, and contract value = 20			
	• Letter submitted with 4 client names, contact details, project description, duration, and contract value = 40			
	• Letter submitted with 5 client names, contact details, project description, duration, and contract value = 60			
	• Letter submitted with 6 client names, contact details, project description, duration, and contract value = 80			
	• Letter submitted with 7 client names, contact details, project description, duration, and contract value = 100			
Sub Total for Previous Experience				25
	This Criteria must be read in conjunction with returnable T2.2-08. The Tenderer must sufficiently demonstrate methodology that he/she will employ to cover the scope of the project in a method statement. <u>Score</u> Points = 100 x Weight			
T2.2.08 Method Statement	Score	Weight		
	Demolition Work, Fence Installation Work, Maintaining Security i.e. No section can be left open overnight, Control of Debris from the holes, House Keeping and keeping material safe and secured, Traffic Control and, Communication (All site requirements to be communicated the Project Manager)			
	• The tenderer has submitted no information or inadequate information to determine a score. = 0	15		
	• The methodology/approach and work alignment to project schedule is poorly presented, generic and not tailored to address the specific project objectives and methodology. = 20			
	• The methodology/approach is generic and not tailored to address the specific project objectives and methodology. The methodology approach does not adequately deal with the critical characteristics of the project. = 40			
	• Satisfactory response/solution to the aspect of the requirement and evidence given that the stated employer's requirements will be met. = 60			
	• The methodology/approach is specifically tailored to address the specific project objectives and methodology and is sufficiently flexible to			

	<p>accommodate changes that may occur during execution. The methodology/ approach to manage activities is specifically tailored to the critical characteristics of the project. = 80</p> <ul style="list-style-type: none"> Besides meeting the "80" rating, the important issues are approached in an innovative and efficient way, indicating that the tenderer has outstanding knowledge of state-of-the-art approaches. The methodology approach details ways to improve the project outcomes and the quality of the outputs. = 100 			
	Sub Total for Method Statement			15
	<p>This Criteria must be read in conjunction with returnable T2.2-09. The tender must be able to demonstrate that the project personnel have sufficient knowledge, experience, and qualifications to provide the required services.</p> <p><i>Score</i> $Points = \frac{Score}{100} \times Weight$</p>			
	Score	Weight		
T2.2.09 Management of CV's	CV with qualifications and experience for the Project Manager	1,5		
	General experience (total duration of construction activity) and positions held of each discipline specific team member.			
	<ul style="list-style-type: none"> No CVs submitted = 0 			
	<ul style="list-style-type: none"> Key staff do not have suitable levels of relevant experience. He/she has 3 or more years' experience. No clear indication of roles and responsibilities. = 20 			
	<ul style="list-style-type: none"> Key staff has limited recommended levels of relevant experience. He/she has 4 or more years' experience. Inadequate indication of roles and responsibilities and specific function. = 40 			
	<ul style="list-style-type: none"> Key staff have acceptable levels of relevant experience. He/she has more than 5 or more years' experience. Reasonable indication of roles and responsibilities and specific function. = 60 			
	<ul style="list-style-type: none"> Key staff have acceptable levels of relevant experience. He/she has 6 or more years' experience. Adequate indication of roles and responsibilities and specific function. = 80 			
	<ul style="list-style-type: none"> Key staff have acceptable levels of relevant experience and qualifications with 7 or more years' experience. Adequate indication of roles and responsibilities and specific function. = 100 			
	The education, training, and skills of the assigned staff in the specific sector, field, subject, etc. which is directly linked to the scope of work. Proof of education/ qualification and training must be attached to the C.V.			
	<ul style="list-style-type: none"> The Tenderer has submitted no information or inadequate information to determine a score. = 0 	1,5		
	<ul style="list-style-type: none"> Key staff does not have project specific education, skills, training, and experience. = 20 			

	<ul style="list-style-type: none"> Key staff has limited levels of project specific education, skills, training, and experience. = 40 			
	<ul style="list-style-type: none"> Key staff has adequate levels of project specific education, skills, training, and experience. = 60 			
	<ul style="list-style-type: none"> Key staff has extensive levels of project specific education, skills, training, and experience. = 80 			
	<ul style="list-style-type: none"> Key staff has outstanding levels of project specific education, skills, training, and experience. = 100 			
	The key staff members' / experts' knowledge must provide his/her experience with respect to the specific aspects of the project (Fence installation).			
	<ul style="list-style-type: none"> Key staff has no experience of issues pertinent to the project. = 0 	2		
	<ul style="list-style-type: none"> Key staff has limited knowledge of issues pertinent to the project. = 20 			
	<ul style="list-style-type: none"> Key staff has reasonable knowledge of issues pertinent to the project. = 40 			
	<ul style="list-style-type: none"> Key staff has extensive knowledge of issues pertinent to the project. = 60 			
	<ul style="list-style-type: none"> Key staff has outstanding knowledge of issues pertinent to the project. = 80 			
	<ul style="list-style-type: none"> Key staff has no experience of issues pertinent to the project. = 100 			
	CV with qualifications and experience for the Site Supervisor			
	General experience (total duration of construction activity) and positions held of each discipline specific team member.	1,5		
	<ul style="list-style-type: none"> No CVs submitted = 0 			
	<ul style="list-style-type: none"> Key staff do not have suitable levels of relevant experience. He/she has 3 or more years' experience. No clear indication of roles and responsibilities. = 20 			
	<ul style="list-style-type: none"> Key staff has limited recommended levels of relevant experience. He/she has 4 or more years' experience. Inadequate indication of roles and responsibilities and specific function. = 40 			
	<ul style="list-style-type: none"> Key staff have acceptable levels of relevant experience. He/she has more than 5 or more years' experience. Reasonable indication of roles and responsibilities and specific function. = 60 			
	<ul style="list-style-type: none"> Key staff have acceptable levels of relevant experience. He/she has 6 or more years' experience. Adequate indication of roles and responsibilities and specific function. = 80 			
	<ul style="list-style-type: none"> Key staff have acceptable levels of relevant experience and qualifications with 7 or more years' experience. Adequate indication of roles and responsibilities and specific function. = 100 			
	The education, training, and skills of the assigned staff in the specific sector, field, subject, etc. which is directly linked to the scope of work. Proof of education and training must be attached to the C.V.			

	<ul style="list-style-type: none"> The Tenderer has submitted no information or inadequate information to determine a score. = 0 	1,5		
	<ul style="list-style-type: none"> Key staff does not have project specific education, skills, training, and experience. = 20 			
	<ul style="list-style-type: none"> Key staff has limited levels of project specific education, skills, training, and experience. = 40 			
	<ul style="list-style-type: none"> Key staff has adequate levels of project specific education, skills, training, and experience. = 60 			
	<ul style="list-style-type: none"> Key staff has extensive levels of project specific education, skills, training, and experience. = 80 			
	<ul style="list-style-type: none"> Key staff has outstanding levels of project specific education, skills, training, and experience. = 100 			
	The key staff members' / experts' knowledge must provide his/her experience with respect to the specific aspects of the project (Fence installation).			
	<ul style="list-style-type: none"> Key staff has no experience of issues pertinent to the project. = 0 	2		
	<ul style="list-style-type: none"> Key staff has limited knowledge of issues pertinent to the project. = 20 			
	<ul style="list-style-type: none"> Key staff has reasonable knowledge of issues pertinent to the project. = 40 			
	<ul style="list-style-type: none"> Key staff has extensive knowledge of issues pertinent to the project. = 60 			
	<ul style="list-style-type: none"> Key staff has outstanding knowledge of issues pertinent to the project. = 80 			
	<ul style="list-style-type: none"> Key staff has no experience of issues pertinent to the project. = 100 			
	CV with qualifications and experience for the SHE Officer			
	General experience (total duration of construction activity) and positions held of each discipline specific team member.	1,5		
	<ul style="list-style-type: none"> No CVs submitted = 0 			
	<ul style="list-style-type: none"> Key staff do not have suitable levels of relevant experience. He/she has 3 or more years' experience. No clear indication of roles and responsibilities. = 20 			
	<ul style="list-style-type: none"> Key staff has limited recommended levels of relevant experience. He/she has 4 or more years' experience. Inadequate indication of roles and responsibilities and specific function. = 40 			
	<ul style="list-style-type: none"> Key staff have acceptable levels of relevant experience. He/she has more than 5 or more years' experience. Reasonable indication of roles and responsibilities and specific function. = 60 			
	<ul style="list-style-type: none"> Key staff have acceptable levels of relevant experience. He/she has 6 or more years' experience. Adequate indication of roles and responsibilities and specific function. = 80 			
	<ul style="list-style-type: none"> Key staff have acceptable levels of relevant experience and qualifications with 7 or more years' experience. Adequate indication of roles and responsibilities and specific function. = 100 			

	The education, training, and skills of the assigned staff in the specific sector, field, subject, etc. which is directly linked to the scope of work. Proof of education and training must be attached to the C.V.			
	• The Tenderer has submitted no information or inadequate information to determine a score. = 0	1,5		
	• Key staff does not have project specific education, skills, training, and experience. = 20			
	• Key staff has limited levels of project specific education, skills, training, and experience. = 40			
	• Key staff has adequate levels of project specific education, skills, training, and experience. = 60			
	• Key staff has extensive levels of project specific education, skills, training, and experience. = 80			
	• Key staff has outstanding levels of project specific education, skills, training, and experience. = 100			
	The key staff members' / experts' knowledge must provide his/her experience with respect to the specific aspects of the project (Fence installation).			
	• Key staff has no experience of issues pertinent to the project. = 0	2		
	• Key staff has limited knowledge of issues pertinent to the project. = 20			
	• Key staff has reasonable knowledge of issues pertinent to the project. = 40			
	• Key staff has extensive knowledge of issues pertinent to the project. = 60			
	• Key staff has outstanding knowledge of issues pertinent to the project. = 80			
	• Key staff has no experience of issues pertinent to the project. = 100			
	CV with qualifications and experience for the Construction Manager			
	General experience (total duration of construction activity) and positions held of each discipline specific team member.	1,5		
	• No CVs submitted = 0			
	• Key staff do not have suitable levels of relevant experience. He/she has 3 or more years' experience. No clear indication of roles and responsibilities. = 20			
	• Key staff has limited recommended levels of relevant experience. He/she has 4 or more years' experience. Inadequate indication of roles and responsibilities and specific function. = 40			
	• Key staff have acceptable levels of relevant experience. He/she has more than 5 or more years' experience. Reasonable indication of roles and responsibilities and specific function. = 60			
	• Key staff have acceptable levels of relevant experience. He/she has 6 or more years' experience. Adequate indication of roles and responsibilities and specific function. = 80			

	<ul style="list-style-type: none"> Key staff have acceptable levels of relevant experience and qualifications with 7 or more years' experience. Adequate indication of roles and responsibilities and specific function. = 100 			
	The education, training, and skills of the assigned staff in the specific sector, field, subject, etc. which is directly linked to the scope of work. Proof of education and training must be attached to the C.V.			
	<ul style="list-style-type: none"> The Tenderer has submitted no information or inadequate information to determine a score. = 0 	1,5		
	<ul style="list-style-type: none"> Key staff does not have project specific education, skills, training, and experience. = 20 			
	<ul style="list-style-type: none"> Key staff has limited levels of project specific education, skills, training, and experience. = 40 			
	<ul style="list-style-type: none"> Key staff has adequate levels of project specific education, skills, training, and experience. = 60 			
	<ul style="list-style-type: none"> Key staff has extensive levels of project specific education, skills, training, and experience. = 80 			
	<ul style="list-style-type: none"> Key staff has outstanding levels of project specific education, skills, training, and experience. = 100 			
	The key staff members' / experts' knowledge must provide his/her experience with respect to the specific aspects of the project (Fence installation)			
	<ul style="list-style-type: none"> Key staff has no experience of issues pertinent to the project. = 0 	2		
	<ul style="list-style-type: none"> Key staff has limited knowledge of issues pertinent to the project. = 20 			
	<ul style="list-style-type: none"> Key staff has reasonable knowledge of issues pertinent to the project. = 40 			
	<ul style="list-style-type: none"> Key staff has extensive knowledge of issues pertinent to the project. = 60 			
	<ul style="list-style-type: none"> Key staff has outstanding knowledge of issues pertinent to the project. = 80 			
	<ul style="list-style-type: none"> Key staff has no experience of issues pertinent to the project. = 100 			
	Sub Total for Experience and Qualifications			20
	This Criteria must be read in conjunction with returnable T2.2-10. The Tenderer must provide their Contract specific health and safety plan. $\text{Score} = \frac{\text{Points}}{100} \times \text{Weight}$			
T2.2.10 Health and Safety Plan	Score	Weight		
	Project Specific Safety Plan			
	<ul style="list-style-type: none"> The Tenderer has submitted no information or inadequate information to determine a score. = 0 	1,5		
	<ul style="list-style-type: none"> Information supplied is totally insignificant / inadequate to meet Employer's requirements = 20 			
	<ul style="list-style-type: none"> Health and Safety Plan submission unlikely to ensure compliance with stated Employer's Works Information = 40 			
	<ul style="list-style-type: none"> Health and Safety Plan submission possibly able to ensure compliance with stated Employer's Works Information. = 60 			

	<ul style="list-style-type: none"> Health and Safety Plan submission likely to ensure compliance with stated Employer's Works Information. = 80 			
	<ul style="list-style-type: none"> Health and Safety Plan submission most likely to ensure compliance with stated Employer's Works Information. = 100 			
	Policy (State points allocated)			
	<ul style="list-style-type: none"> The Tenderer has submitted no information or inadequate information to determine a score. = 0 	0,5		
	<ul style="list-style-type: none"> 1 of the 5 key policy components are recognized and meet the Employer's requirement. = 20 			
	<ul style="list-style-type: none"> 2 of the 5 key policy components are recognized and meet the Employer's requirement. = 40 			
	<ul style="list-style-type: none"> 3 of the 5 key policy components are recognized and meet the Employer's requirements. = 60 			
	<ul style="list-style-type: none"> 4 of the five key policy components are recognized and meets the Employer's requirements. = 80 			
	<ul style="list-style-type: none"> All 5 key policy components are recognized and meets the Employer's requirements = 100 			
	Roles & Responsibilities			
	<ul style="list-style-type: none"> The Tenderer has submitted no information or inadequate information to determine a score. = 0 	0,5		
	<ul style="list-style-type: none"> Roles and responsibilities do not meet the Occupational health and safety Act as per construction regulations and Transnet health and safety Specifications. = 20 			
	<ul style="list-style-type: none"> Roles and responsibilities are unlikely to ensure compliance as per the Works information and not in line with OHS Act and Transnet health and safety Specifications. = 60 			
	<ul style="list-style-type: none"> Satisfactory response on roles and responsibilities as per Employer's requirements. =80 			
	<ul style="list-style-type: none"> Roles and responsibilities are likely to ensure compliance as per Works Information, OHS Act and Transnet health and safety Specifications. = 100 			
	Training Matrix			
	<ul style="list-style-type: none"> The Tenderer has submitted no information or inadequate information to determine a score. = 0 	1		
	<ul style="list-style-type: none"> Key responsible persons are not included on training matrix as per proposed organogram structure. = 20 			
	<ul style="list-style-type: none"> 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 Specifications. Training matrix not signed by responsible personnel. = 40 			
	<ul style="list-style-type: none"> Satisfactory response on the list of job categories and trainings as per proposed project organogram structure. Training matrix covers most of the trainings listed on Transnet Health and safety Specifications. = 60 			
	<ul style="list-style-type: none"> Most of key persons listed on the training matrix as per proposed project organogram structure. Trainings 			

	specified on the matrix are in line with Transnet health and safety Specifications. = 80			
	<ul style="list-style-type: none"> Training matrix include Management and all employees /personnel in the project. Training matrix had been signed by responsible personnel. = 100 			
	Overview of the Baseline			
	<ul style="list-style-type: none"> The Tenderer has submitted no information or inadequate information to determine a score. = 0 	1,5		
	<ul style="list-style-type: none"> Information supplied is totally insignificant /inadequate to achieve the required standard of service. = 20 			
	<ul style="list-style-type: none"> Poor response/answer /solution lacks convincing evidence, medium risk that stated employer's requirements will not be met. = 60 			
	<ul style="list-style-type: none"> Satisfactory response/answer/solution to the particular aspect of the requirement, evidence given that the stated Employer's requirements will be met. = 80 			
	<ul style="list-style-type: none"> Good response/answer/solution which demonstrates real understanding and evidence of ability to meet stated Employer's requirements. = 100 			
	<ul style="list-style-type: none"> Very good response /answer/solution gives real confidence that the tenderer is most likely to ensure compliance with stated Employer's requirements. 			
	One year synopsis			
	<ul style="list-style-type: none"> The Tenderer has submitted no information or inadequate information to determine a score. = 0 	1		
	<ul style="list-style-type: none"> Information supplied is totally insignificant /inadequate to achieve the Employers Works information. = 20 			
	<ul style="list-style-type: none"> Poor response /answer/solution lacks convincing evidence, medium risk that stated Employer's requirements will not be met. = 40 			
	<ul style="list-style-type: none"> Satisfactory response /answer/solution to the particular aspect of the requirement, evidence given that the stated Employer's requirements will be met. = 60 			
	<ul style="list-style-type: none"> Good response /answer/solution which demonstrates real understanding and evidence of ability to meet stated Employer's requirements. = 80 			
	<ul style="list-style-type: none"> Very good response /answer/solution gives real confidence that the tenderer is most likely to ensure compliance with stated Employer's requirements. = 100 			
	Cost Breakdown Sheet			
	<ul style="list-style-type: none"> The Tenderer has submitted no information or inadequate information to determine a score. = 0 	1,5		
	<ul style="list-style-type: none"> Health and safety Budget submitted is totally insignificant /inadequate to achieve the required standard of service, 0, 1 to 1% allocated. = 20 			
	<ul style="list-style-type: none"> Health and safety Budget submitted is insignificant /inadequate /answer /solution to the returnable, 			

	Employer's health and safety requirements will not be met, 1 – 2% allocated. = 40			
	• Health and safety Budget submitted is Satisfactory response /answer/solution to the returnable, Employer's health and safety requirements will be met, 2 – 3% allocated. = 60			
	• Health and safety Budget submitted is Good response /answer/solution to the returnable, Employer's health and safety requirements will be met, 3 – 4% - above allocated. = 80			
	• 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. = 100			
	Sub Total for health and safety plan			7,5
	This Criteria must be read in conjunction with returnable T2.2-11. The tender must be able to demonstrate that the project personnel have sufficient knowledge, experience, and qualifications to provide the required services. <u>Score</u> Points = 100 x Weight			
T2.2.11 Environmental Management	Score	Weight		
	Environmental Policy			
	• Tenderer has not submitted the signed policy and cannot be rated. = 0	3,5		
	• Tenderer has provided a signed environmental policy and addressed one (1) key policy component. = 20			
	• Tenderer has provided a signed environmental policy and addressed two (2) key policy components. = 40			
	• Tenderer has provided a signed environmental policy and addressed three (3) key policy components. = 60			
	• Tenderer has provided a signed environmental policy and addressed four (4) key policy components. = 80			
	• Tenderer has provided a signed environmental policy and addressed all five (5) key policy components. = 100			
	Environmental method statements			
	• Tenderer has not submitted the required information/ cannot be rated. = 0	4		
	• Tenderer has provided generic method statements. = 20			
	• Four (4) of the environmental method statements listed above have been provided and the when, where, what, who and how is covered. = 40			
	• Six (6) of the environmental method statements listed above have been provided and the when, where, what, who and how is covered. = 60			
	• Ten (10) of the environmental method statements listed above have been provided and the when, where, what, who and how is covered. = 80			
	• All the environmental method statements listed above have been provided and the when, where, what, who and how is covered. = 100			

	Sub Total for Environmental Management		7,5
Maximum possible points for Functionality		100	100

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

- T2.2-03 Programme
- T2.2-04 Previous Experience
- T2.2-07 Quality Management
- T2.2-09 Environmental Management
- T2.2-05 Health and Safety Plan
- T2.2-06 Method Statement

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)) or 0, 40, 70, 90 or 100 (logarithmic scale, more suitable for NEC3, PSC or Supply Contract)..

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.

C3.11 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.

Or

Only tenders that are Administratively and Substantively Responsive will be evaluated (in case e is not applicable – Please delete this note) further in accordance with the 80/20 preference points systems as described in Preferential Procurement Regulations

(Please select the applicable statement and delete the other and delete this note) .

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 W1 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.

C3.13 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



TRANSNET PORT TERMINALS

TENDER NUMBER: ICLM HQ 641/TPT

DESCRIPTION OF THE WORKS: DESIGN, SUPPLY, DELIVERY, INSTALLATION AND COMMISSIONING OF BBC PERIMETER FENCE FOR TRANSNET SOCLTD (REG.NO 1990/000900/30) OPERATING AS TRANSNET PORT TERMINALS (HEREINAFTER REFERRED TO AS "TPT") AT THE PORT OF DURBAN POINT CAR TERMINAL (MPT), AGRI-PORT TERMINAL AND MAYDON WHARF TERMINAL.

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 Three as per CIDB: Eligibility Criteria Schedule** – Certificate of attendance at Compulsory Tender Clarification Meeting
- T2.2-02 **Stage Four as per CIDB: Eligibility Criteria Schedule** - CIDB Registration

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

- T2.2-03 **Evaluation Schedule:** Programme
- T2.2-04 **Evaluation Schedule:** Previous experience
- T2.2-05 **Evaluation Schedule:** Health and Safety Plan
- T2.2-06 **Evaluation Schedule:** Method Statement
- T2.2-07 **Evaluation Schedule:** Quality Management
- T2.2-08 **Evaluation Schedule:** Management and CV's
- T2.2-09 **Evaluation Schedule:** Environmental Management

2.1.3 Returnable Schedules:

General:

- T2.2-10 Authority to submit tender
- T2.2-11 Record of addenda to tender documents
- T2.2-12 Letter of Good Standing
- T2.2-13 Risk Elements
- T2.2-14 Availability of equipment and other resources
- T2.2-15 Site Establishment requirements
- T2.2-16 Capacity and ability to meet delivery schedule
- T2.2-17 Health and Safety Management Cost Breakdown
- T2.2-18 Health and Safety Management Questionnaire
- T2.2-19 Guarantees and Warrantees
- T2.2-20 Eligibility Criteria

Agreement and Commitment by Tenderer:

- T2.2-21 CIDB SFU ANNEX G 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

1.3.2 Bonds/Guarantees/Financial/Insurance:

- T2.2-28 Insurance provided by the Contractor
- T2.2-29 Form of Intent to provide a Performance Guarantee
- T2.2-30 Three (3) years audited financial statements
- T2.2-31 Protection of Personal Information Act (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 (Activity Schedule)

2.6 C2.2 Activity Schedule

2.7 C3 Scope of Works

2.8 C4 Site Instructions

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, for a **6SQ or 6CE 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 one level below the required grading designation in the class of construction works under consideration and possesses the required recognition status; and
3. the combined Contractor grading designation calculated in accordance with the Construction Industry Development Regulations is equal to or higher than a contractor grading designation determined in accordance with the sum tendered for a **6SQ or 6CE 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.



Perimeter Fencing at TPT, Durban Point, Agri-Port and Maydon Wharf Terminal	Programme	Tender Schedule: T2.2-03
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The Tenderer details the programme for evaluation and attaches it to this schedule. In addition, the Tenderer is to provide an electronic copy of the programme in **Primavera or Ms. Project**. The Tenderer's attention is drawn to core **clause 31.2 of the NEC3 Engineering and Construction contract** regarding the items to be shown on a programme.

The tenderer shall provide the proposed programme, at a minimum Level 3 showing but not limited to the following:

- Ability to execute the works in terms of the Employer's requirements and within the required timeframe indicating, in a logical sequence, the order and timing of the construction that will take place to Provide the Works clearly indicating the capacity & capability to achieve the dates stated in the Contract Data.
- Dates when the Contractor will need access to any part of the Site; submission & approval process and timing for Health & Safety Files, Environmental Files and Quality Files. In addition, the Programme must clearly demonstrate the procurement process for all long lead items if applicable and demonstrate adequate provision for timeframes of inductions, permits and medicals.
- The Contractor indicates how he plans in achieving the following dates and clearly demonstrates them on the schedule - Start Date, Access Date, Planned Completion, Key Dates/Sectional Completion Dates & Completion Date.
- In addition, the Programme must clearly demonstrate adequate provisions for Time Risk Allowance (TRA). Time Risk Allowances are not float, are owned by the Tenderer, can be included in the activity duration and illustrated in the schedule in a code field or as an attachment.
- The Programme must clearly support and demonstrate alignment to the Method Statement as contained in **T2.1 List of Returnables**. In addition, the programme needs to have a basis of a schedule not limited to assumptions, constraints and approach to providing the Works as detailed in the programme.
- Attachment of electronic copy and hard copy of the programme.

TRANSNET PORT TERMINALS

TENDER NUMBER: iCLM HQ 641/TPT

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The scoring of the Programme will be as follows:

	CORE				
	Ability to execute the works in terms of the Employer's requirements and within the required timeframe indicating, in a logical sequence, the order and timing of the construction that will take place in order to Provide the Works clearly indicating the capacity & capability to achieve the dates stated in the Contract Data.	Dates when the Contractor will need access to any part of the Site, submission & approval process & timing for Health & Safety Files, inclusive of construction work permit, Environmental Files and Quality Files. In addition, the Programme must clearly demonstrate the procurement process for all long lead items if applicable. Moreover, the Programme must clearly demonstrate adequate provision for the process and timeframes associated with undertaking inductions, permits and medicals.	The Contractor indicates how he plans in achieving the following dates and clearly demonstrates them on the schedule - Starting Date, Planned Completion, Sectional Completion Dates & Completion Date. In addition, the Programme clearly demonstrates adequate provisions for Time Risk Allowance (TRA). Time Risk Allowances are not float, are owned by the Tenderer, can be included in the activity duration and illustrated in the schedule in a code field or as an attachment.	The Programme shall be aligned to the C3: Works Information and detailed at an appropriate level of decomposition to support the scope and associated duration estimates.	The Programme must clearly support and demonstrate alignment to the method statement as contained in T2.2-08 List of Returnables. In addition, the programme needs to have a basis of a schedule not limited to assumptions, constraints and approach to providing the Works and construction monitoring as detailed in the programme.
Score	3	3	3	3	3
	<u>Score</u> $Points = \frac{Score}{100} \times Weight$				
0	<ul style="list-style-type: none"> The tenderer has submitted no information 	<ul style="list-style-type: none"> The tenderer has submitted no information 	<ul style="list-style-type: none"> The tenderer has submitted no information 	<ul style="list-style-type: none"> The tenderer has submitted no information 	<ul style="list-style-type: none"> The tenderer has submitted no information
20	<ul style="list-style-type: none"> The programme is poor, and it will not satisfy project objectives or requirements. The tenderer has misunderstood the scope of Works and does not deal with the critical aspects of the overall programme 	<ul style="list-style-type: none"> The tenderer poorly addressed critical access requirements. The tenderer has not allowed timing for undertaking deliverables as stipulated within the Works Information. The tenderer has not allowed approval process and timing 	<ul style="list-style-type: none"> The tenderer has poorly addressed some but not all date requirements and submission contain critical logic and sequencing errors which renders it unrealistic / unachievable. The tenderer has poorly demonstrated Time Risk Allowance (TRA). 	<ul style="list-style-type: none"> Poor alignment between programme and the Works Information. 	<ul style="list-style-type: none"> Poor alignment between programme and method statement. The Basis of the Schedule document contains poor detail, critical errors and omissions. As such it does not support the programme model. Poor alignment between

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		<p>for Health & Safety, Environmental and Quality pre-requisites/requirements.</p> <ul style="list-style-type: none"> The tenderer has not demonstrated provision for the process and timeframes associated with undertaking procurement processes, inductions, permits and medicals. 			Basis of Schedule documentation and the programme model.
40	<ul style="list-style-type: none"> The programme is generic, not practical, and unrealistic, therefore is unlikely to satisfy project objectives or Employer's requirements. The tenderer has misunderstood certain aspects of the scope of the Works and does not deal with the critical aspects of the project. 	<ul style="list-style-type: none"> The tenderer has addressed some critical but not all access requirements. The tenderer has made an adequate allowance in timing for undertaking deliverables as stipulated within the Works Information. The tenderer has not made an adequate allowance for the approval process and timing for Health & Safety, Environmental and Quality pre-requisites/requirements. The tenderer has not adequately demonstrated provision for the process and timeframes associated with undertaking procurement processes, inductions. 	<ul style="list-style-type: none"> The tenderer has addressed some but not all date requirements and submission contain critical logic and sequencing errors which renders it unrealistic / unachievable. The tenderer has demonstrated Time Risk Allowance (TRA). 	<ul style="list-style-type: none"> Programme and some Works Information are relatively aligned but the level of decomposition of the programme is not appropriate to support the scope and associated duration estimates for the phase in question and the project overall. 	<ul style="list-style-type: none"> Some critical errors and or omissions in alignment between programme and method statement. The Basis of the Schedule document contains inadequate detail, and critical errors exist. As such the Basis of Schedule does not fully support the programme model. Some critical errors in alignment between Basis of Schedule documentation and the programme model.
60	<ul style="list-style-type: none"> The programme is project specific, practical, and realistic, therefore is likely to satisfy project objectives or Employer's requirements. The tenderer has understood certain aspects of the scope of the Works and is dealing with the critical aspects of the 	<ul style="list-style-type: none"> The tenderer has addressed all access requirements. The tenderer has made an allowance in timing and scope for undertaking deliverables as stipulated within the Works Information and Employer's Scope of Works. 	<ul style="list-style-type: none"> The tenderer has addressed most date requirements correctly and submission contains logic and sequencing which is accurate and renders the submission realistic and achievable. The tenderer has demonstrated inadequate provision for Time Risk Allowance (TRA) i.e. TRA in 	<ul style="list-style-type: none"> Programme and most Works Information are relatively aligned but the level of decomposition of the programme is appropriate to support the scope and associated duration estimates for the phase in question and 	<ul style="list-style-type: none"> No critical errors and or omissions in alignment between programme and method statement. The Basis of Schedule document contains adequate detail, however critical aspects of the programme model are substantiated.

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	project.	<ul style="list-style-type: none"> The tenderer has made an allowance for the approval process, timing and scope for Health & Safety, Environmental and Quality pre-requisites/requirements. The tenderer has not demonstrated provision for the process and timeframes associated with undertaking procurement processes, inductions, permits and medicals. 	inadequate quantities, and not assigned to specific activities and/or critical components of the scope which are known to be subject to uncertainty.	the project overall.	<ul style="list-style-type: none"> No errors and or omissions exist in alignment of the Basis of Schedule document and the programme model.
80	<ul style="list-style-type: none"> The programme addresses certain specific project objectives but does not adequately deal with all the critical characteristics of the project. The programme is complete and decomposed, as demonstrated in the project WBS which fully demonstrates the Provision of the Works and the Scope of Works and is in accordance with the Works Information. The programme is predictive in that it contains minor errors or omissions in critical path. The programme contains minor errors and omissions in logic (i.e., horizontal, and vertical traceability) The programme demonstrates the sequence, methodology and underlying approach to Provision of the Works and the Scope of Works, in line with the requirements of the Contract, 	<ul style="list-style-type: none"> The tenderer has addressed all access requirements. The tenderer has made an allowance in timing and scope for undertaking deliverables as stipulated within the Works Information and Employer's Scope of Works. The tenderer has made an allowance for the approval process, timing and scope for Health & Safety, Environmental and Quality pre-requisite/requirements. The tenderer has demonstrated provision for the process and timeframes associated with undertaking procurement processes, inductions, permits and medicals i.e., all items considered, and adequate timeframes allowed. 	<ul style="list-style-type: none"> The tenderer has addressed all date requirements correctly and submission contains logic and sequencing which is accurate and renders the submission realistic and achievable. The tenderer has demonstrated provision for Time Risk Allowance (TRA) i.e. TRA quantities, correctly assigned to specific activities and/or critical components of the scope which are known to be subject to uncertainty 	<ul style="list-style-type: none"> Programme and all Works Information are aligned and the level of decomposition of the programme is appropriate to support the scope and associated duration estimates for the phase in question and the project overall. 	<ul style="list-style-type: none"> Programme and method statement are aligned, and submission contains no critical errors or omissions. The Basis of the Schedule document contains adequate detail, no critical errors or omissions and as such fully supports the programme model. Basis of Schedule document and programme model are aligned.

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	as such adequately deals with some but not all the critical characteristics of overall project.				
100	<ul style="list-style-type: none"> The programme adequately addresses specific project objectives and critical aspects. The programme is complete and adequately decomposed, as demonstrated in the project WBS which fully demonstrates the Provision of the Works and the Scope of Works and is in accordance with the Works Information and /or encompasses project scope as detailed but not limited to the Scope of Works. The programme is adequately predictive in that it provides meaningful critical path(s) and forms an accurate/realistic model of project risk, the latter as demonstrated in activity duration estimates. The programme contains logic that is horizontally, vertically traceable as supported by realistic duration estimates. The programme adequately demonstrates the sequence, methodology, and underlying approach to Provision of the Works and the Scope of Works, in line with the requirements of the Works information as such adequately deals with the critical characteristics of overall project. = 100. 	<ul style="list-style-type: none"> The tenderer has adequately addressed all access requirements. The tenderer has made an adequate allowance in timing and scope for undertaking deliverables as stipulated within the Works Information and Employer's Scope of Works. The tenderer has made an adequate allowance for the approval process, timing and scope for Health & Safety, Environmental and Quality pre-requisite/requirements. The tenderer has adequately demonstrated provision for the process and timeframes associated with undertaking procurement processes, inductions, permits and medicals i.e., all items considered, and adequate timeframes allowed. 	<ul style="list-style-type: none"> The tenderer has adequately addressed all date requirements correctly and submission contains logic and sequencing which is accurate and renders the submission realistic and achievable. The tenderer has demonstrated adequately provision for Time Risk Allowance (TRA) i.e. TRA adequate quantities, correctly assigned to specific activities and/or critical components of the scope which are known to be subject to uncertainty 	<ul style="list-style-type: none"> Programme and all Works Information are adequately aligned and the level of decomposition of the programme is appropriate to support the scope and associated duration estimates for the phase in question and the project overall. 	<ul style="list-style-type: none"> Programme and method statement are adequately aligned, and submission contains no errors or omissions. The Basis of the Schedule document contains adequate details, no errors or omissions and as such fully supports the programme model. Basis of Schedule document and programme model are adequately aligned.

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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	

TRANSNET PORT TERMINALS

TENDER NUMBER: iCLM HQ 641/TPT

DESCRIPTION OF THE WORKS: DESIGN, SUPPLY, DELIVERY, INSTALLATION AND COMMISSIONING OF BBC PERIMETER FENCE FOR TRANSNET SOC LTD (REG.NO 1990/000900/30) OPERATING AS TRANSNET PORT TERMINALS (HEREINAFTER REFERRED TO AS "TPT") AT THE PORT OF DURBAN POINT CAR TERMINAL (MPT), AGRI-PORT TERMINAL AND MAYDON WHARF TERMINAL



TRANSNET PORT TERMINALS

TENDER NUMBER: iCLM HQ 641/TPT

DESCRIPTION OF THE WORKS: THE SUPPLY, DELIVERY, INSTALLATION AND COMMISSIONING OF BBC PERIMETER FENCE FOR TRANSNET SOC LTD (REG.NO 1990/000900/30) OPERATING AS TRANSNET PORT TERMINALS (HEREINAFTER REFERRED TO AS "TPT") AT THE PORT OF DURBAN POINT CAR TERMINAL (MPT), AGRI-PORT TERMINAL AND MAYDON WHARF TERMINAL



Perimeter Fencing at TPT, Durban Point, Agri-Port and Maydon Wharf Terminal	Previous Experience	Tender Schedule: T2.2-04
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Tenderers are required to demonstrate performance in comparable projects of similar size and nature by supplying the following:

1. A list of past / current comparable projects.
2. Construction of similar works as detailed in the Works Information with reference to:
 - Previous Experience of Palisade Fencing and/or High Security Fence installation conducted by tenderer, or their partner / subcontractor, in the last 7 years. References to provide letter of reference, to be traceable and contactable to allow verification of track record provided.
 - Sufficient references to substantiate experience indicated (Client name and contact details, project description, duration, and contract value)
 - Submit a signed reference letter with a customer letter head.
3. **Note:** Bidders are to complete all the details in the reference table for it to be considered for evaluation.

#	Name of Previous Customer	Contact Details	Nature of Fencing	Value	Year and duration
1.					
2.					
3.					
4.					
5.					

TRANSNET PORT TERMINALS

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DESCRIPTION OF THE WORKS: THE SUPPLY, DELIVERY, INSTALLATION AND COMMISSIONING OF BBC PERIMETER FENCE FOR TRANSNET SOC LTD (REG.NO 1990/000900/30) OPERATING AS TRANSNET PORT TERMINALS (HEREINAFTER REFERRED TO AS "TPT") AT THE PORT OF DURBAN POINT CAR TERMINAL (MPT), AGRI-PORT TERMINAL AND MAYDON WHARF TERMINAL



The scoring of the Previous Experience will be as follows:

	CORE
	<ol style="list-style-type: none"> 1. A list of past / current comparable projects. 2. Construction of similar works as detailed in the Works Information with reference to: <ul style="list-style-type: none"> • Previous Experience of Palisade Fencing and/or High Security Fence installation conducted by tenderer, or their partner / subcontractor, in the last 5 years. References to provide letter of reference, to be traceable and contactable to allow verification of track record provided. • Sufficient references to substantiate experience indicated (Client name and contact details, project description, duration, and contract value)
Score	25
	$Points = \frac{Score}{100} \times \text{Weight}$
0	The Tenderer failed to address the question / issue. Has not submitted the required information. The tenderer lacks convincing evidence of knowledge of previous experience, specific to the works.
20	The Tenderer's previous experience presented has no relevance to the scope of this project and did not address any of the required categories. Tenderers generally have experience in three (3) projects relating to the scope of works. The tenderer has limited or poor evidence of previous experience.
40	The Tenderer's previous experience presented has some relevance to the project but lacks detail i.e. Description of previous projects, value and references. Tenderers generally have experience in four (4) projects relating to scope of works.
60	The Tenderer's previous experience presented demonstrates sufficient knowledge and experience to successfully execute this project scope. Tenderers generally have experience in five (5) projects relating to the scope of works. The tenderer has reasonable and relevant previous experience to the requirements of the works.
80	The Tenderer's previous experience presented demonstrates a real understanding and substantial evidence of the ability meet the stated project requirements. Tenderers generally have experience in six (6) projects relating to the scope of works. The tenderer has extensive previous experience in relation to the works.
100	The Tenderer's previous experience presented demonstrates real confidence extensive understanding in all the categories as required. Tenderers generally have experience in seven (7) or more than seven (7) projects relating to the scope of works. The tenderer has comprehensive previous experience in projects of a similar nature.

Signed	Date
Name	Position
Tenderer	

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Perimeter Fencing at TPT, Durban Point, Agri-Port and Maydon Wharf Terminal	Health and Safety Management	Tender Schedule: T2.2-05
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Submit the following documents as a minimum with your tender:

1. The Tenderer must provide their Contract specific health and safety plan.
2. Safety, Health & Environmental Policy signed by the Chief Executive Officer. List the five elements.
 - Commitment to Safety, prevention of pollution,
 - Continual improvement,
 - Compliance to legal requirements, appropriate to the nature of contractor's activities,
 - Hold management accountable for development of the safety systems.
 - Include objectives and targets.
3. Roles & Responsibilities, such as S16.2 CEO, CR8.1 Construction manager, CR8.2 Assistant Construction manager, CR8.5 Safety officer, CR8.7 Construction Supervisor – Civils, Construction and Electrical, CR8.8 Construction assistant supervisor, CR9.1 Risk Assessor, 17.1 SHE Reps, etc. as per the Occupational health and safety Act 85 of 1993
4. 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 highlight training planned dates.
5. Overview of the project specific Baseline Risk Assessment (RA), indicating major activities of the project namely: **General building work excavations and removal and erection of the fencing**
6. One year synopsis of SHE incidents, description, type and action taken to prevent re-occurrence.
7. Complete and return with tender documentation the Contractor Safety Questionnaire included to this Evaluation Schedule as a returnable.
8. Evidence that the Principal Contractor have made adequate provisions for the cost of Health & Safety "Bill of quantities": CR 3(5) (b)(iii) read with CR 5(1)(g)

The scoring of the Tender's Health and Safety criteria is as follows:

	Project Specific Safety Plan	Policy (State points allocated)	Roles & Responsibilities	Training Matrix	Overview of the Baseline	One year synopsis	Safety Questionnaire	Cost Breakdown Sheet
	Documented Health and Safety Plan in accordance with Transnet Project Health and Safety Specifications.	<ol style="list-style-type: none"> 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. 	S16.2 CEO, 8.1 Construction manager, 8.2 Assistant Construction manager, 8.5 Safety officer Registered with the SACPCMP, 8.7 Construction Supervisor, 8.8 Construction assistant supervisor, 9.1 Risk Assessor, 17.1 SHE Reps, etc. as per the Occupational health and safety Act 85 of 1993	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 highlight training planned dates.	Indicating major activities of the project namely: General building work excavations and removal and erection of the fencing	SHE incidents, description, type and action taken to prevent re-occurrence.	Complete and return with tender documentation the Contractor with required supporting documentation included as an Annexure.	Submission of completed cost breakdown sheet.
Score	1,5	0,5	0,5	1	1,5	1		1,5
0	The Tenderer has submitted no information or inadequate information to determine a score.							



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20	Information supplied is totally insignificant / inadequate to meet Employer's requirements	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 regulations and Transnet health and safety Specifications.	Key responsible persons are not included on training matrix as per proposed organogram structure.	Information supplied is totally insignificant /inadequate to achieve the required standard of service.	Information supplied is totally insignificant /inadequate to achieve the Employers Works information.	Information supplied is totally insignificant /inadequate to achieve the required standard of service.	Health and safety Budget submitted is totally insignificant /inadequate to achieve the required standard of service, 0, 1 to 1% allocated.
40	Health and Safety Plan submission unlikely to ensure compliance with stated Employer's Works Information	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 Transnet health and safety Specifications.	Not all key responsible persons are included in the training matrix. Trainings matrix submitted does not cover all SHE training listed on Health and Safety Specifications. 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.	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, Employer's health and safety requirements will not be met, 1 – 2% allocated.
60	Health and Safety Plan submission possibly able to ensure compliance with stated Employer's	3 of the 5 key policy components are recognized and meet the <i>Employer's</i> requirements.	Satisfactory response on roles and responsibilities as per Employer's requirements.	Satisfactory response on the list of job categories and trainings as per proposed project organogram structure.	Satisfactory response/answer /solution to the particular aspect of the requirement, evidence given that the stated <i>Employer's</i>	Satisfactory response /answer/solution to the particular aspect of the requirement, evidence given that the stated <i>Employer's</i>	Satisfactory response /answer/solution to the particular aspect of the requirement, evidence given that the stated	Health and safety Budget submitted is Satisfactory response /answer/solution to the returnable, Employer's health and safety requirements will



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	Works Information.			Training matrix covers most of the trainings listed on Transnet Health and safety Specifications.	requirements will be met.	requirements will be met.	<i>Employer's</i> requirements will be met.	be met, 2 – 3% allocated.
80	Health and Safety Plan submission likely to ensure compliance with stated Employer's Works Information.	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 Transnet health and safety Specifications.	Most of key persons listed on the training matrix as per proposed project organogram structure. Trainings specified on the matrix are in line with Transnet health and safety Specifications.	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.	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 – 4% - above allocated.
100	Health and Safety Plan submission most likely to ensure compliance with stated Employer's Works Information.	All 5 key policy components are recognized and meets the <i>Employer's</i> requirements	Roles and Responsibilities are most likely to ensure compliance as per requirements of OHS Act and Transnet Health and Safety Specifications.	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.	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.

DESCRIPTION OF THE WORKS: DESIGN, SUPPLY, DELIVERY, INSTALLATION AND COMMISSIONING OF BBC PERIMETER FENCE FOR TRANSNET SOC LTD (REG.NO1990/000900/30) OPERATING AS TRANSNET PORT TERMINALS (HEREINAFTER REFERRED TO AS "TPT") AT THE PORT OF DURBAN POINT CAR TERMINAL (MPT), AGRI-PORT TERMINAL AND MAYDON WHARF TERMINAL

[illegible]

Signed	Date
Name	Position
Tenderer	



TRANSNET PORT TERMINALS TENDER

NUMBER: iCLM HQ 641/TPT

DESCRIPTION OF THE WORKS: DESIGN, SUPPLY, DELIVERY, INSTALLATION AND COMMISSIONING OF BBC PERIMETER FENCE FOR TRANSNET SOC LTD (REG.NO 1990/000900/30) OPERATING AS TRANSNET PORT TERMINALS (HEREINAFTER REFERRED TO AS "TPT") AT THE PORT OF DURBAN POINT CAR TERMINAL (MPT), AGRI-PORT TERMINAL AND MAYDON WHARF TERMINAL

Perimeter Fencing at TPT, Durban Point, Agri-Port and Maydon Wharf Terminal	Method Statement	Tender Schedule: T2.2-06
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The tenderers must sufficiently demonstrate the approach/methodology that will be employed to cover the scope of the project.

- Demolition Work and disposal,
- Fence Installation Work,
- Maintaining Security i.e. No section can be left open overnight,
- House Keeping and keeping material safe and secured, Control of Debris from the holes,
- Traffic Control and,
- Communication (All site requirements to be communicated the Project Manager)

In addition to general methodology for the project, the tenderer must demonstrate the following aspects but not limited to:

- Order and timing of the audits, inspection and design milestones that will take place to provide the Works.
- Indication of how the above will be achieved in terms of the associated policies and procedures, and relevant specification described in the tender.

Please note: Tenderers are required to provide detailed method statements for the categories as listed above.

The table below will be used as guidelines for scoring / evaluating the method statement submitted by the Tenderer:

CORE		
	<ul style="list-style-type: none"> Demolition Work, Fence Installation Work, Maintaining Security i.e. No section can be left open overnight, Control of Debris from the holes, House Keeping and keeping material safe and secured, Traffic Control and, Communication (All site requirements to be communicated the Project Manager) 	<ul style="list-style-type: none"> Order and timing of the audits, inspection and design milestones that will take place in order to provide the Works. Indication of how the above will be achieved in terms of the associated policies and procedures, and relevant specification described in the tender.
Score	10	5
	$\text{Points} = \frac{\text{Score}}{100} \times \text{Weight}$	—
0	The tenderer has submitted no information or inadequate information to determine a score.	
20	The methodology/approach and work alignment to project schedule is poorly presented, generic and not tailored to address the specific project objectives and methodology.	
40	The methodology/approach is generic and not tailored to address the specific project objectives and methodology. The methodology approach does not adequately deal with the critical characteristics of the project.	
60	Satisfactory response/solution to the aspect of the requirement and evidence given that the stated employer's requirements will be met.	
80	The methodology/approach is specifically tailored to address the specific project objectives and methodology and is sufficiently flexible to accommodate changes that may occur during execution. The methodology/ approach to manage activities is specifically tailored to the critical characteristics of the project.	
100	Besides meeting the "80" rating, the important issues are approached in an innovative and efficient way, indicating that the tenderer has outstanding knowledge of state-of-the-art approaches. The methodology approach details ways to improve the project outcomes and the quality of the outputs.	

Signed	Date
Name	Position
Tenderer	



Perimeter Fencing at TPT, Durban Point, Agri-Port and Maydon Wharf Terminal	Quality Management	Tender Schedule: T2.2-07
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1. The tenderer is to provide quality management plan and quality control plan based on employers' quality assurance requirements specification (EEAM-Q-009 Quality Management System).
2. As a minimum, the Supplier/Contractor shall submit its Quality System documentation to TPT at the time of tender and at Contract Phases as detailed below:
 - Data book Index/List of Procedures/Method statement to be used
 - Qualification and experience of Quality personnel
 - Project specific Quality Control Plan
 - Quality requirements of the works, identifying all procedures, reviews, audits, controls, and records used to control and verify compliance with the Works Information.
3. The tenderer shall as a minimum submit a valid ISO 9001 certification.
4. The Supplier/Contractor shall have, maintain, and demonstrate its use to TPT, its documented Quality Management System. The Supplier/Contractors Quality Management System should be in accordance with the International Standard ISO 9001.

Attached submissions to this schedule:

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TRANSNET PORT TERMINALS

TENDER NUMBER: iCLM HQ 641/TPT

DESCRIPTION OF THE WORKS: DESIGN SUPPLY, DELIVERY, INSTALLATION AND COMMISSIONING OF BBC PERIMETER FENCE FOR TRANSNET SOC LTD (REG.NO 1990/000900/30) OPERATING AS TRANSNET PORT TERMINALS (HEREINAFTER REFERRED TO AS "TPT") AT THE PORT OF DURBAN POINT CAR TERMINAL (MPT) AND MAYDON WHARF

The scoring will be as follows:

CORE		
	Project Quality Plan based on EEAM-Q-009 Quality Management System	Valid ISO 9001 Certificate
Score	6	4
	Formulae: $Points = \frac{Score}{100} \times Weight$	
0	No Project Quality Plan submitted.	No ISO 9001 certificate/ certificate has expired
20	Project Quality Plan is too general with no project Specifics.	N/A
40	Project Quality Plan is project specific but inadequate to cover project scope.	N/A
60	Project Quality Plan shows adequate understanding of project quality requirements.	N/A
80	Project Quality Plan shows above average understanding of the project quality requirements.	N/A
100	Project Quality Plan covers all and above the project quality requirements of the project scope.	ISO 9001 certificate submitted and valid.

Signed	Date
Name	Position
Tenderer	

Perimeter Fencing at TPT, Durban Point, Agri-Port and Maydon Wharf Terminal	Management of CVs for Key Persons	Tender Schedule: T2.2-08
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Tenderers are required to submit comprehensive CVs for their *key persons* as requested below.

1. The experience of assigned *key persons* in relation to the scope of work will be evaluated from three different points of view below:
 - a) General experience (total duration of construction activity) and positions held of each discipline specific team member.
 - b) The education, training, and skills of the assigned staff in the specific sector, field, subject, etc. which is directly linked to the scope of work. Proof of education and training must be attached to the C.V.
 - c) The key staff members' / experts' knowledge must provide his/her experience with respect to the specific aspects of the project (Fence installation).
2. Comprehensive CVs should be attached to this schedule, as a minimum each CV should address the following, but not limited to;
 - a) Personal particulars
 - Name
 - Date and place of birth.
 - Place (s) of tertiary education and dates associated therewith.
 - Professional awards
 - b) Attach proof of qualifications (degrees, diplomas, grades of membership of professional societies and professional registrations)
 - c) Skills
 - d) Name of current employer and position in enterprise
 - e) Overview of postgraduate / diploma experience (year, organization, and position)
 - f) Outline of recent assignments / experience that has a bearing on the scope of work.
3. CVs for people proposed for all identified posts including:
 - a) Project Manager**
 - The Project Manager must have a national diploma qualification in Built Environment, national diploma in Project Management and at least 5 years post qualification experience managing construction projects.
 - The Project Manager should further provide evidence in working with the NEC suit of contracts and must have experience working in similar projects.
 - b) Site Supervisor (building and civil infrastructure)**
 - The General Foreman must have a minimum of NTC 3/Grade 12 with at least 5 years of experience in building services and civil /building construction.
 - c) SHE Officer**
 - SHE Officer must have a minimum and completed SAMTRAC/NEBOSH or MSRM (Modern SHEQ Risk Management Qualification course) in safety management, registered with SACPCMP as CHSO (Construction Health and Safety Officer) and a minimum of 5 years'

experience as a SHE Officer within the civil/ structural and/ or construction projects. Proof of environmental training must be attached to the C.V. and experience in environmental management to be included in the C.V.

d) Construction Manager/Site Agent

- The Construction Manager must have a minimum qualification of a Diploma in Civil Engineering and at least 5 years of experience in building construction projects. The Construction Manager must have experience working with the NEC suit of contracts and must have experience working in similar projects. (Fencing, demolitions, and civil works).
4. No sharing of key personnel roles will be permitted in this project.
 5. Details of experience for proposed staff working in similar projects in terms of nature, complexity, and value.
 6. An explanation of how you propose to allocate adequate resources to enable you to comply with the requirements and prohibitions imposed on you by or under the statutory provisions relating to health and safety.
 7. Details of experience for proposed staff in respect to NEC3 Engineering and Construction Contract Option chosen for this contract. If staff experience is limited, an indication of relevant training that they have attended would be helpful.

The following table is to be populated by the tenderer identifying the resources for the key roles on the project.

Key Person Role	Name of Resource

TRANSNET PORT TERMINALS

TENDER NUMBER: ICLM HQ 641/TPT

DESCRIPTION OF THE WORKS: DESIGN, SUPPLY, DELIVERY, INSTALLATION AND COMMISSIONING OF BBC PERIMETER FENCE FOR TRANSNET SOC LTD (REG.NO1990/000900/30) OPERATING AS TRANSNET PORT TERMINALS (HEREINAFTER REFERRED TO AS "TPT") AT THE PORT OF DURBAN POINT CAR TERMINAL (MPT), AGRI-PORT TERMINAL AND MAYDON WHARF TERMINAL



Attached submissions to this schedule:

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The scoring of the Management & CV's of Key Persons will be as follows:

CORE			
	Education, training, and skills Adequacy for the following: <ul style="list-style-type: none"> • Project Management • Site Supervisory • SHE Officer • Construction Management 	General experience for the following: <ul style="list-style-type: none"> • Project Management • Site Supervisory • SHE Officer • Construction Management 	The key staff members' / experts' knowledge must provide his/her experience with respect to the specific aspects of the project (Fence installation). <ul style="list-style-type: none"> • Project Management • Site Supervisory • SHE Officer • Construction Management
Score	5	5	10
	Formulae: $Points = \frac{Score}{100} \times Weight$		
0	No CVs submitted		
20	Key staffs do not have suitable levels of relevant experience and qualifications or equivalent specialised training. Inadequate organisation chart. No clear indication of roles and responsibilities and specific function of each team member		
40	Key staff has limited recommended levels of relevant experience and qualifications. Key staff has 1 to 3 years' experience. Inadequate indication of roles and responsibilities and specific function of each team member.		
60	Key staff have acceptable levels of relevant experience and qualifications. Key staff has more than 3 years but up to 5 years' experience. Organisation chart showing reasonable indication of roles and responsibilities and specific function of each team member.		
80	Key staff have acceptable levels of relevant experience and qualifications. Key staff has more than 5 years but up to 7 years' experience. Organisation chart showing adequate indication of roles and responsibilities and specific function of each team member.		
100	All Key staff have acceptable levels of relevant experience and qualifications with more than 7 years' experience. Organisation chart showing more than adequate indication of roles and responsibilities and specific function of each team member.		

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			



Perimeter Fencing at TPT, Durban Point, Agri-Port and Maydon Wharf Terminal	Environmental Management	Tender Schedule: T2.2-09
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The Tenderer must review the following documents for context to meet the environmental requirements, namely:

1. Transnet SOC Limited – Transnet Integrated Management System (TIMS) Policy Commitment Statement
2. Project Environmental Specification (PES) which comprises of the following as a minimum:
 - a. Standard Operating Procedure for Construction Environmental Management (009_CLO_SUS_11386)
 - b. Contractor Environmental and Sustainable Specifications (TRN_IMS_GRP_GDL_014.4)
3. The tenderer must provide an environmental policy signed by Top Management which, as a minimum:
 - a. Is appropriate given the purpose and context of the tenderer's business.
 - b. Includes a commitment to fulfil the tenderer's environmental compliance (legal) obligations.
 - c. Includes a commitment to the protection of the environment, including prevention of pollution.
 - d. Provides framework for setting environmental objectives; and
 - e. Includes a commitment to continual improvement of their EMS.
4. The tenderer must provide environmental method statements which describe relevant roles and responsibilities; the when, where, what, who and how the Tenderer intends to manage and mitigate potential environmental impacts including the monitoring and recording. These include, but are not limited to, the following where applicable:
 - a. Site establishment and demarcation
 - b. Hazardous and non-hazardous waste management
 - c. Handling, Storage and Management of Hazardous Substances
 - d. Contaminated water management
 - e. Prevention of marine pollution
 - f. Hydrocarbon spills
 - g. Dust control
 - h. Noise and vibration control
 - i. Environmental awareness training
 - j. Emergency procedures for environmental incident
 - k. Rehabilitation



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

	1. Environmental Policy	2. Environmental method statements
Points	3,5	4
	Formulae: $Points = \frac{Score}{100} \times Weight$	
0	Tenderer has not submitted the signed policy and cannot be rated.	Tenderer has not submitted the required information/ cannot be rated.
20	Tenderer has provided a signed environmental policy and addressed one (1) key policy component.	Tenderer has provided generic method statements.
40	Tenderer has provided a signed environmental policy and addressed two (2) key policy components.	Four (4) of the environmental method statements listed above have been provided and the when, where, what, who and how is covered.
60	Tenderer has provided a signed environmental policy and addressed three (3) key policy components.	Six (6) of the environmental method statements listed above have been provided and the when, where, what, who and how is covered.
80	Tenderer has provided a signed environmental policy and addressed four (4) key policy components.	Ten (10) of the environmental method statements listed above have been provided and the when, where, what, who and how is covered.
100	Tenderer has provided a signed environmental policy and addressed all five (5) key policy components.	All the environmental method statements listed above have been provided and the when, where, what, who and how is 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			

TRANSNET PORT TERMINALS

TENDER NUMBER: ICLM HQ 641/TPT

DESCRIPTION OF THE WORKS: DESIGN, SUPPLY, DELIVERY, INSTALLATION AND COMMISSIONING OF BBC PERIMETER FENCE FOR TRANSNET SOC LTD (REG.NO1990/000900/30) OPERATING AS TRANSNET PORT TERMINALS (HEREINAFTER REFERRED TO AS "TPT") AT THE PORT OF DURBAN POINT CAR TERMINAL (MPT), AGRI-PORT TERMINAL AND MAYDON WHARF TERMINAL



T2.2-10: 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

T2.2-11: 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		

T2.2-12 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:

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This image shows a single sheet of white paper with horizontal blue or grey ruling lines. The lines are evenly spaced and run across the width of the page. There is a solid black vertical margin line on the left side, creating a narrow left margin. The top edge of the paper has a slightly irregular, deckled appearance. The overall look is that of a clean, unused piece of stationery or notebook paper.

Part T2: Returnable Schedules

T2.2-13: Risk Elements

TRANSNET PORT TERMINALS

TENDER NUMBER: ICLM HQ 641/TPT

DESCRIPTION OF THE WORKS: DESIGN, SUPPLY, DELIVERY, INSTALLATION AND COMMISSIONING OF BBC PERIMETER FENCE FOR TRANSNET SOC LTD (REG.NO1990/000900/30) OPERATING AS TRANSNET PORT TERMINALS (HEREINAFTER REFERRED TO AS "TPT") AT THE PORT OF DURBAN POINT CAR TERMINAL (MPT), AGRI-PORT TERMINAL AND MAYDON WHARF TERMINAL



Perimeter Fencing at TPT, Durban Point, Agri-Port and Maydon Wharf Terminal	Site Establishment Requirements	Tender Schedule: T2.2-15
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Tenderers are to indicate their site establishment layout, including the following but not limited:

- Attach a copy of site establishment plan.
- Waste management Skips.
- Workplace/ welfare facilities.
- Security measures.
- Materials deliveries & storage.
- Site requirements are subject to employer approval.

Signed		Date	
Name		Position	
Tenderer			

T2.2-16: Capacity and Ability to meet Delivery Schedule

Note to tenderers:

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

A schedule detailing the following:

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

Index of documentation attached to this schedule:

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TRANSNET PORT TERMINALS

TENDER NUMBER: iCLM HQ 641/TPT

DESCRIPTION OF THE WORKS: DESIGN, SUPPLY, DELIVERY, INSTALLATION AND COMMISSIONING OF BBC PERIMETER FENCE FOR TRANSNET SOC LTD (REG.NO 1990/000900/30) OPERATING AS TRANSNET PORT TERMINALS (HEREINAFTER REFERRED TO AS "TPT") AT THE PORT OF DURBAN POINT CAR TERMINAL (MPT), AGRI-PORT TERMINAL AND MAYDON WHARF TERMINAL



Perimeter Fencing at TPT, Durban Point, Agri-Port and Maydon Wharf Terminal	Health and Safety Cost Breakdown	Tender Schedule: T2.2-17
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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 (3 kits @R500 pm)			
14.	H&S Reward & Recognition			

Total Health and Safety Estimate (R)	
Total Estimate Value (R)	
H&S Cost as % of Tender value	

Perimeter Fencing at TPT, Durban Point, Agri-Port and Maydon Wharf Terminal	Health and Safety Questionnaire	Tender Schedule: T2.2-18
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Health, 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													
<table border="1"> <tr> <td>1 - Medical Treatment Case</td> <td>Any occupational injury or illness requiring treatment provided by a physician or treatment provided under the direction of a physician</td> </tr> <tr> <td>2 - Restricted Work Day Case</td> <td>Any occupational injury or illness that prevents a worker from performing any of his/her craft jurisdiction duties</td> </tr> <tr> <td>3 - Lost Time injury Cases</td> <td>Any occupational injury that prevents the worker from performing any work for at least one day</td> </tr> <tr> <td>4 - Total Recordable Frequency</td> <td>Total number of Medical Treatment, Restricted Work and Lost Time Injury cases multiplied by 200,000 then divided by total manhours</td> </tr> <tr> <td>5- Lost Time Injury Frequency</td> <td>Total number of Lost Time Injury cases multiplied by 200,000 then divide by total manhours</td> </tr> </table>				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
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? ☐ Yes ☐ 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?

☐ 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



Perimeter Fencing at TPT, Durban Point and Maydon Wharf Terminal	Guarantees and Warranties	Tender Schedule: T2.2-19
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The extent of guarantees that can be offered by the Tenderer on the corrosion protection and installation of the fencing will play an important role in the evaluation of the tenders.

- a) The Tenderer is required to indicate on the schedule what guarantee period is offered for the fencing, including the corrosion protection and installation (workmanship).
- b) A Guarantee period on the fencing of not less than seven years on corrosion protection is required.
- c) A Guarantee period on workmanship for the fencing, including gates and turnstiles, of not less than one year is required, however longer guarantees will be rewarded during the evaluation.
- d) The Tenderer is required to issue a guarantee/ warrantee from manufacturer.

Item	Guarantee and Warrantee period	Description of Guarantee
Palisade Fence guarantee offered on corrosion protection		
High Security Fence guarantee offered on corrosion protection		
Palisade and High Security Fence, Gate and Turnstile Installation Workmanship Guarantee		

Signed	Date
Name	Position
Tenderer	

Perimeter Fencing at TPT, Durban Point, Agri-Port and Maydon Wharf Terminal	Compliance to Eligibility Criteria	Tender Schedule: T2.2-20
--	---	---------------------------------

Tenderers are to list in this schedule compliance to the Eligibility Criteria for the **High Security Fence**. **For evidence tenderer's are to submit proof in the form of either qualifications, specifications, drawings, data books, brochures, certificates, etc.** Proof to be attached as part of this returnable. Failure to comply with eligibility criteria i.e., a **"No" answer or "No" response** will lead to disqualification.

Eligibility Criteria for High Security Fence		Comply (Yes/No)	Evidence Provided (Yes/No)
1.	High security fence (see through anti-cut, anti-climb and CCTV optimised and security patrol friendly invisible wall) shall have apertures not exceeding 75mm x 13mm.		
2.	High Security Fencing provided shall be hot dip galvanized, for use in a marine environment and for extremely high corrosion resistance.		
3.	High Security Fencing Product guarantee on corrosion protection > or = 7 years.		
4.	The Civil / Structural and design Engineers must be professionally registered (Pr. Tech. Eng. of Pr. Eng.), for final sign off and provision of relevant compliance certifications.		
5.	The project planner must have a built environment qualification with at least 3 years' experience in construction projects with a proof of training certificate in Ms. Project or Primavera (Attach CV and qualifications).		
6.	Tenderer to have CIDB rating of 7SQ (Attach a copy of CIDB grading).		

Signed	Date
Name	Position
Tenderer	

T2.2-21: ANNEX G Compulsory Enterprise Questionnaire

The following particulars hereunder must be furnished.

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

Section 1: Name of enterprise: _____

Section 2: VAT registration number, if any: _____

Section 3: CIDB registration number, if any: _____

Section 4: CSD number: _____

Section 5: Particulars of sole proprietors and partners in partnerships

Name	Identity number	Personal income tax number

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

Section 6: Particulars of companies and close corporations

Company registration number _____

Close corporation number _____

Tax reference number: _____

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

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

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

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

Signed	_____	Date	_____
Name	_____	Position	_____
Enterprise name	_____		

SBD 6.1

PREFERENCE POINTS CLAIM FORM

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

1. GENERAL CONDITIONS

- 1.1 The following preference point systems are applicable to all bids:
- the 80/20 system for requirements with a Rand value of up to R50 000 000 (all applicable taxes included); and
- 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;
 - (b) B-BBEE Status Level of Contribution; and
 - (c) Any other specific goal determined in the Transnet preferential procurement policy
- 1.4 The maximum points for this bid are allocated as follows:

	POINTS
PRICE	80
B-BBEE STATUS LEVEL OF CONTRIBUTION Level 1 or 2	20
LIST THE OTHER APPLICABLE SPECIFIC GOALS FOR THIS TENDER	
Total points for Price and B-BBEE must not exceed	100

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

2. DEFINITIONS

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

3. POINTS AWARDED FOR PRICE

3.1 THE 80/20 PREFERENCE POINT SYSTEMS

A maximum of 80 or 90 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. EVIDENCE REQUIRED FOR CLAIMING SPECIFIC GOALS

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

Specific Goals	Acceptable Evidence
B-BBEE Status contributor	B-BBEE Certificate / Sworn- Affidavit / B-BBEE CIPC Certificate (in case of JV, a consolidated scorecard will be accepted) as per DTIC guideline
30% Black Women Owned Entities	B-BBEE Certificate / Sworn- Affidavit / B-BBEE CIPC Certificate (in case of JV, a consolidated scorecard will be accepted) as per DTIC guideline
+50% Black Youth Owned Entities	Certified copy of ID Documents of the Owners and B-BBEE Certificate / Sworn- Affidavit / B-BBEE CIPC Certificate (in case of JV, a consolidated scorecard will be accepted) as per DTIC guideline
Entities Owned by People with Disability (PWD)	Certified copy of ID Documents of the Owners / Doctor's note and /or EEA1 form confirming the disability
Entities/Black People living in rural areas	Entity 's Municipal/ESKOM bill or letter from Induna/chief confirming residential address not older than 3 months.
South African Enterprises	CIPC Certificate
EME or QSE 51% Black Owned	B-BBEE Certificate / Sworn-Affidavit / CIPC Certificate
Entities that are 51 % Black Owned	CI B-BBEE Certificate / Sworn- Affidavit / B-BBEE CIPC Certificate (in case of JV, a consolidated scorecard will be accepted) as per DTIC guideline
Promoting exports Orientated for Job creation	Section.....Job Creation Schedule Returnable documents
Local Content and Local Production	Returnable Local Content and production Annexures
NIPP	NIPP Returnable documents
Creation of new jobs and labour intensification	Section.....Job Creation Schedule Returnable documents
The promotion of supplier development through sub-contracting or JV for a minimum of 30% of the value of a contract to South African Companies which are:	Sub-contracting agreements and Declaration / Joint Venture Agreement and CIPC – B-BBEE Certificate / Sworn- Affidavit / B-BBEE CIPC Certificate as per DTIC guideline

<p>I. 30% Black Women, 51% Black Youth and 51% Black people with disabilities</p> <p>II. Entities with a specified minimum B-BBEE level (1 and 2)</p> <p>III. EMEs and/or QSEs who are 51% black-owned</p>	
<p>The promotion of enterprises located in a specific province/region/municipal area for work to be done or services to be rendered in that province/region/municipal area</p>	<p>CIPC – B-BBEE Certificate / Sworn- Affidavit / B-BBEE CIPC Certificate (in case of JV, a consolidated scorecard will be accepted) as per DTIC guidelines and Proof Registered address of entity</p>

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>
EME¹	<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.

¹ 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	<input type="checkbox"/>	NO	<input type="checkbox"/>
-----	--------------------------	----	--------------------------

- 7.1.1 If yes, indicate:

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

(***Tick applicable box***)

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

8. DECLARATION WITH REGARD TO COMPANY/FIRM

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

8.2 VAT registration number:.....

8.3 Company registration number:.....

8.4 TYPE OF COMPANY/ FIRM

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

[TICK APPLICABLE BOX]

8.5 DESCRIBE PRINCIPAL BUSINESS ACTIVITIES

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

8.6 COMPANY CLASSIFICATION

- ☐ Manufacturer
- ☐ Supplier
- ☐ Professional Supplier
- ☐ Other Suppliers, 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:

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 interest² in the enterprise, employed by the state? **YES/NO**

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

Full Name	Identity Number	Name of institution	State

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

2.2.1 If so, furnish particulars:

.....
.....

2.3 Does the bidder or any of its directors / trustees / shareholders / members / partners or any person having a controlling interest in the enterprise have any

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

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 consortium³ will not be construed as collusive bidding.
- 3.4 In addition, there have been no consultations, communications, agreements or arrangements with any competitor regarding the quality, quantity, specifications, prices, including methods, factors or formulas used to calculate prices, market allocation, the intention or decision to submit or not to submit the bid, bidding with the intention not to win the bid and conditions or delivery particulars of the products or services to which this bid invitation relates.
- 3.4 The terms of the accompanying bid have not been, and will not be, disclosed by the bidder, directly or indirectly, to any competitor, prior to the date and time of the official bid opening or of the awarding of the contract.
- 3.5 There have been no consultations, communications, agreements or arrangements made by the bidder with any official of the procuring institution in relation to this procurement process prior to and during the bidding process except to provide clarification on the bid submitted where so required by the institution; and the bidder was not involved in the drafting of the specifications or terms of reference for this bid.
- 3.6 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

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

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

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

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

.....
Signature	Date
.....
Position	Name of bidder



T2.2-22 NON-DISCLOSURE AGREEMENT



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

- 1.3.1 is publicly available at the time of its disclosure or becomes publicly available [other than as a result of disclosure by the Receiving Party or any of its Agents contrary to the terms of this Agreement]; or
- 1.3.2 was lawfully in the possession of the Receiving Party or its Agents [as can be demonstrated by its written records or other reasonable evidence] free of any restriction as to its use or disclosure prior to its being so disclosed; or
- 1.3.3 following such disclosure, becomes available to the Receiving Party or its Agents [as can be demonstrated by its written records or other reasonable evidence] from a source other than the Disclosing Party or its Agents, which source is not bound by any duty of confidentiality owed, directly or indirectly, to the Disclosing Party in relation to such information;
- 1.4 **Group** means any subsidiary, any holding company and any subsidiary of any holding company of either party; and
- 1.5 **Information** means all information in whatever form including, without limitation, any information relating to systems, operations, plans, intentions, market opportunities, know-how, trade secrets and business affairs whether in writing, conveyed orally or by machine-readable medium.

2. CONFIDENTIAL INFORMATION

- 2.1 All Confidential Information given by one party to this Agreement [the **Disclosing Party**] to the other party [the **Receiving Party**] will be treated by the Receiving Party as secret and confidential and will not, without the Disclosing Party's written consent, directly or indirectly communicate or disclose [whether in writing or orally or in any other manner] Confidential Information to any other person other than in accordance with the terms of this Agreement.
- 2.2 The Receiving Party will only use the Confidential Information for the sole purpose of technical and commercial discussions between the parties in relation to the Tender or for the subsequent performance of any contract between the parties in relation to the Tender.
- 2.3 Notwithstanding clause 2.1 above, the Receiving Party may disclose Confidential Information:
- 2.3.1 to those of its Agents who strictly need to know the Confidential Information for the sole purpose set out in clause 2.2 above, provided that the Receiving Party shall ensure that such Agents are made aware prior to the disclosure of any part of the Confidential Information that the same is confidential and that they owe a duty of confidence to the Disclosing Party. The Receiving Party shall at all times remain liable for any actions of such Agents that would constitute a breach of this Agreement; or
- 2.3.2 to the extent required by law or the rules of any applicable regulatory authority, subject to clause 2.4 below.
- 2.4 In the event that the Receiving Party is required to disclose any Confidential Information in accordance with clause 2.3.2 above, it shall promptly notify the Disclosing Party and cooperate with the Disclosing Party regarding the form, nature, content and purpose of such disclosure or any action which the Disclosing Party may reasonably take to challenge the validity of such requirement.

- 2.5 In the event that any Confidential Information shall be copied, disclosed or used otherwise than as permitted under this Agreement then, upon becoming aware of the same, without prejudice to any rights or remedies of the Disclosing Party, the Receiving Party shall as soon as practicable notify the Disclosing Party of such event and if requested take such steps [including the institution of legal proceedings] as shall be necessary to remedy [if capable of remedy] the default and/or to prevent further unauthorised copying, disclosure or use.
- 2.6 All Confidential Information shall remain the property of the Disclosing Party and its disclosure shall not confer on the Receiving Party any rights, including intellectual property rights over the Confidential Information whatsoever, beyond those contained in this Agreement.

3. RECORDS AND RETURN OF INFORMATION

- 3.1 The Receiving Party agrees to ensure proper and secure storage of all Information and any copies thereof.
- 3.2 The Receiving Party shall keep a written record, to be supplied to the Disclosing Party upon request, of the Confidential Information provided and any copies made thereof and, so far as is reasonably practicable, of the location of such Confidential Information and any copies thereof.
- 3.3 The Company shall, within 7 [seven] days of receipt of a written demand from Transnet:
- 3.3.1 return all written Confidential Information [including all copies]; and
- 3.3.2 expunge or destroy any Confidential Information from any computer, word processor or other device whatsoever into which it was copied, read or programmed by the Company or on its behalf.
- 3.4 The Company shall on request supply a certificate signed by a director as to its full compliance with the requirements of clause 3.3.2 above.

4. ANNOUNCEMENTS

- 4.1 Neither party will make or permit to be made any announcement or disclosure of its prospective interest in the Tender without the prior written consent of the other party.
- 4.2 Neither party shall make use of the other party's name or any information acquired through its dealings with the other party for publicity or marketing purposes without the prior written consent of the other party.

5. DURATION

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

6. PRINCIPAL

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



7. ADEQUACY OF DAMAGES

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

8. PRIVACY AND DATA PROTECTION

- 8.1 The Receiving Party undertakes to comply with South Africa's general privacy protection in terms 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

Tenderer

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]



Transnet Port Terminals

Tender Number: ICLM HQ 641/TPT

Description of the Works: DESIGN, SUPPLY, DELIVERY, INSTALLATION AND COMMISSIONING OF BBC PERIMETER FENCE FOR TRANSNET SOCLTD (REG.NO 1990/000900/30) OPERATING AS TRANSNET PORT TERMINALS (HEREINAFTER REFERRED TO AS "TPT") AT THE PORT OF DURBAN POINT CAR TERMINAL (MPT), AGRI-PORT TERMINAL AND MAYDON WHARF TERMINAL.

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.



Transnet Port Terminals

Tender Number: ICLM HQ 641/TPT

Description of the Works: DESIGN, SUPPLY, DELIVERY, INSTALLATION AND COMMISSIONING OF BBC PERIMETER FENCE FOR TRANSNET SOCLTD (REG.NO 1990/000900/30) OPERATING AS TRANSNET PORT TERMINALS (HEREINAFTER REFERRED TO AS "TPT") AT THE PORT OF DURBAN POINT CAR TERMINAL (MPT), AGRI-PORT TERMINAL AND MAYDON WHARF TERMINAL.

-
- 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____

SIGNATURE OF TENDERER

Transnet Port Terminals

Tender Number: ICLM HQ 641/TPT

Description of Supply: DESIGN, SUPPLY, DELIVERY, INSTALLATION AND COMMISSIONING OF BBC PERIMETER FENCE FOR TRANSNET SOCLTD (REG.NO 1990/000900/30) OPERATING AS TRANSNET PORT TERMINALS (HEREINAFTER REFERRED TO AS "TPT") AT THE PORT OF DURBAN POINT CAR TERMINAL (MPT), AGRI-PORT TERMINAL AND MAYDON WHARF TERMINAL.

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

8 SANCTIONS FOR VIOLATIONS

- 8.1 Transnet shall also take all or any one of the following actions, wherever required to:
 - a) Immediately exclude the Tenderer/Service Provider/Contractor from the tendering process or call off the pre-contract negotiations without giving any compensation

the Tenderer/Service Provider/Contractor. However, the proceedings with the other Tenderer/ Service Provider/Contractor may continue;

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

9 CONFLICTS OF INTEREST

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

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

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

- 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.

9.3 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.

- 9.4 The Tenderer/Service Provider/Contractor shall not lend to or borrow any money from or enter into any monetary dealings or transactions, directly or indirectly, with any committee member or any person involved in the sourcing process, where this is done, Transnet shall be entitled forthwith to rescind the contract and all other contracts with the Tenderer/Service Provider/Contractor.

10 DISPUTE RESOLUTION

10.1 Transnet recognises that trust and good faith are pivotal to its relationship with its Tenderer / Service Provider / Contractor. When a dispute arises between Transnet and its Tenderer / Service Provider / Contractor, the parties should use their best endeavours to resolve the dispute in an amicable manner, whenever possible. Litigation in bad faith negates the principles of trust and good faith on which commercial relationships are based. Accordingly, following a blacklisting process as mentioned in paragraph 6 above, Transnet will not do business with a company that litigates against it in bad faith or is involved in any action that reflects bad faith on its part. Litigation in bad faith includes, but is not limited to the following instances:

- a) **Vexatious proceedings:** these are frivolous proceedings which have been instituted without proper grounds;
- b) **Perjury:** where a Tenderer / Service Provider / Contractor make a false statement either in giving evidence or on an affidavit;
- c) **Scurrilous allegations:** where a Tenderer / Service Provider / Contractor makes allegations regarding a senior Transnet employee which are without proper foundation, scandalous, abusive or defamatory; and
- d) **Abuse of court process:** when a Tenderer / Service Provider / Contractor abuses the court process in order to gain a competitive advantage during a Tender process.

11 GENERAL

11.1 This Integrity Pact is governed by and interpreted in accordance with the laws of the Republic of South Africa.

11.2 The actions stipulated in this Integrity Pact are without prejudice to any other legal action that may follow in accordance with the provisions of the law relating to any civil or criminal proceedings.

11.3 The validity of this Integrity Pact shall cover all the tendering processes and will be valid for an indefinite period unless cancelled by either Party.

11.4 Should one or several provisions of this Integrity Pact turn out to be invalid the remainder of this Integrity Pact remains valid.

11.5 Should a Tenderer/Service Provider/Contractor be confronted with dishonest, fraudulent or corruptive behaviour of one or more Transnet employees, Transnet expects its Tenderer/Service Provider/Contractor to report this behaviour directly to a senior Transnet official/employee or alternatively by using Transnet's "Tip-Off Anonymous" hotline number 0800 003 056, whereby your confidentiality is guaranteed.

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

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

Signature

Date

T2.2-27: 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:



TRANSNET PORT TERMINALS

TENDER NUMBER: ICLM HQ 641/TPT

DESCRIPTION OF THE WORKS: DESIGN, SUPPLY, DELIVERY, INSTALLATION AND COMMISSIONING OF BBC PERIMETER FENCE FOR TRANSNET SOCLTD (REG.NO 1990/000900/30) OPERATING AS TRANSNET PORT TERMINALS (HEREINAFTER REFERRED TO AS "TPT") AT THE PORT OF DURBAN POINT CAR TERMINAL (MPT), AGRI-PORT TERMINAL AND MAYDON WHARF TERMINAL.

-
- 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.

**TRANSNET PORT TERMINALS****TENDER NUMBER: ICLM HQ 641/TPT**

DESCRIPTION OF THE WORKS: DESIGN, SUPPLY, DELIVERY, INSTALLATION AND COMMISSIONING OF BBC PERIMETER FENCE FOR TRANSNET SOCLTD (REG.NO 1990/000900/30) OPERATING AS TRANSNET PORT TERMINALS (HEREINAFTER REFERRED TO AS "TPT") AT THE PORT OF DURBAN POINT CAR TERMINAL (MPT), AGRI-PORT TERMINAL AND MAYDON WHARF TERMINAL.

-
- Suppliers must record and report facts accurately, honestly and objectively.
Financial records must be accurate in all material respects.

DESCRIPTION OF THE WORKS: DESIGN, SUPPLY, DELIVERY, INSTALLATION AND COMMISSIONING OF BBC PERIMETER FENCE FOR TRANSNET SOCLTD (REG.NO 1990/000900/30) OPERATING AS TRANSNET PORT TERMINALS (HEREINAFTER REFERRED TO AS "TPT") AT THE PORT OF DURBAN POINT CAR TERMINAL (MPT), AGRI-PORT TERMINAL AND MAYDON WHARF TERMINAL.

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

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/R10 000 000.			
Insurance in respect of loss of or damage to own property and equipment.			
(Other)			

T2.2-29: Form of Intent to Provide a Performance Guarantee

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

Name of Guarantor
(Bank/Insurer)

Address

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

Signed

Name

Capacity

On behalf of (name of
tenderer)

Date

Confirmed by Guarantor's Authorised Representative

Signature(s)

Name (print)

Capacity

On behalf of Guarantor
(Bank/insurer)

Date



Transnet Port Terminals

Tender Number: ICLM HQ 641/TPT

Description of the Works: DESIGN, SUPPLY, DELIVERY, INSTALLATION AND COMMISSIONING OF BBC PERIMETER FENCE FOR TRANSNET SOCLTD (REG.NO 1990/000900/30) OPERATING AS TRANSNET PORT TERMINALS (HEREINAFTER REFERRED TO AS "TPT") AT THE PORT OF DURBAN POINT CAR TERMINAL (MPT), AGRI-PORT TERMINAL AND MAYDON WHARF TERMINAL.

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.
- 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	
-----------	--

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/infoereg/>, 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: _____

XXXXX (Pty) Ltd

(Operator)

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

AS WITNESSES:

1. Name: _____ Signature: _____

2. Name: _____ Signature: _____

Transnet Port Terminals

Tender Number: iCLM HQ 641/TPT

Description of the Works: DESIGN, SUPPLY, DELIVERY, INSTALLATION AND COMMISSIONING OF BBC PERIMETER FENCE FOR TRANSNET SOCLTD (REG.NO 1990/000900/30) OPERATING AS TRANSNET PORT TERMINALS (HEREINAFTER REFERRED TO AS "TPT") AT THE PORT OF DURBAN POINT CAR TERMINAL (MPT), AGRI-PORT TERMINAL AND MAYDON WHARF TERMINAL.

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:

Title of the Contract

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

Transnet Port Terminals**Tender Number:** iCLM HQ 641/TPT**Description of the Works:** DESIGN, SUPPLY, DELIVERY, INSTALLATION AND COMMISSIONING OF BBC PERIMETER FENCE FOR TRANSNET SOCLTD (REG.NO 1990/000900/30) OPERATING AS TRANSNET PORT TERMINALS (HEREINAFTER REFERRED TO AS "TPT") AT THE PORT OF DURBAN POINT CAR TERMINAL (MPT), AGRI-PORT TERMINAL AND MAYDON WHARF TERMINAL.

Name &
signature of
witness

Tenderer's CIDB registration number:

Transnet Port Terminals

Tender Number: iCLM HQ 641/TPT

Description of the Works: DESIGN, SUPPLY, DELIVERY, INSTALLATION AND COMMISSIONING OF BBC PERIMETER FENCE FOR TRANSNET SOCLTD (REG.NO 1990/000900/30) OPERATING AS TRANSNET PORT TERMINALS (HEREINAFTER REFERRED TO AS "TPT") AT THE PORT OF DURBAN POINT CAR TERMINAL (MPT), AGRI-PORT TERMINAL AND MAYDON WHARF TERMINAL.

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).

Transnet Port Terminals

Tender Number: iCLM HQ 641/TPT

Description of the Works: DESIGN, SUPPLY, DELIVERY, INSTALLATION AND COMMISSIONING OF BBC PERIMETER FENCE FOR TRANSNET SOCLTD (REG.NO 1990/000900/30) OPERATING AS TRANSNET PORT TERMINALS (HEREINAFTER REFERRED TO AS "TPT") AT THE PORT OF DURBAN POINT CAR TERMINAL (MPT), AGRI-PORT TERMINAL AND MAYDON WHARF TERMINAL.

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

Transnet Port Terminals

Tender Number: iCLM HQ 641/TPT

Description of the Works: DESIGN, SUPPLY, DELIVERY, INSTALLATION AND COMMISSIONING OF BBC PERIMETER FENCE FOR TRANSNET SOCLTD (REG.NO 1990/000900/30) OPERATING AS TRANSNET PORT TERMINALS (HEREINAFTER REFERRED TO AS "TPT") AT THE PORT OF DURBAN POINT CAR TERMINAL (MPT), AGRI-PORT TERMINAL AND MAYDON WHARF TERMINAL.

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

Transnet Port Terminals**Tender Number:** iCLM HQ 641/TPT**Description of the Works:** DESIGN, SUPPLY, DELIVERY, INSTALLATION AND COMMISSIONING OF BBC PERIMETER FENCE FOR TRANSNET SOCLTD (REG.NO 1990/000900/30) OPERATING AS TRANSNET PORT TERMINALS (HEREINAFTER REFERRED TO AS "TPT") AT THE PORT OF DURBAN POINT CAR TERMINAL (MPT), AGRI-PORT TERMINAL AND MAYDON WHARF TERMINAL.

Name &
signature
of witness

Date

C1.2 Contract Data

Part one - Data provided by the *Employer*

(Compilers) Please read the relevant clauses in the conditions of contract before you enter data. The number of the principal clause is shown for each statement however other clauses may also use the same data.

Completion of this data in full including Z Clauses, according to the Options chosen, is essential to create a complete contract. (Please delete all the above highlighted sentences).

Clause	Statement	Data
1	General	
	The <i>conditions of contract</i> are the core clauses and the clauses for main Option	
		A: Priced contract with activity schedule
	dispute resolution Option	W1: Dispute resolution procedure
	and secondary Options	
		X2: Changes in Law
		X7: Delay damages
		X13: Defect Correction
		X18: Limitation of liability



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Z1: Local Production and Content Obligations

Z2: Additional Clauses relating to joint venture

Z3: Anti-Corruption Warranty

Z4: Protection of Personal Information Act

Z5: Collusion in the Construction Industry

Z6: Additional clause relating to Performance

Bonds and/ or Guarantees

of the NEC3 Engineering and Construction Contract June 2005 (amended June 2006 and April 2013)

10.1	The <i>Employer</i> is:	Transnet SOC Ltd (Registration No. 1990/000900/30)
------	-------------------------	---

Address	Registered address: Transnet Corporate Centre 138 Eloff Street Braamfontein Johannesburg 2000
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Having elected its Contractual Address for the purposes of this contract as:	Transnet Port Terminals 202 Anton Lembede Street Durban 4000
--	---

10.1	The <i>Project Manager</i> is: (Name)	Yanga Ralarala
	Address	Transnet Port Terminals 202 Anton Lembede Street Durban 4000

Tel
-----	-------

e-mail
--------	-------

10.1	The <i>Supervisor</i> is: (Name)	Sanele Biyela
	Address	Transnet Port Terminals 202 Anton Lembede Street Durban 4000



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	Tel No.	
	e-mail	
11.2(13)	The <i>works</i> are	DESIGN, SUPPLY, DELIVERY, INSTALLATION AND COMMISSIONING OF BBC PERIMETER FENCE FOR TRANSNET SOCLTD (REG.NO 1990/000900/30) OPERATING AS TRANSNET PORT TERMINALS (HEREINAFTER REFERRED TO AS "TPT") AT THE PORT OF DURBAN POINT CAR TERMINAL (MPT), AGRI-PORT TERMINAL AND MAYDON WHARF TERMINAL.	
11.2(14)	The following matters will be included in the Risk Register	None	
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	2weeks	
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	29 August 2025	
11.2(9)	The <i>key dates</i> and the <i>conditions</i> to be met are:	<i>Condition to be met</i>	<i>key date</i>
		1 Site access	07 October 2024
		2 Complete whole works	29 August 2025
30.1	The <i>access dates</i> are	Part of the Site	Date
		1 The whole of the sites	07 Oct 2024



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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	28 August 2024
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.	
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 monthly on the	25th (twenty fifth) day of each successive month.
51.1	The <i>currency of this contract</i> is the	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,	the cumulative rainfall (mm) the number of days with rainfall more than 10 mm the number of days with minimum air temperature less than 0 degrees Celsius the number of days with snow lying at 08:00 hours South African Time and these measurements:



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The place where weather is to be recorded (on the Site) is:

The *Contractor's* Site establishment area

The *weather data* are the records of past *weather measurements* for each calendar month which were recorded at:

Durban

and which are available from:

South African Weather Service 012 367 6023 or info3@weathersa.co.za.

7	Title	No additional data is required for this section of the <i>conditions of contract</i>.
8	Risks and insurance	
80.1	These are additional <i>Employer's</i> risks	None
84.1	The <i>Employer</i> 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



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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	<p>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</p> <p>The <i>Contractor</i> provides these additional Insurances</p> <p>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.</p> <ol style="list-style-type: none"> 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 <i>works</i> at premises other than the site, the <i>Contractor</i> shall satisfy the <i>Employer</i> that such plant & materials, components or other goods for incorporation in the <i>works</i> are adequately insured during manufacture and/or fabrication and transportation to the site.



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- 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 R10 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.



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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
9	Termination	There is no additional Contract Data required for this section of the <i>conditions of contract</i>.
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	Activity Schedule
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:	The Chairman of the Association of Arbitrators (Southern Africa)
	If no <i>Adjudicator nominating body</i> is entered, it is:	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	Durban, South Africa
	The person or organisation who will choose an arbitrator	
	- 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



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X7	Delay damages			
X7.1	Delay damages for late Completion of the whole works:	Section	Description	Amount per day
		1	Whole of the works	0.01% of the contract value per day capped at 7%
X13	Defect Correction			
X13.1	The amount of the performance bond is		5% of the total of the Prices	
X18	Limitation of liability			



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X18.1	The <i>Contractor's</i> liability to the <i>Employer</i> for indirect or consequential loss is limited to:	Nil
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 amount of the deductible payable in terms of the Employer's insurance policy or an amount being equal to the total Contract value inclusive of VAT whichever is applicable
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 inclusive of VAT.
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:	An amount being equal to the total Contract Value inclusive of VAT
X18.5	The <i>end of liability date</i> is	5 years after Completion of the whole of the works

Z *Additional conditions of contract are:*



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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 T2.2.01 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 Steel Products and Component for Construction.
- Z1.2** The Contractor is required to note that the Employer, the Department of Trade and Industry [DTI] and/or the body appointed by the DTI 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 T2.2.01 Eligibility Criteria Schedule: Declaration Certificate of Local Production and Content concerning non-compliance penalties applicable to Local Production and Content.



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Z1.5

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



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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:**



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-
- iv. the working capital requirements for the Joint Venture and the extent to which and manner whereby this will be provided and/or guaranteed by the constituents from time to time;
 - v. the names of the auditors and others, if any, who will provide auditing and accounting services to the Joint Venture.

Z2.2

Insert additional core clause 27.6

27.6. The *Contractor* shall not alter its composition or legal status of the Joint Venture without the prior approval of the *Employer*.

Z3 Anti-Corruption Warranty

Z3.1

CONTRACTOR hereby undertakes and warrants that, at the date of the entering into force of the Contract, itself, its directors, officers or employees have not offered, promised, given, authorized, solicited or accepted any undue pecuniary or other advantage or gift of any kind (or implied that they will or might do any such thing at any time in the future) in any way connected with the Contract (hereinafter referred to as any "Corrupt Act") and that it has taken all reasonable measures to prevent its subcontractors, agents or any other third parties, subject to its control or determining influence, from doing so.



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Z3.2

In the event that CONTRACTOR has committed a any Corrupt Act or is found by any competent court or judicial body to have committed any Corrupt Act in relation to this Contract or in relation to another contract that has a material impact on this Contractor in the event that:

I. Improper payments are being or have been made or offered to Transnet officials or any other person by CONTRACTOR or those acting on behalf of CONTRACTOR with respect to the Services; or

II. CONTRACTOR or those acting on behalf of CONTRACTOR has accepted any payment or benefit, regardless of value, as an improper inducement to award, obtain or retain business or otherwise gain or grant an improper business advantage from or to any other person or entity. then:

a) In addition to the remedies available in law to Transnet, Transnet reserves the right to instruct CONTRACTOR to (i) dismiss the employee(s) involved, and/or (ii) to terminate its contracts with the relevant supplier/sub-Contractor, as the case may be, and should CONTRACTOR fail to do so, or if the breach is incapable of being remedied, Transnet may terminate the Contract; and

b) Transnet will be entitled to recover the direct damages suffered by Transnet as a result of the termination of the Contract and no further payments will be made to CONTRACTOR, save for those sums which have already been committed. CONTRACTOR shall deliver to Transnet all works already completed in terms of the contract which Transnet has paid for.

Z4 Protection of Personal Information Act



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Z4.1		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
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.
Z6	Additional clause relating to Performance Bonds and/ or Guarantees	
Z6.1		The Performance Guarantee under X13 above shall be an irrevocable, on-demand performance guarantee, to be issued exactly in the form of the Pro Forma documents provided for this purpose under C1.3 (Forms of Securities), in favour of the Employer by a financial institution reasonably acceptable to the Employer.

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:	



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		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		
A	Priced contract with activity schedule	Data for the Shorter Schedule of Cost Components		
41 in SSSC	The percentage for people overheads is:	%		
21 in SSSC	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 SSSC	The rates of other Equipment are:	Equipment	Size or capacity	Rate
61 in SSSC	The hourly rates for Defined Cost of design outside the Working Areas are	Category of employee		Hourly rate



Transnet Port Terminals

Tender Number: ICLM HQ 641/TPT

Description of the Works: DESIGN, SUPPLY, DELIVERY, INSTALLATION AND COMMISSIONING OF BBC PERIMETER FENCE FOR TRANSNET SOCLTD (REG.NO 1990/000900/30) OPERATING AS TRANSNET PORT TERMINALS (HEREINAFTER REFERRED TO AS "TPT") AT THE PORT OF DURBAN POINT CAR TERMINAL (MPT), AGRI-PORT TERMINAL AND MAYDON WHARF TERMINAL.

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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C1.3 Forms of Securities

Pro forma Performance Guarantee

For use with the NEC3 Engineering & Construction Contract - June 2005 (with amendments June 2006 and April 2013)

The *conditions of contract* stated in the Contract Data Part 1 include the following Secondary Option:

Option X13: Performance bond

The pro forma document for this Guarantee is provided here for convenience but is to be treated as part of the *Works Information*.

The organisation providing the Guarantee does so by copying the pro forma document onto its letterhead without any change to the text or format and completing the required details. The completed document is then given to the *Employer* within the time stated in the contract.

The Performance Bond needs to be issued by an institution that are reasonably acceptable to the *Employer*.

Transnet may choose to not to accept an Issuer. Should the issuer not being accepted, the performance bond needs to be replaced by an issuer that are acceptable to Transnet. Issuers need to be verified for acceptance by Transnet before a performance bond is issued.

Pro-forma Performance Bond (for use with Option X13)

(to be reproduced exactly as shown below on the letterhead of the Surety)

Transnet SOC Ltd
 C/o Transnet
 Transnet Corporate Centre
 138 Eloff Street
 Braamfontein
 Johannesburg
 2000

Date:

Dear Sirs,

Performance Bond for Contract No.

With reference to the above numbered contract made or to be made between

Transnet SOC Limited, Registration No. 1990/000900/30 (the *Employer*) and

{Insert registered name and address of the *Contractor*} (the *Contractor*), for

{Insert details of the *works* from the Contract Data} (the *works*).

I/We the undersigned

on behalf of the
 Guarantor

of physical address

and duly authorised thereto do hereby bind ourselves as Guarantor and co-principal debtors in solidum for the due and faithful performance of all the terms and conditions of the Contract by the *Contractor* and for all losses, damages and expenses that may be suffered or incurred by the *Employer* as a result of non-performance of the Contract by the *Contractor*, subject to the following conditions:

1. The terms *Employer*, *Contractor*, *Project Manager*, *works* and Completion Certificate have the meaning as assigned to them by the *conditions of contract* stated in the Contract Data for the aforesaid Contract.
2. We renounce all benefits from the legal exceptions "Benefit of Excussion and Division", "No value received" and all other exceptions which might or could be pleaded against the validity of this bond, with the meaning and effect of which exceptions we declare ourselves to be fully acquainted.
3. The *Employer* has the absolute right to arrange his affairs with the *Contractor* in any manner which the *Employer* deems fit and without being advised thereof the Guarantor shall not have the right to claim his release on account of any conduct alleged to be prejudicial to the Guarantor. Without derogating from the foregoing compromise, extension of the construction period, indulgence, release or variation of the *Contractor's* obligation shall not affect the validity of this performance bond.

4. This bond will lapse on the earlier of
 - the date that the Guarantor receives a notice from the *Project Manager* stating that the Completion Certificate for the whole of the *works* has been issued, that all amounts due from the *Contractor* as certified in terms of the contract have been received by the *Employer* and that the *Contractor* has fulfilled all his obligations under the Contract, or
 - the date that the Surety issues a replacement Performance Bond for such lesser or higher amount as may be required by the *Project Manager*.
5. Always provided that this bond will not lapse in the event the Guarantor is notified by the *Project Manager*, (before the dates above), of the *Employer's* intention to institute claims and the particulars thereof, in which event this bond shall remain in force until all such claims are paid and settled.
6. The amount of the bond shall be payable to the *Employer* upon the *Employer's* demand and no later than 7 days following the submission to the Guarantor of a certificate signed by the *Project Manager* stating the amount of the *Employer's* losses, damages and expenses incurred as a result of the non-performance aforesaid. The signed certificate shall be deemed to be conclusive proof of the extent of the *Employer's* loss, damage and expense.
7. Our total liability hereunder shall not exceed the sum of:
 (say) _____
 R _____
8. This Performance Bond is neither negotiable nor transferable and is governed by the laws of the Republic of South Africa, subject to the jurisdiction of the courts of the Republic of South Africa

Signed at _____ on this _____ day of _____ 201__

Signature(s)

Name(s) (printed)

Position in Guarantor company

Signature of Witness(s)

Name(s) (printed)

PART 2: PRICING DATA

Document reference	Title	No of pages
	This cover page	1
C2.1	Pricing Instructions	2 - 3
C2.2	Activity Schedule	4 - 12
	Total number of pages	12

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
- 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 Employer requires at least the following activities to be priced. Each activity must be priced individually.

The price reflected below must be fixed and firm. Failure to provide a fixed and firm price will declare the Contractor nonresponsive.

The Employer's proposed percentage payment split is reflected below.

Contractors are to advise details of any alternative proposed payment split.

The proposed payment date **MUST** be completed.

It is Transnet's preference to enter into a Rand based contract, where the contractor will hedge the Foreign exchange (FX) risk exposure on their balance sheet at a cost acceptable to Transnet by verifying cost of hedging with Transnet Treasury before hedge execution by the contractor.

Should this not be possible, and should it be required that the Employer hedge the FX risk, the Contractor will be required to re-imburse the Employer for any hedging related costs (losses that arise due to the moving of hedges), in the event that a payment cannot take place on the hedged date due to the Contractor.

It is Transnet's preference to enter into a contract on a DDP (Incoterms 2010, Port of Durban) basis. However, a DAP (Incoterms 2010, Port of Durban) will be accepted, provided the contractor agrees to reimburse the Employer in respect of any additional costs to be incurred as a result of choosing the DAP Incoterms 2010, e.g., Customs VAT, cargo dues and other cargo clearance levies relating to this contract.

C2.2 Activity Schedule

Mandatory Returnable

Note: It is mandatory for bidders to price for all the terminals and all line items, as TPT will award the work to one successful bidder. Failure to price for all terminals and all line items will lead to disqualification, as the pricing will be incomplete.

Item	Description Activity	Unit	Qty.	Unit Rate	Total cost (Excl. VAT)
1.	Main Offer: Durban Car Terminal (MPT) & Maydon Wharf.				
1.1	The on-site establishment of facilities for the Contractor and the provision of site offices, personnel, and necessary equipment.				
	Car Terminal.	each	1		
	Maydon Wharf & Agri-Port Terminals.	each	1		
	The contractor to provide safety file for approval prior to the commencement of the works as per <i>Employers Health and Safety Project Specification</i> .	each	1		
	Environmental, skip and waste management	each	1		
	Security	each	1		
	As built drawings	each	1		
	Time related obligations	each	1		
	Engineering designs as per scope of work	each	1		
1.2	Careful demolition and removal of the existing infrastructure (Fencing, gates & rail etc.). Note: Removal rate to include stockpiling all steel material in an area identified in the terminal.				
	Car Terminal - Q & R (Figure 1 in Scope of Work):				
	Remove a single gate consisting of 4m manual swing gates.	each	2		
	Remove palisade fence panels including the posts.	m	600		
	Remove the existing turnstile (Quayside entrance).	each	1		
	Remove electric fence (isolated).	each	1		
	Car Terminal – FPT (Figure 2 in Scope of Work):				
	Remove damaged panels of high security fence (see through anti-cut, anti-climb and CCTV optimized and security patrol friendly invisible wall) - fence panels including posts.	m	100		
	Remove damaged palisade fence including posts.	m	100		

TRANSNET PORT TERMINALS

TENDER NUMBER: ICLM HQ 641/TPT

DESCRIPTION OF THE WORKS: DESIGN, SUPPLY, DELIVERY, INSTALLATION AND COMMISSIONING OF BBC PERIMETER FENCE FOR TRANSNET SOC LTD (REG.NO 1990/000900/30) OPERATING AS TRANSNET PORT TERMINALS (HEREINAFTER REFERRED TO AS "TPT") AT THE PORT OF DURBAN POINT TERMINAL (MPT), AGRI-PORT AND MAYDON WHARF TERMINAL

Car Terminal - Control Room & Fitment Center (Figure 3 in Scope of Work):					
Remove a single gate consisting of 4m manual swing gates.	each	2			
Remove palisade fence panels including the posts.	m	250			
Remove single gate consisting of 4m manual sliding gate that opens by sliding on the rail.	each	1			
Car Terminal - Concrete Wall (Figure 4 in Scope of Work):					
Remove a single gate consisting of 4m manual swing gates.	each	2			
D Gate (Figure 5 in Scope of Work):					
Remove palisade fence panels including the posts.	m	150			
Remove the existing turnstile.	each	1			
Remove single gate consisting of 4m automated sliding gate that opens by sliding on the rail.	each	1			
Remove electric motor (isolated).	each	1			
G Gate to C Berth (Figure 6 in Scope of Work):					
Remove a single gate consisting of 4m manual swing gates	each	2			
Remove a single gate consisting of 4m manual swing gates.	each	2			
Remove palisade fence panels including the posts.	m	115			
MPT Clinic (Figure 7 in Scope of Work):					
Remove Concrete Fence	m	200			
Maydon Wharf Berth 12 (Figure 9 in Scope of Work):					
Remove palisade fence panels including the posts.	m	270			
K-Block (Figure 8 in Scope of Work):					
Remove palisade fence panels including the posts.	m	500			
Maydon Wharf Entrance (Figure 10 in Scope of Work)					
Remove palisade fence panels including the posts.	m	50			
Maydon Wharf Shed 12 M&A (Figure 11 in Scope of Work):					
Remove Concrete Fence & steel (rail)	m	150			

1.3	Supply and installation of temporary fencing structure where fence has been removed or where there are trenches, (i.e., green shaded/ yellow/orange cloth/net and quick fence shall be utilized). It is envisaged that the new fence installation, and erection of temporary fencing prior to removal of existing fence, will be done in phases to reduce the amount of temporary fencing that would be required at one time.	m	200		
1.4	Supply and installation of hot dip galvanised steel palisade fencing.				
	Terminal - Q & R (Figure 1 in Scope of Work):				
	Supply and install palisade fence panels including the posts	m	600		
	Car Terminal - FPT (Figure 2 in Scope of Work):				
	Supply and install palisade fence panels including the posts.	m	100		
	Car Terminal - Control Room & Fitment Centre (Figure 3 in Scope of Work)				
	Supply and install palisade fence panels including the posts.	m	250		
	Car Terminal - G Gate to C Berth (Figure 6 in Scope of Work):				
	Supply and install palisade fence panels including the posts.	m	115		
	MPT Clinic (Figure 7 in Scope of Work):				
	Supply and install 200m palisade fence panels including the posts.	m	200		
	Maydon Wharf Berth 12 (Figure 9 in Scope of Work):				
	Supply and install palisade fence panels including the posts.	m	270		
	Maydon Wharf Entrance (Figure 10 in Scope of Work):				
	Supply and install palisade fence panels including the posts.	m	50		
	K-Block (Figure 8 in Scope of Work):				
	Supply and install palisade fence panels including the posts.	m	500		
	Maydon Wharf Shed 12 M&A (Figure 11 in Scope of Work):				
	Supply and install palisade fence panels including the posts.	m	150		
1.5	Supply and install high security fence (see through anti-cut, anti-climb and CCTV optimized and security patrol friendly invisible wall) - fence panels including posts.				
	Car Terminal - FTP (Figure 2 in Scope of Work):				

TRANSNET PORT TERMINALS

TENDER NUMBER: ICLM HQ 641/TPT

DESCRIPTION OF THE WORKS: DESIGN, SUPPLY, DELIVERY, INSTALLATION AND COMMISSIONING OF BBC PERIMETER FENCE FOR TRANSNET SOC LTD (REG.NO 1990/000900/30) OPERATING AS TRANSNET PORT TERMINALS (HEREINAFTER REFERRED TO AS "TPT") AT THE PORT OF DURBAN POINT TERMINAL (MPT), AGRI-PORT AND MAYDON WHARF TERMINAL

	Supply and install high security fence (see through anti-cut, anti-climb and CCTV optimized and security patrol friendly invisible wall) - fence panels including posts.	m	100		
	D Gate (Figure 5 in Scope of Work):				
	Supply and install high security fence (see through anti-cut, anti-climb and CCTV optimized and security patrol friendly invisible wall) - fence panels including posts.	m	150		
1.6	Supply and install sliding gate that opens by sliding on the rail. Include new rail and brackets				
	Car Terminal - Control Room & Fitment Centre (Figure 3 in Scope of Work):				
	Supply and install a single gate consisting of 4m manual sliding gate that opens by sliding on the rail with wheels.	each	3		
	MPT Clinic (Figure 7 in Scope of Work):				
	Supply and install a single gate consisting of 4m sliding gate that opens by sliding on the rail.	each	1		
	Maydon Wharf Main Entrance (Figure 10 in Scope of Work):				
	Supply and install a single gate consisting of 20m sliding gate that opens by sliding on the rail.	each	1		
1.7	Supply and install high security fence (see through anti-cut, anti-climb and CCTV optimized and security patrol friendly invisible wall) - fence panels including posts.				
	D Gate (Figure 7 in Scope of Work):				
	Supply and install a single high security fence gate consisting of 4m sliding gate that opens by sliding on the rail with the wheels. High security fence gate (see through anti-cut, anti-climb and CCTV optimized and security patrol friendly invisible wall)	each	1		
1.8	Supply and install swing gate that opens inward circular motion.				
	Car Terminal Q & R (Figure 1 in Scope of Work):				
	Supply and install a single gate consisting of 4m manual swing gates.	each	2		
	Car Terminal - FPT (Figure 2 in Scope of Work):				
	Supply and install a single gate consisting of 4m manual swing gates.	each	2		
	Car Terminal - Control Room & Fitment Centre (Figure 4 in Scope of Work):				
	Supply and install a single gate consisting of 4m manual swing gates.	each	2		
	Car Terminal - G Gate (Figure 8 in Scope of Work):				

TRANSNET PORT TERMINALS

TENDER NUMBER: ICLM HQ 641/TPT

DESCRIPTION OF THE WORKS: DESIGN, SUPPLY, DELIVERY, INSTALLATION AND COMMISSIONING OF BBC PERIMETER FENCE FOR TRANSNET SOC LTD (REG.NO 1990/000900/30) OPERATING AS TRANSNET PORT TERMINALS (HEREINAFTER REFERRED TO AS "TPT") AT THE PORT OF DURBAN POINT TERMINAL (MPT), AGRI-PORT AND MAYDON WHARF TERMINAL

	Supply and install a single gate consisting of 4m manual swing gates.	each	3		
	Supply and install a single gate consisting of 4m manual swing gates	each	1		
	Supply and install a single gate consisting of 4m manual swing gates.	each	2		
	Maydon Wharf Main Entrance (Figure 13 in Scope of Work):				
	Supply and install a single gate consisting of 4m manual swing gates (next to admin offices).	each	2		
	Maydon Wharf Shed 12 M&A (Figure 11 in Scope of Work):				
	Supply and install a single gate consisting of 1,2m manual swing gates.	m	1		
1.9	Supply and install turnstile gates.				
	Car Terminal - Q & R (Figure 1 in Scope of Work):				
	Supply and install turnstile (Quayside entrance).	each	1		
	Car Terminal - D Gate (Figure 7 in Scope of Work):				
	Supply and install turnstile.	each	1		
1.10	Supply and installation of stainless steel shackles/ chain.				
	Car Terminal - Q & R (Figure 1 in Scope of Work):				
	Provide 0.5m long stainless-steel long shackle/ chain.	each	1		
	Car Terminal - FTP (Figure 2 in Scope of Work):				
	Provide 0.5m long stainless-steel long shackle/ chain.	each	1		
	Car Terminal - Control Room & Fitment Centre (Figure 4 in Scope of Work):				
	Provide 0.5m long stainless-steel long shackle/ chain.	each	2		
	D Gate (Figure 5 in Scope of Work):				
	Provide 0.5m long stainless-steel long shackle/ chain.	each	1		
	G Gate (Figure 8 in Scope of Work):				
	Provide 0.5m long stainless-steel long shackle/ chain.	each	2		
	Maydon Wharf Main Entrance (Figure 10 in Scope of Work):				
	Provide 0.5m long stainless-steel long shackle/ chain.	each	2		
1.11	Supply and installation of hot dip galvanised padlocks.				
	Car Terminal - Q & R (Figure 1 in Scope of Work):				

TRANSNET PORT TERMINALS

TENDER NUMBER: ICLM HQ 641/TPT

DESCRIPTION OF THE WORKS: DESIGN, SUPPLY, DELIVERY, INSTALLATION AND COMMISSIONING OF BBC PERIMETER FENCE FOR TRANSNET SOC LTD (REG.NO 1990/000900/30) OPERATING AS TRANSNET PORT TERMINALS (HEREINAFTER REFERRED TO AS "TPT") AT THE PORT OF DURBAN POINT TERMINAL (MPT), AGRI-PORT AND MAYDON WHARF TERMINAL

	Provide stainless steel padlock with keys.	each	1		
	Car Terminal - FTP (Figure 2 in Scope of Work):				
	Provide stainless steel padlock with keys.	each	1		
	Car Terminal - Control Room & Fitment Centre (Figure 4 in Scope of Work):				
	Provide two stainless steel padlocks with keys.	each	2		
	D Gate (Figure 7 in Scope of Work):				
	Provide stainless steel padlock with keys.	each	1		
	G Gate (Figure 8 in Scope of Work):				
	Provide stainless steel padlock with keys.	each	2		
	Car Terminal - Main Terminal:				
	Provide stainless steel padlock with keys.	each	1		
	Maydon Wharf Main Entrance (Figure 10 in Scope of Work):				
	Provide stainless steel padlock with keys	each	2		
1.12	Supply and installation of hot dip galvanised security razor wire concertina on top of the new and existing fence.				
	Car Terminal - Q & R (Figure 1 in Scope of Work):				
	Supply and install concertina flat razor wire on top of the existing fence.	m	600		
	Car Terminal - FPT (Figure 2 in Scope of Work):				
	Supply and install concertina flat razor wire on top of the existing fence.	m	550		
	Car Terminal - Control Room & Fitment Centre (Figure 4 in Scope of Work):				
	Supply and install concertina flat razor wire on top of the existing fence.	m	200		
	Car Terminal - Concrete Wall (Figure 5 in Scope of Work):				
	Supply and install Concertina flat razor wire on top of the existing wall.	m	700		
	Car Terminal - D Local Offices & Admin Parking Area:				
	Supply and install concertina flat razor wire on top of the existing fence	m	150		
	Car Terminal - G Gate (Figure 8 in Scope of Work):				

TRANSNET PORT TERMINALS

TENDER NUMBER: ICLM HQ 641/TPT

DESCRIPTION OF THE WORKS: DESIGN, SUPPLY, DELIVERY, INSTALLATION AND COMMISSIONING OF BBC PERIMETER FENCE FOR TRANSNET SOC LTD (REG.NO 1990/000900/30) OPERATING AS TRANSNET PORT TERMINALS (HEREINAFTER REFERRED TO AS "TPT") AT THE PORT OF DURBAN POINT TERMINAL (MPT), AGRI-PORT AND MAYDON WHARF TERMINAL

	Supply and install concertina flat razor wire on top of the existing fence.	m	500		
	Car Terminal - Main Terminal:				
	Supply and install concertina flat razor wire on top of the existing fence.	m	454		
	K-Block (Figure 11 in Scope of Work):				
	Supply and install concertina flat razor wire on top of the existing fence.	m	500		
	Maydon Wharf Berth 12 (Figure 12 in Scope of Work):				
	Supply and install concertina flat razor wire on top of the existing fence.	m	600		
	Maydon Wharf Main Entrance (Figure 13 in Scope of Work):				
	Supply and install concertina flat razor wire on top of the existing fence.	m	360		
2.	Main Offer: Agri-Port Terminal				
2.1	Careful demolition and removal of the existing infrastructure (Fencing, gates, and rail etc.). Note: Removal rate to include stockpiling all steel material in an area identified in the terminal.				
	Remove a single gate consisting of 8m x 2 manual sliding gates including rails.	each	2		
	Remove a single gate consisting of 4m x 2 manual sliding gates including rails.	each	2		
	Remove a single gate consisting of 4m x 2 manual swing gates.	each	2		
	Remove Palisade fence.	m	470		
	Remove Concrete fence and provide skips for concrete/ rubble waste.	m	630		
	Remove concertina flat razor wire on top of the existing fence.	m	470		
2.2	Disposal of 630m long concrete fence waste as per municipality by-laws for concrete/ rubble waste disposal.	m	630		
2.3	Supply, delivery, install and commissioning of Hot dip galvanised palisade fence panels including the posts.	m	1100		
2.4	Supply and install sliding gate that opens by sliding on the rail. Include a brush to clean the rail.	each	1		
	Supply, delivery, install and commissioning of a single gate (hot dip galvanised palisade) consisting of 8m x2 sliding gate that opens by sliding on the rail with wheels.	each	2		
	Supply, delivery, install and commissioning of a single gate (hot dip galvanised palisade) consisting of 4m x2 manual sliding gate that opens by sliding on the rail with wheels.	each	2		
2.5	Supply and install swing gate that opens inward circular motion.				
	Supply, delivery, install and commissioning of a single gate (hot dip galvanised palisade) consisting of 4m x2 manual swing gates.	each	2		

TRANSNET PORT TERMINALS

TENDER NUMBER: ICLM HQ 641/TPT

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	Supply, delivery, install and commissioning of a single pedestrian gate (hot dip galvanised palisade) consisting of 1.2m x1 manual swing gates.	each	1		
2.6	Supply and installation of hot dip galvanised shackles/ chain.				
	Provide 0.5m long stainless-steel long shackle/ chain.	each	4		
2.7	Supply an installation of stainless-steel padlocks.				
	Provide stainless steel padlock with keys	each	4		
2.8	Supply and installation of hot dip galvanised security razor wire concertina on top of the fence.	m	1100		
2.9	Concrete works for anchoring of panel posts and gate rails.	LOT			
2.10	Provision of a QA Pack and production of "as-built drawings".	LOT			
2.11	The de-establishment of site facilities for the Contractor, removal of plant and equipment as well as final tidying up of the site on completion. The site must be left to its original standard upon dismantling of such facilities and handed back to the <i>Employer</i>.				
	Car Terminal.	each	1		
	Maydon Wharf & Agri-Port Terminals.	each	1		

Total Price to be carried over to the Form of Offer & Acceptance
(Excl. VAT)

TRANSNET PORT TERMINAL
 CONTRACT NUMBER: ICLM HQ 641/TPT
 DESCRIPTION OF THE WORKS: DESIGN, SUPPLY, DELIVERY, INSTALLATION AND COMMISSIONING OF BBC PERIMETER FENCE FOR TRANSNET SOC LTD (REG.NO 1990/000900/30) OPERATING AS TRANSNET PORT TERMINALS (HEREINAFTER REFERRED TO AS "TPT") AT THE PORT OF DURBAN POINT TERMINAL (MPT), AGRI-PORT AND MAYDON WHARF TERMINAL



PART C3: SCOPE OF WORK

Document reference	Title	No of page
	This cover page	1
C3.1	<i>Employer's Works Information</i>	53
C3.2	<i>Contractor's Works</i>	
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TRANSNET PORT TERMINAL
 CONTRACT NUMBER: ICLM HQ 641/TPT
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DOCUMENTATION DISTRIBUTION, REVISION AND APPROVAL HISTORY

DOCUMENT	REV	DISTRIBUTION	PREPARED BY	APPROVED BY
<i>Employer's Works Information</i>	01	Owner Approval	Yanga Ralarala	Earle Peters

COMPILED BY:

 Signature
 Name: Yanga Ralarala
 Designation: Project Manager
 Date: _____

REVIEWED BY:

 Signature
 Name: Sanele Biyela
 Designation: Construction Manager
 Date: _____

REVIEWED BY:

 Signature
 Name: Neelan Archary
 Designation: Engineering Manager
 Date: _____

RECOMMENDED BY:

 Signature
 Name: Giddy Govender
 Designation: Security
 Date: _____

RECOMMENDED BY:

 Signature
 Name: Nico du Plessis
 Designation: Chief Security Officer
 Date: _____

RECOMMENDED BY:

 Signature
 Name: Boysie Mthembu
 Designation: Terminal Manager, MW & Agriport
 Date: _____

RECOMMENDED BY:

 Signature
 Name: Prince Magoda Manganyi
 Designation: Terminal Manager, Durban MPT & Car Terminal
 Date: _____

APPROVED BY:

 Signature
 Name: Earle Peters
 Designation: Managing Executive, Durban Terminals
 Date: _____

C3.1 EMPLOYER'S WORKS INFORMATION

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TRANSNET PORT TERMINAL

CONTRACT NUMBER: ICLM HQ 641/TPT

DESCRIPTION OF THE WORKS: DESIGN, SUPPLY, DELIVERY, INSTALLATION AND COMMISSIONING OF BBC PERIMETER FENCE FOR TRANSNET SOC LTD (REG.NO 1990/000900/30) OPERATING AS TRANSNET PORT TERMINALS (HEREINAFTER REFERRED TO AS "TPT") AT THE PORT OF DURBAN POINT TERMINAL (MPT), AGRI-PORT AND MAYDON WHARF TERMINAL



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SECTION 1

1 Description of the *works*

1.1 Executive overview

1.1.1 Port of Durban Bulk, Break Bulk and Car Terminal (BBC Terminal) is made up of Point Terminal, Agri-Port Terminal, and Maydon Wharf Terminal. They are used for import and export purposes, as a storage area for bulk cargo, breakbulk cargo, and cars. The Terminals are physically enclosed with a fence along the perimeters for security purposes, safeguarding of commodities, life, properties, TPT assets, and provision of a physical barrier to prevent stowaway instances.

1.2 Employer's objectives

The employers' objective is to appoint a suitable *contractor* to execute the project for Transnet Port Terminals to comply and adhere to security measure and the following standards:

- a) National Ports Act No. 12 of 2005.
- b) Ensure compliance to International Ship and Port Security (ISPS) Code requirements.
- c) Adhere to security measures and control of access into TPT property and assets.

1.3 Guarantees and Warranties

The extent of guarantees that can be offered by the Tenderer on the corrosion protection and installation of the fencing will play an important role in the evaluation of the tenders.

- The Tenderer is required to indicate on the schedule what guarantee period is offered for the fencing, including the corrosion protection and installation (workmanship).
- A Guarantee period on the fencing of not less than seven years on corrosion protection is required.
- A Guarantee period on workmanship for the fencing, including gates and turnstiles, of not less than one year is required, however longer guarantees will be rewarded during the evaluation.
- The Tenderer is required to issue a guarantee/ warrantee from manufacturer.

1.4 Interpretation and Terminology

The following abbreviations are used in this Works Information:

Abbreviation	Meaning given to the abbreviation
Approx.	Approximate
SOP: CEM	Standard Operating Procedure for Construction Environmental Management
CDR	<i>Contractor</i> Documentation Register
CDS	<i>Contractor</i> Documentation Schedule
CRL	<i>Contractor</i> Review Label
CIRP	<i>Contractor's</i> Industrial Relations Practitioner

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CM	Construction Manager
CSHEO	Contractor's Safety, Health and Environmental Officer
DTI	Department of Trade and Industry
DGN	CAD file format supported by Microstation
DWG	Drawings
EA	Environmental Authorisation
EIR	Environmental Impact Report
EM	Environmental Manager
EMPr	Environmental Management Programme
EDMS	Emissions Data Management System
EO	Environmental Officer
HAZCON	Hazard of Construction
HAZOP	Hazard and Operability Study
HSSP	Health and Safety Surveillance Plan
INC	Independent Nominated Consultant
IP	Industrial Participation
IR	Industrial Relations
ISO	International Standard Organisation
ISPS	International Ship and Port Facility Security Code
IPP	Industrial Participation Policy
IPO	Industrial Participation Obligation
IPS	Industrial Participation Secretariat
IRCC	Industrial Relations Co-ordinating Committee
JSA	Job Safety Analysis
CIRP	Contractor's Industrial Relations Practitioner
MSP	Microsoft Projects
Native	Original electronic file format of documentation
PES	Project Environmental Specifications
PHA	Preliminary Hazard Assessment
PIRM	Project Industrial Relations Manager
PIRPMP	Project Industrial Relations Policy and Management Plan
PLA	Project Labour Agreements
PIRM	Project Industrial Relations Manager
PSPM	Project Safety Program Manager
ProgEM	Programme Environmental Manager
ProjEM	Project Environmental Manager
QA	Quality Assurance
R&D	Research and Development
SACNASP	South African Council for Natural Scientific Professions
SACPCMP	South African Council for Project and Construction Management Professionals
SANS	South African National Standards
SASRIA	South African Special Risks Insurance Association
CESSG	Contractor Environmental and Sustainable and Specification Guideline
SHEO	Safety, Health and Environment Officer
TPT	Transnet Port Terminals

1.5 Existing Fence Layout - Google Maps

Existing fence layout which requires replacement is illustrated below, where red shows fence boundaries and green shows the gates.

1.5.1 Terminal Installation Sites (Google Maps)



Figure 1: Q & R

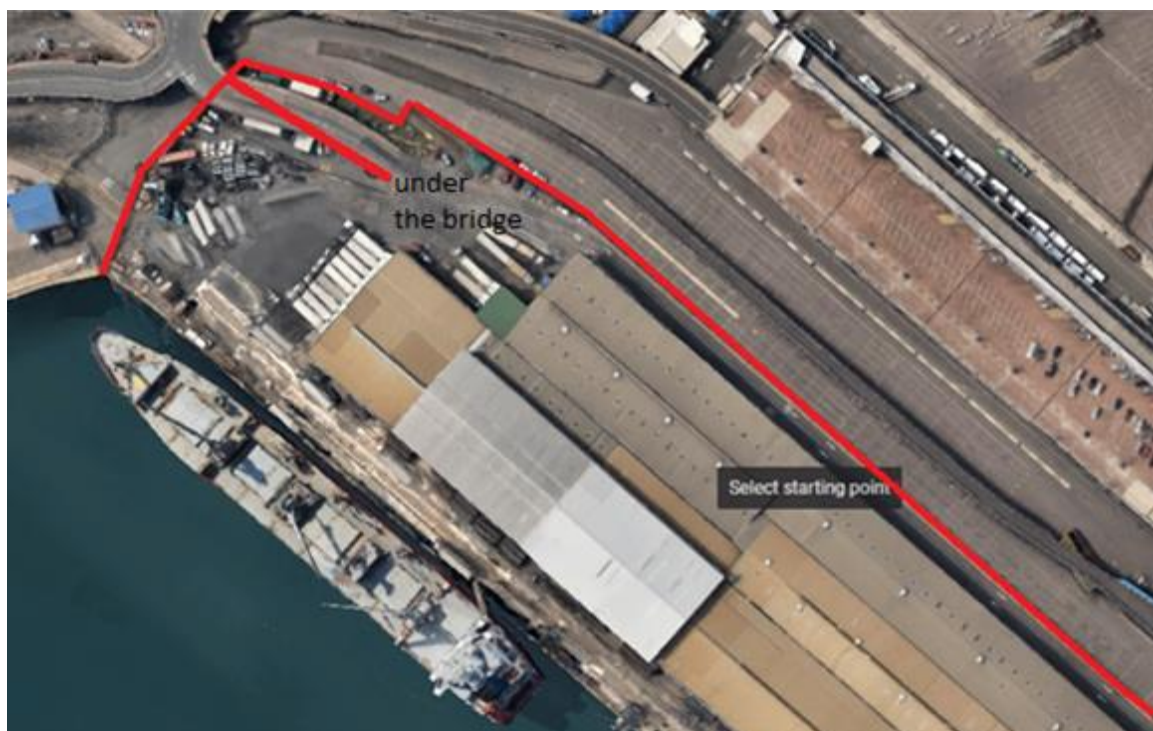


Figure 2: FPT

TRANSNET PORT TERMINAL

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Figure 3: Control Room



Figure 4: Concrete wall

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Figure 5: 111 Offices/ D gate



Figure 6: G Gate to C Berth



Figure 7: MPT Clinic

1.5.2 Maydon Wharf Terminal Installation Sites (Google Maps)



Figure 8: Maydon Wharf (K-block)

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Figure 9: Maydon Wharf Berth 12

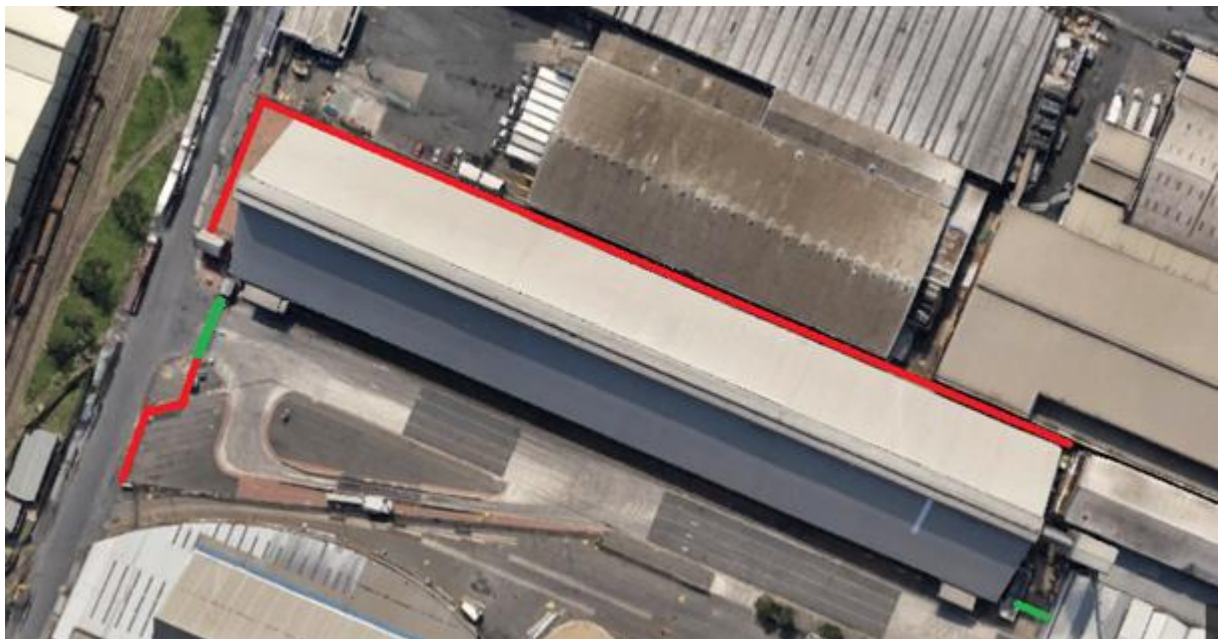


Figure 10: Maydon Main Entrance

TRANSNET PORT TERMINAL
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Figure 11: Maydon Shed 12 M & A

1.5.3 Agri-Port Terminal Installation Sites (Google Maps)



Figure 12: Agri-Port

2 Engineering and the *Contractor's* design

2.1 *Employer's Responsibilities*

- a) No design is provided by the *Employer* (The *employer* has provide minimum guidelines).
- b) The *Employer's* performance requirements for the *works* are contained in the Works Information and all annexures thereto (Typical Transnet Drawings).
- c) The *Employer* grants the *Contractor* a licence to use the copyright in performance data presented to the *Contractor* for the purpose of the works ONLY.
- d) The *employer* has provided minimum requirements to be adhered to and used as guidelines during the procurement, designing and installation. The Contractors scope of Works shall include, but not limited to Typical Transnet Drawings.

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

The *works* that the *Contractor* is to perform *involve* the design, supply, delivery, removal of old fence, installation, and commissioning of Perimeter Fence at BBC Terminal namely Durban Point Terminal, Agri-Port Terminal, and Maydon Wharf Terminal.

The major activities of the *works* include:

- a) The design, supply, and installation of hot dip galvanised steel palisade fencing (refer to Annexure - CAD PALISADE_FENCE_AMEND 9).
- b) The design supply, and installation of high security fence (refer to Annexure - General Specification for High Security Fence).
- c) The design, supply, and installation of steel palisade gates (swing and sliding) with shackles and padlocks
- d) The design supply and installation of turnstile gates.
- e) The supply and install hot dip galvanised concertina security razor wire
- f) Detection of existing underground services
- g) Excavation and provision for concrete footing/ base.
- h) Relocation and or diversion of existing services (electrical, communications, sewer, and water) when it is required.
- i) Careful removal of the existing fence (wire mesh, concrete slabs, and brickwork) and gates where required. Removal of the existing fence and installation of new fence must be done in parallel to seal off the area from impending threats and always provide physical security on the exposed sections during construction.
- j) **Note:** All steel material (fencing, gates, etc.) removed are to be stockpiled in an area identified in each terminal, for TPT's reverse logistics team to dispose of.

- k) Provide skips for waste management.
- l) Disposal of concrete fence waste as per municipality by-laws for concrete/ rubble waste disposal.
- m) The *Contractor* shall provide the *works* in accordance with the Technical, Health and Safety, Environmental, Quality, Industrial relations and Programming requirements as set out in the Works Information.

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

- a) Steel Palisade Fence (Annexure - CAD PALISADE_FENCE_AMEND 9)
- b) Steel Palisade Gate (Annexure - CAD Palisade Swing Gate Details & Annexure - CAD Palisade Sliding Gate Details)
- a) High Security Fence (Annexure - General Specification for High Security Fence)
- c) Turnstile gates
- d) Concrete Foundations

2.2.2 Steel Palisade Panel

- a) Height: Not less than 2400mm above floor level, with an opening below fence (between fence and ground level) not exceeding 50mm.
- b) Post: Approximately 3000mm centres on the posts.
- c) Concrete strength: According to SANS 1200
- d) Vertical pales (palisades) of fencing to be angle iron, at least 40mm x 40mm, and at least 3mm thick.
- e) Top of pales to be profiled to have pointed / spiked finish.
- f) Vertically installed pales to be evenly distributed across each panel to ensure the opening between pales to not exceed 150 mm.
- g) Angle iron cross bars spanning between posts to be angle iron, at least 50mm x 50mm, and at least 5mm thick. At least two cross bars per panel.
- h) Posts: To be square tubes of at least 75mm x 75mm, with a wall thickness of at least 2mm.
- i) Posts to be fitted with a suitable cap, epoxied into position to prevent easy removal, to seal pipe and prevent the ingress of water.
- j) Cross bars to be fixed to the posts by means of brackets. No holes are to be drilled into the posts.
- k) The palisade fence shall be made from hot dip galvanised steel.
- l) All bolt and nuts used in the assembly of the palisade fencing to be off the antivandal type or welds.

2.2.3 Steel Palisade Gate

- a) Gate frames to be made from steel sections compatible to use with palisade panels i.e., match palisade fencing for uniformity.
- b) Height: Not less than 2400mm above floor level.
- c) Vertically installed pales to be evenly distributed across each panel to ensure the opening between pales to not exceed 150 mm.
- d) Concrete strength: According to SANS 1200
- e) Gates, Panels, Posts, Single bolts clamping plates, base plates, fasteners, and bolting must be fully galvanised for use in a marine environment and for extremely high corrosion resistance.
- f) Supply and install pedestrian gate that opens with an inward circular motion. Approximately 1,2m wide galvanized, lockable gates.
- g) Supply and install sliding gate that opens by sliding on the rail. Approximately 8m or 4m x 2 wide galvanized lockable sliding gates complete with rail. All gates to include strong/weight to gate ratio portals and tracks to be at least 75mm where gates are 4m and longer embedded in concrete. The guide wheels to be heavy duty as well due to weather, weight, and the port environment.
- h) Supply and install swing gate that opens inward circular motion. Approximately 8m or 4m x 2 wide galvanized lockable sliding gates.
- i) The gates to be of the same design as palisade panels for design continuity.

2.2.4 High Security Fence

- b) Supply and install new high security fence (see through anti-cut, anti-climb and CCTV optimised and security patrol friendly wall), with required posts.
- c) Gates, Panels, Posts, Single bolts clamping plates, base plates, fasteners, and bolting must be fully galvanised for use in a marine environment and for extremely high corrosion resistance.
- d) Final colour to be moss green (RAL 6005).
- e) Concrete strength: According to SANS 1200.
- f) Refer to "General Specification for High Security Fence" on the annexures or provide a similar product.

2.2.5 Turnstile

- a) It must be hot-dip galvanized to provide best corrosion protection and ensuring prolonged life (Outdoor).
- b) Suited for high volume access.
- c) Heavy-duty latch mechanism rotation locking mechanism.
- d) Bi-directional operation with a manual access button.

- e) Suspended rotor.
- f) Self-centering rotation system.
- g) Mechanical key override - clockwise and anti-clockwise directions (fail-secure).
- h) Installed on top of a plinth and the plinth must be reinforced.
- i) Concrete strength: According to SANS 1200

2.2.6 Concertina Flat Razor Wire

- a) It must be hot-dip galvanized to provide best corrosion protection and ensuring prolonged life.
- b) 500mm Coil Diameter Galvanized Concertina Flat Wrap Razor Wire.
- c) The installation requires additional hot dip galvanised vertical uprights supports.
- d) Flat wrap

2.2.7 All required temporary works. Temporary works are all works other than the permanent works which shall be removed from the Site on Completion of the works.

2.2.8 Further details of design and performance requirements for the parts of the works which the Contractor is to design are provided in the relevant technical specifications included within annexures which forms part of this Works Information

2.2.9 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.

2.2.10 All designs/calculations must be done by an authenticated and authorized Professional Engineer/Professional Technologist registered with the Engineering Council of South Africa. The Contractor shall submit to the Project Manager details of the Professional Engineer/Professional Technologist registered with the Engineering Council of South Africa prior to starting any design of temporary or permanent works. The Contractor shall submit to the Project Manager for acceptance all design calculations and drawings for all temporary and permanent works.

2.2.11 The Contractor shall be responsible for full compliance with all codes of practice, safety, professional procedures, checking, Site approval and requirements of the construction regulations with regards to all works including developing and submitting maintenance plans for acceptance by the Project Manager for all works designed by the Contractor.

2.2.12 Unless expressly stated to form part of the design responsibility of the Employer as stated under clause 2.1 and whether or not specifically stated to form part of the design responsibility of the Contractor under this clause 2.2, all residual design responsibility and overall responsibility for the total design solution for the works rests with the Contractor.

2.3 Procedure for submission and acceptance of Contractor's design

2.3.1 The Contractor shall address the following procedures:

- All designs done by the *Contractor* must comply with all relevant SANS and SABS must be approved by Professional registered personnel with ECSA.
- A hardcopy of the design, approved by Professional registered personnel with ECSA, must be supplied to the *Project Manager* for approval.
- After the approval both a hard copy of the design as well as USB with Adobe Acrobat (PDF) and "Native" file format of the design must be supplied to the *Project Manager*.

Acceptance of documentation by the *Project Manager* in no way relieves the *Contractor* of his professional indemnity responsibility for the correctness of information, or conformance with the requirements of the Works Information. This responsibility rests solely with the *Contractor*.

2.4 Review and Acceptance of *Contractor* Documentation

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

The Approval of relevant documents will have a lead time of ten (10) working days for acceptance by the *Project Manager*.

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

2.5 Use of *Contractor's* design

2.5.1 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*.

2.5.2 The *Contractor* vests in the *Employer* full title guarantee in the intellectual property and copyright in the design data created in relation to the *works* as follows:

- 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 future tenders and construction of modular facilities.

2.6 Design of Equipment

2.6.1 The principal Equipment categories deployed for the *Contractor* to provide the *Works* require its design to be accepted by the *Project Manager* under **ECC Clause 23.1**

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

2.7.1 The *Contractor* provides the following:

- As Built /Final Documentation
- Plan view from start to end and left to right hand boundaries is required.

- c) All elements are to be on separate layers. Example, points, codes, and elevation are to be on separate layers. Every different element is to be on a separate layer. Note that no "z" values are to be saved to any lines or points.
- d) Topographical survey shall be provided in the form of hard copies to a scale of 1:500 as well as a magnetic medium in a format assessable by Microstation and AutoCAD (.dwg and/or .dxf format) on a USB.
- e) In undertaking the works (including all incidental services required), the *Contractor* shall conform and adhere to the requirements of the Contractor Document Submittal Requirements Standard included in the Annexures (Refer DOC-STD-0001 Rev 03).
- f) All Red Line information to be signed off by *Contractor's* responsible Professional Engineer/Technologist before issue to the *Project Manager*.

2.7.2 Installation, Maintenance and Operating Manuals and Data Books

- a) The *Contractor* provides manuals in an A4 hard covered, red, grease and waterproof binder, using 2 ring type binders. The manuals are well indexed and user friendly and include a summarized Table of Contents.
- b) Drawings and charts larger than A4 are folded and those greater than A3 are enclosed in an A4 plastic pocket of adequate strength.
- c) The *Contractor* submits the draft Table of Contents to the *Project Manager* for acceptance prior to the compilation and official submittal of the manuals.
- d) The originals of all brochures shall be issued to the *Project Manager*. When a general brochure is applicable to a range of equipment, then the specific item, catalogue number or model number shall be stated, which is best achieved by introducing a separate index page, which cross-references the specific item to a tag number.
- e) The address, phone numbers, fax numbers and reference numbers of all Subcontractors is provided.
- f) Where manuals include drawings that still need to be revised to "As-Built" status, and such manuals are required prior to 'As-Built' status, the manual will not be considered to be in its final form until the "As-Built" version of each such drawing has been incorporated.
- g) The required number of copies of the manual (s) shall be as specified by the *Project Manager* and submitted per type or model number of equipment included in the contract, or as specified by the *Project Manager*.
- h) All electronic copies (pdf.) of Data Packs to be properly indexed.
- i) A typical example of what the binder/file (s) shall be marked with on the spine and the front cover is as follows: -
 - Project Name
 - Manual Title, e.g. Installation, Maintenance and Operating Manual
 - Title

- Manual Numbering (e.g. Volume 1 of 2, etc.)
 - Contract Number
 - *Contractor* Name
- j) Unless otherwise stated elsewhere the required number of copies of as built/Final documents/drawings shall be:
- 2 x hard copies (full size)
 - USB with Adobe Acrobat (PDF) and "Native" file format.

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 *Contractor* complies with the *Employer's* Site entry and security control, permits, and Site regulations.
- The *Contractor* arranges for ID cards to all *Contractors'* employees for access/egress of personnel (and Equipment) within the Site boundaries.

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

- a) All *Contractor* staff entering the Transnet Port Terminal (TPT) facility will undertake an alcohol breathalyser on a daily basis
- b) All relevant PPE must be worn by Site personnel when entering the Port.
- c) All vehicle permits must be obtained prior to site access
- d) All relevant personnel inductions must be done prior to site access being granted.

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

- a) The *Contractor* is specifically excluded from entering the *Employer's* Operational Areas which are adjacent to the Site and Working Area. The *Contractor* plans and organises his work in such a manner so as to cause the least possible disruption to the *Employer's* operations (Where required, the contractor to provide Traffic Management)
- b) The *Contractor* ensures the safe passage of *Contractor's* traffic to and from the Site and Working Areas at all times that includes providing flagmen, protective barriers, signage, etc. for the protection, direction, and control of traffic.
- c) The *Contractor* ensures that none of his personnel and Equipment will be allowed to move outside of his allocated Site and Working Areas. To this end, access routes are allocated and co-ordinated by the *Project Manager*.
- d) The *Contractor* ensures that all his construction personnel and Equipment remains within his allocated and fenced off construction area.
- e) The *Contractor's* personnel working within Transnet Port Terminal complies with Transnet National Port Authority (TNPA) operational safety requirements and are

equipped with all necessary PPE, high visibility apparel and, when working within two meters of the quay wall, floating apparel (To be supplied by the contractor)

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

- a) Access permissions and restrictions for all personnel and equipment will apply
- b) All personnel to remain within the site boundary at all times

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

- a) The working hours shall be in accordance with the requirements of the Department of Labour or with the agreement of the relevant trade unions. This information relating to working hours shall be supplied to the Project Manager prior to commencement of the proposed working hours.
- b) In the event that the Contractor requests to work overtime to make up for time lost due to his own delays, the Contractor will be liable for the supervision cost required from The Employer's team during The Works.
- c) The Contractor complies with a nine (9) hour a day, five (5) day a week standard workday/week for all activities to be undertaken by his people (including Sub-Contractors) employed on site.
- d) The *Contractor* keeps daily records of his people engaged on the Site and Working Areas (including Subcontractors) with access to such daily records available for inspection by the *Project Manager* at all reasonable times.

3.1.6 Health and safety facilities on Site to comply with the OSH ACT.

3.1.7 The *Contractor* provides a notice board in terms of Transnet requirements at a location to be approved by the *Project Manager* on site.

3.1.8 The *Contractor* provides progress photographs at weekly intervals in electronic format to the *Project Manager*.

3.1.9 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*.

3.1.10 Site services and facilities:

- a) For the duration of the Contract, the *Project Manager* will provide an area, free of charge, of the *Contractor* to establish his offices, lay down areas, stores, workshops, and other *Contractor's* Equipment when needed.
- b) No connection to the sewer system will be made available to the *Contractor*, therefore a *Contractor* shall provide portable chemical type toilets for use on site by his people.
- c) All costs for preparation of the site establishment area are for the *Contractor's* account.
- d) The *Contractor* is responsible for his own connection to the *Employer's* services and for the reticulation of his services from the connection point. The cost of meters,



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

- e) The *Contractor* provides, at his own cost, a sufficient number of toilets and maintains them in a clean and sanitary working condition. Safe disposal certificates to be obtained for all waste removed.
- f) The *Supervisor* (or his nominated representative) conducts routine inspections of the *Contractor's* construction power reticulation and power tools. If found to be un-safe and / or non-compliant with statutory requirements, the electrical power supply is disconnected until the Contractor rectifies all defaults.
- g) The *Contractor* provides temporary lighting and fencing around every section occupied by him during the construction of the works in accordance with the Traffic Management Plan.
- h) Such fencing demarcates and secures the construction area. The fencing is erected before any work starts and is removed only upon completion of the work in the area.
- i) The *Contractor* includes for all costs for such lighting and fencing, including access control into and out of these restricted areas.
- j) Wherever the *Contractor* provides facilities (either his own or for the *Project Manager* and/or *Supervisor*) and all items of Equipment, involving, *inter alia*, offices, accommodation, laboratories, Materials storage, compound areas etc, within the Working Areas, then the *Contractor* makes good and provides full reinstatement to the land (including all apparatus of the *Employer* and Others in, on or under the land) and surrounding areas to its original standard, upon dismantling of such facilities and items of Equipment.
- k) Upon completion, and within one month of the date of acceptance of the works, the *Contractor* completely removes from the Site and Working Area all his Equipment, including the foundations of any structures, stores, office accommodation or any other asset belonging to him, and leaves the Site and Working Areas in a tidy condition to the satisfaction of the *Project Manager*.
- l) No excess or discarded materials or Equipment may be buried or dumped within the port boundary.
- m) Demolition of all temporary structures, surfaces, etc., shall be first approved by the *Project Manager* prior to the work being carried out.
- n) The *Employer* does not provide any security for the Site and Working Areas. The *Contractor* provides same and indemnifies and hold indemnified the *Project Manager* and *Employer* against any claims and actions that may arise out of Site and Working Areas security.
- o) No housing is available for the *Contractor's* employees. The *Contractor* makes his own arrangements to house his employees and transports them to site in a closed

vehicle specifically designed for passenger transport (bus or similar), accepted by the *Project Manager*.

p) The *Contractor* shall provide everything else necessary for Providing the Works.

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

3.1.12 Facilities provided by the *Contractor*:

- The *Contractor* ensures that this site establishment area is compliant with the relevant safety regulations and restrictions, is clearly sign posted, and has a suitable security fence, lighting, and the necessary access control gates.

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

3.1.14 Unless expressly stated as a responsibility of the *Employer* as stated under 3.1.10 Site services and facilities, all residual requirements for the provision of facilities and all items of Equipment necessary for the *Contractor* to Provide the Works remains the responsibility of the *Contractor*.

3.1.15 Underground services, other existing services, cable, and pipe trenches and covers

- a) Where the *Contractor* encounters existing underground services or existing service cables, the *Contractor* undertakes the following:
- b) The *Contractor* is required to liaise with the *Project Manager*, and the Supervisor and The *Employer's* Engineers, and establish as accurately as possible the location of the various existing services situated within the Work Area and record all such information on a suitable "marked-up" drawing for reference at all times.
- c) In addition to the above, the *Contractor* shall consult the *Project Manager*, the Supervisor and The *Employer's* Engineers, prior to undertaking any excavation work.
- d) Where the *Contractor* encounters existing underground services / existing services cables / pipe trenches, the *Contractor* is to notify the *Project Manager*, the Supervisor and The *Employers* Engineers.



- e) Where the encountered services are causing a delay in the provision of *The Works*, the *Contractor* shall approach the *Project Manager*, the Supervisor and *The Employer's* Engineers for a decision by submitting a Field Engineering Query (FEQ), including his recommendations.
- f) The *Contractor* shall then provide the solution described in the answered FEQ.
- g) The *Contractor* must thereafter exercise due care and attention in carrying out the agreed excavation Works and any Works as may be directed by the *Project Manager* to avoid damage or disruption to existing services.
- h) The *Contractor* shall be liable for all claims arising out of any damage caused by such excavation if the *Contractor* fails to exercise the requisite care and attention in carrying out the excavation.
- i) The cost of locating and protecting, if necessary, services shall be included in the rates for the services intersecting and adjoining the trenches.
- j) A group of cables intersecting or adjoining a trench will be regarded as one service.
- k) The existing services shall be protected when excavating.
- l) The costs of protecting these services shall be included in the rates for excavation and compaction.
- m) All existing services shall be treated as in service and "live". All necessary Safety Instructions of *The Employer* and statutory requirements as per the OHS Act and its Regulations shall be complied with in the handling of the "live" service.
- n) In the case of electrical services, the *Contractor* shall trace, locate, and identify all cables within the service and record the information as per this Works Information above.

3.1.16 Control of noise, dust, water, and waste

- a) Before moving Equipment onto the Site and Working Areas and commencing The Works, the *Contractor* submits his proposed methods of construction (In accordance with TIMS Environment and Sustainability Contractor Specification Guideline) which demonstrate the measures taken to avoid and or reduce any environmental and health issues arising from dust, noise, and vibration for acceptance by the Project Manager.
- b) The Contractor shall comply with the requirements of "Environmental constraints and management" of Section C3.1 Employer's Works Information.
- c) The Contractor shall comply with the requirements of "Safety risk management" of Section C3.1 Employer's Works Information.
- d) The *Contractor* is to provide dust suppression as per the SOP: CEM, CESSG and PES documents to ensure that dust levels resulting from the *Contractor's* construction traffic are kept to the required safety and environmental standards as specified in the relevant project environmental specifications.

3.1.17 Excavations and associated water control

- a) Where applicable, the *Contractor* protects all excavations against any water ingress whether by seepage, rains, storms, floods, or any other means.
- b) Where applicable, the *Contractor* immediately removes any water found in the excavation by pumping and / or bailing provided the removal of water complies with the National Water Act (Act 36 of 1998) and provides all necessary Equipment (pumps, pipes, etc.) to do so.
- c) Water is cleared in such a way that it cannot seep or flow back into the excavations.
- d) The *Contractor* shall install shoring where necessary, and in all deep excavations to ensure that the sides of the excavation does not collapse.
- e) The *Contractor* shall comply with *The Employer's* TIMS Policy Commitment Statement in all respects for the Provision of *The Works* involving deep excavations.
- f) All activities related to excavations and water control forms part of this contract, and the *Contractor* shall make allowance for these activities in his Price and Programme.

3.1.18 Giving notice of work to be covered up:

- a) The *Contractor* notifies the *Supervisor* in writing of any elements of *The Works* which are to be covered up. This notification is given not less than 48 (forty-eight) hours prior to the proposed covering up.
- b) The *Contractor* shall not cover *The Works* without the authorization of the Supervisor.
- c) The *Contractor* shall make the *Project Manager* and Supervisor aware of any tests and inspections required by *The Employer's* Quality Management Procedures. Notification of required test and/or *The Employer's* Engineers inspections to be given 24 (twenty-four) hours in advance.

3.2 Completion, testing, commissioning, and correction of Defects

3.2.1 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 the work listed below which is to be done before the Completion Date and in any case before the dates stated. The *Project Manager* cannot certify Completion until all the work listed below 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.



Item of work	To be completed by
Submission of all data packs, quality assurance records and as-built drawings	Within two weeks after completion of construction

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

4 Plant and Materials Standards and Workmanship

4.1 Civil Engineering and Structural Works

- 4.1.1 The SANS 1200 Series of Specifications are applicable to all Civil Engineering and Structural works associated with this contract. The following interpretations and meanings shall apply:
- 4.1.2 In case of any conflict in interpretation, ambiguity, or discrepancy between any SANS 1200 Specification (whether standard or written as a particular project specification) contained in the *Works Information* and the conditions of contract, the conditions of contract take precedence within the ECC contract.
- 4.1.3 In case of any conflict in interpretation, ambiguity or discrepancy between any SANS 1200 Specification (whether standard or written as a particular project specification) contained in this paragraph 4.3 of the *Employer's Works Information* and specific statements contained elsewhere in C3.1 *Employer's Works Information*, the specific statements contained elsewhere shall prevail, without prejudice to the *Project Manager's* express duty to resolve any ambiguity or inconsistency in the *Works Information* under ECC Clause 17.1.
- 4.1.4 Within SANS 1200 A: GENERAL, the following amendments and interpretations shall apply:
- Where the word or expression "Employer" is used, read "*Employer*";
- Where the word or expression "Contractor" is used, read "*Contractor*";
- Where the word or expression "Engineer" is used, read "*Project Manager*" or "Supervisor" as the context requires;
- Where the word or expression "schedule of quantities" is used, this is deleted in entirety. Assessment and payment is in accordance with the *conditions of contract* (and the ECC main and secondary options stated therein);
- 4.1.5 Within SANS 1200 A: GENERAL 2.3 DEFINITIONS, the following apply:
- "Acceptable. Approved (Approval)" is interpreted as either a *Project Manager* or a *Supervisor* communication or instruction in relation to Works Information compliance, consistent with the *conditions of contract* as the context requires;



"Adequate" is deleted. The *Project Manager* notifies the *Contractor* where the *Contractor* has not complied with the *Works Information*;

"Measurement and payment" and the further definitions contained within 6.3 c) are deleted. Assessment and payment is in accordance with the conditions of contract (and the ECC main and secondary options stated therein);

4.1.6 Within SANS 1200 A: GENERAL 2.6 APPROVAL, the following applies:

"Approval" by either the *Project Manager* and/or the *Supervisor* is without prejudice to ECC Clause 14.1 and, inter alia, ECC Clauses 13.1, 14.3 and 27.1.

4.1.7 SANS 1200 A: GENERAL 2.8 ITEMS IN SCHEDULE OF QUANTITIES, is deleted in entirety. Assessment and payment is in accordance with the *conditions of contract* (and the ECC main and secondary options stated therein).

4.1.8 SANS 1200 A: GENERAL 3.2 STRUCTURES AND NATURAL MATERIAL ON SITE, applies only to the extent that it is consistent with paragraph 3.1.6 of C3.1 *Employer's Works Information*.

4.1.9 Within SANS 1200 A: GENERAL 7.1 PLANT, the following applies:

Where the word or expression "Plant" is used, read "Equipment".

4.1.10 SANS 1200 A: GENERAL 7.2 CONTRACTOR'S OFFICES, STORES AND SERVICES, applies but the *Project Manager* resolves any inconsistency with statements included within paragraph 3.1.12 of C3.1 *Employer's Works Information*.

4.1.11 SANS 1200 A: GENERAL 3.1 SURVEY, applies only to the extent that it is consistent with paragraph 3.1.14 of C3.1 *Employer's Works Information*.

4.1.12 Within SANS 1200 A: GENERAL 3.2 WATCHING, BARRICADING, LIGHTING AND TRAFFIC CROSSINGS, the following applies:

Where the word or expression "specification" is used, read "Works Information".

4.1.13 SANS 1200 A: GENERAL 3.4 PROTECTION OF OVERHEAD AND UNDERGROUND SERVICES applies only to the extent that it is consistent with the specific statements made elsewhere in C3.1 *Employer's Works Information* and in any case and at all times consistent with the *conditions of contract*.

4.1.14 Within SANS 1200 A: GENERAL 5 TESTING, the following applies:

Where the word or expression "Engineer" is used, read "*Supervisor*".

4.1.15 SANS 1200 A: GENERAL 8 MEASUREMENT AND PAYMENT, is deleted in entirety. Assessment and payment is in accordance with the conditions of contract (and the ECC main and secondary options stated therein).

4.1.16 The principles, meanings and interpretation stated and established within paragraphs 6.3.1 to 6.3.15 with respect to SANS 1200 series and to SANS 1200 A: GENERAL equally apply to the other SANS 1200 specification references used within this paragraph 6.3 of C3.1 *Employer's Works Information*.

4.1.17 Demolition and earthworks:

This part covers the demolition of the existing fence at Durban Point, Agri-port and Maydon Wharf Terminals for the construction of the *works*.

a) Supporting Specifications

This specification must be read in conjunction with the following specifications:

SANS 1200 DA: Earthworks (small works)

SANS 1200 MF: Base

b) Making good of existing surfaces

The *Contractor* shall ensure that all surfaces that are damaged during the construction are to be repaired to a satisfactory condition and to match the existing surface. Any damage to the adjacent surfaces shall be repaired by the *Contractor* to the satisfaction of the *Project Manager*.

c) Materials

All vegetation, trees, etc. resulting from site clearance shall be removed off site to a disposal dump to be selected by the *Contractor*. The haulage, dump costs and any levies etc. shall be deemed to be included in his tendered rates. Burning of materials on site shall not be permitted.

d) Cement

Common cements, complying with SANS 50197-1 shall be used for all concrete work. On no account shall masonry cements be used for concrete work, even if the strength designations are the same as for common cements.

e) Coastal Zone

In this application, which is within one kilometre of the sea, one or more of the following Portland cementations binders shall be used in all applications:

Blast furnace cement, Type III/A, certified as containing not less than 40% and not more than 50% milled granulated blast furnace slag (MGBS), or a blend of Type 1 Portland cement with not less than 40% and not more than 50% MGBS. MGBS shall comply with SANS 1491 Part 1.

Fly ash cement Type II/B-V or Portland fly ash cement Type II/B-W, certified as containing not less than 25% and not more than 30% fly ash shall comply with SANS 1491 Part 2.

f) Alkali Reactive Concrete

Alkali Reactive Aggregates shall not be used in this project. The equivalent Na₂O content of the concrete shall not exceed 2,0 kg/m³ where % Na₂O equivalent = % Na₂O + (0,658 x % K₂O).

g) Aggregates

Fine and coarse aggregate shall comply with the relevant clauses of SANS 1083.

Where aggregates have constituents, which, in the opinion of the *Supervisor*, may give rise to damage due to alkali-aggregate reactions, the provisions of PS: C2.3 shall be applicable.

Evidence of compliance of the aggregates with the requirements of PS: C3.1 & C3.2 shall be furnished as early as practical. If required by the *Project Manager*, the *Contractor* shall submit 40 kg samples for approval at least 6 weeks prior to the start of concrete construction. No aggregate shall be delivered for use in the works until approval is given.

h) Curing Period

The curing period for concrete containing only CEM 1 shall be 7 days.

The curing period for concrete containing CEM 1 plus cement extenders (MGBS, FA) shall be 10 days.

The curing period will start on completion of the concrete pour and for formed surfaces shall include the time for which forms are still in place after the pour.

SECTION 2

5 Management and start up

- a) 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 minimising the adverse effects of risks and surprises for both parties.
- b) Depending on the size and complexities of the Works, it is probably beneficial for the Employer to hold a weekly risk register meeting (Clause 16.2). This could be used to discuss safety, environmental, compensation events, subcontracting, overall co-ordination, and other matters of a general nature. Separate meetings for specialist activities such as programming, engineering, and design management, may also be warranted.

5.1 Management meetings

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:
Risk register and compensation events	Weekly on (or at shorter intervals if required)	On site / Virtual	<i>Project Manager, Supervisor, Contractor</i> , and appropriate key persons
Overall contract progress and feedback	Every two weeks	On site / Virtual	<i>Employer, Project Manager, Supervisor, Contractor</i> , and appropriate key persons

TRANSNET PORT TERMINAL

CONTRACT NUMBER: ICLM HQ 641/TPT

DESCRIPTION OF THE WORKS: DESIGN, SUPPLY, DELIVERY, INSTALLATION AND COMMISSIONING OF BBC PERIMETER FENCE FOR TRANSNET SOC LTD (REG.NO 1990/000900/30) OPERATING AS TRANSNET PORT TERMINALS (HEREINAFTER REFERRED TO AS "TPT") AT THE PORT OF DURBAN POINT TERMINAL (MPT), AGRI-PORT AND MAYDON WHARF TERMINAL

TRANSNET



Technical Meetings	Every two weeks	On site / Virtual	<i>Project Manager, Supervisor, Contractor, and appropriate key persons</i>
Planning Meetings	Weekly	On site / Virtual	<i>Employer, Project Manager, Supervisor, Contractor, and appropriate key persons</i>

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

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

5.2 Documentation Control

- In undertaking the *works* all documentation requirements for the *works* shall be dealt with in accordance with document DOC-STD-0001 – Rev03 (*Contractor* Documentation Submittal Requirements). The control, maintenance and handling of these documents and drawings, using a suitable document control system, remain the sole responsibility of the *Contractor*.
- TPT's Project Document Controller will take the responsibility for the management of all technical and non-technical documentation throughout the life cycle of the Project. All documentation produced for and on behalf of the project will be registered with document control and its management thereof.
- This will include the registration, classification, managing, scanning, tracking, filing, storing, distribution and filing of all hardcopy and electronic documentation generated for and on behalf of the project.
- All documentation and data created for the Project shall be numbered and named according to the TPT Codification Procedure. Such numbering is only available from the Project's Document Control Group.
- All contract correspondence is issued through document control. All communication to submitted electronically and is to be addressed to the Project Manager and Transnet Port Terminals Doc Control mailbox at all times email: DBNDocControl@transnet.net
- 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.

- g) 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 Doc Control DBNDocControl@transnet.net to replace the out-dated information.
- h) 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 and Scope of Work.
- i) Electronic files submitted to the Project shall be clear of known viruses and extraneous "macros". The supplier of documentation is required to have, at all times, the latest generation of virus protection software and up-to-date virus definitions.
- j) 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. Eg One drive should be used for document submission that exceed the email space requirement.
- k) The *Contractor* shall be responsible for the supply of all Sub-Supplier/*Contractor*/Manufacturer, etc. documentation and data related to their package of work and shall ensure that these Sub-Suppliers have the capability to supply the necessary documentation and data in the required time-frame and quality as outlined in the specified standards prior to awarding sub-orders.
- l) The required number of copies shall as a minimum be three (3) (1x original + 2 x hard copies), with the corresponding electronic PDF and 'Native' file formats upon final submission.
- m) The *Contractor* shall apply "wet signatures" to the original Documentation before scanning the signed original and prior to formal submission to the Project.
- n) 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.

The *Contractor* shall ensure adequate resources are available to manage and execute the Document Control function as per the requirements of the Project. (*The Contractor* shall ensure that a dedicated Document).

5.3 Safety risk management

5.3.1 Health and Safety Standard

- The *Contractor* must comply with the requirements of the Project Health and Safety Specification – PHSS-0001 and OHS Act No. 85 of 1993 and its applicable Regulations.

5.3.2 *Contractor's* General Requirements for Health and Safety

The *Contractor* is solely responsible for carrying out the work under the Contract having the highest regard for the health and safety of its employees, Transnet's employees and persons at or in the vicinity of the Site, the *works*, temporary work, materials, the property of third parties and any purpose relating to the *Contractor* carrying out its obligations under this Contract.

The *Contractor* must initiate and maintain safety precautions and programs to conform to all applicable Health and Safety laws or other requirements, including requirements of any applicable government instrumentality and client corporate, business unit and site requirements. The *Contractor* must, at its own cost, erect and maintain safeguards for the protection of workers and the public. The *Contractor* must manage all reasonably foreseeable hazards created by performance of the work. The *Contractor* must:

- Provide all things and take all measures necessary for maintaining proper personal hygiene, ensuring safety of persons and property and protecting the environment at or near the Site.
- Avoid unnecessary interference with the passage of people and property at or near the Site.
- Prevent nuisance and excessive noises and unreasonable disturbances in performing the Services.
- Be responsible for the adequacy, stability and safety of all of its site operations, of all its methods of design, construction and work and be responsible for all of the work, irrespective of any acceptance, recommendation or consent by TPT, its *Contractors*, employees, agents and invitees, or any Government Body.

Costs for the above are borne by the *Contractor*.

The *Contractor* must comply and is responsible for ensuring that all of its Subcontractors comply with the relevant legislation(s) and statutory regulations for health and safety, the Transnet Health and Safety requirements included in the Contract and other document pertaining to health & safety contained in the Programme Health & Safety Management System and include standards, policies, procedures, guidelines and safe work instructions.

5.3.3 *Contractor's* Health and Safety Management

The *Contractor* must prepare, implement and maintain a project-specific Health and Safety Management Plan. The plan must be based on the requirements set out in this Project Health and Safety specification as well as all applicable legislation. It must cover all activities that will be carried out on the project site(s), from mobilisation and set-up through 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) A copy of the *Contractor's* Health and Safety Policy; in terms of the OHS Act section 7;
- b) Procedures concerning Hazard Identification and Risk Assessment, including both Baseline and Task-Based Risk Assessments;
- c) 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;
- d) Details concerning Health and Safety Objectives – a process must be in place for setting objectives (and developing associated action plans) to drive continual improvement;
- e) 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;
- f) 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;
- g) Communication, Participation and Consultation arrangements concerning health and safety, including Toolbox Talks, Daily Safe Task Instructions, project health and safety meetings, and notice boards;
- h) 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;
- i) 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.;
- j) Emergency Preparedness and Response procedures;
- k) Management of Change – a process must be in place to ensure that health and safety risks are considered before changes are implemented;
- l) Sub-*Contractor* Alignment procedures – a process must be in place for the assessment of Subcontractors and suppliers with regard to health and safety requirements and performance (before any contract or purchase order is awarded);



- m) 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;
- n) Incident Reporting and Investigation procedures describing the protocols to be followed with regard to incident reporting, recording, investigation and analysis;
- o) Non-conformance and Action Management procedures concerning the management of corrective actions;
- p) 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
- q) Details concerning the Management Review process followed to assess the effectiveness of health and safety management efforts.
- r) The *Contractor* shall comply with OH&S Act – Section 8, 9, 13 and 16 and the Construction Regulations 2014.
- s) The *Contractor* must nominate and appoint a responsible person on site to whom the *Project Manager* may refer in connection with the *works*. Persons are nominated for all shifts worked or whilst any activity relating to the Contract is being performed on site, and must have the authority to bind the *Contractor* with respect to the Contract. (OH&S Act - 16 Section (2)).
- t) The *Contractor* must ensure that the performance of all specified *works* is supervised throughout by a sufficient number of qualified and competent appointed representatives of the *Contractor*, who have experience in the type of work specified. (OH&S Act – Construction Reg. 8 (1) and 8 (2).)
- u) Note: No work may commence and or continue without *Supervisory* Appointees present on site. The *Contractor's* Site *Supervisor* must be equipped with a mobile telephone with message bank and/or pager or an equivalent communication device so that communication throughout the Contract can be maintained at all times.
- v) The *Contractor's* Site *Supervisor* must provide a list of names and contact telephone numbers of all *Contractors* and Subcontractor's contact persons on Site. This list is updated as a new *Contractor* or Subcontractor employee commences on Site.
- w) The *Contractor's* Site *Supervisor* must keep a record of all employees, including date of induction, relevant skills and licenses, and be able to produce this list at the request of the *Supervisor*.
- x) The *Contractor's* Site *Supervisor* must complete manning sheets describing the day's activities, labor numbers and classifications and issue these to the *Supervisor* prior to 9.00 am on a daily basis.
- y) The *Project Manager's* Site Safety Representative is notified of any new starter with evidence of induction and site specific induction prior to commencement of work.

5.3.4 *Contractor's Safety Officer*

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). If more than 100 employees are deployed on the project site(s) (directly or through sub-*Contractors*), at least two full-time Health and Safety Officers must be appointed, with an additional Health and Safety Officer appointed for every 100 additional employees thereafter.

The Health and Safety Officer 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 an additional Health and Safety Officer.

Each *Contractor* Health and Safety Officer shall be responsible for:

- a) Reviewing all applicable legal and project health and safety requirements and providing guidance to *Contractor* and Subcontractor personnel (particularly the *Contractor's Project Manager*) to help ensure compliance at all times;
- b) Assisting with the implementation of effective hazard identification and risk management processes for all work to be carried out by the *Contractor*;
- c) 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;
- d) 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;
- e) Conducting *Contractor* health and safety induction training for all *Contractor* and Subcontractor personnel;
- f) Compiling and maintaining all health and safety related documents and records required of the *Contractor*;
- g) Communicating relevant health and safety information to *Contractor* and Subcontractor personnel (e.g. incidents and lessons learnt, leading practices, hazards, risks and control measures, etc.);
- h) Carrying out Safety Observations and Coaching (one per day);
- i) 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;
- j) Attending monthly *Contractor* and Site Health and Safety Meetings;
- k) Assisting with the implementation of the *Contractor's* Health and Safety Management Plan and associated Safe Work Procedures;

- l) Carrying out Planned Task Observations on an ad hoc basis;
- m) Assisting with the implementation, testing and maintenance of an effective Emergency Response Plan for all *Contractor* and sub-*Contractor* activities;
- n) Responding to workplace incidents (as appropriate);
- o) Participating in incident investigations;
- p) Maintaining accurate health and safety statistics (for the *Contractor* and all Subcontractors), and compiling health and safety performance reports as required;
- q) Auditing the health and safety management system and workplace activities of the *Contractor* and each Subcontractor on a monthly basis to assess compliance with the project health and safety requirements; and
- r) Tracking and reporting on the implementation of corrective actions (arising from incident investigations, audits, inspections, etc.).

The *Contractor* must ensure that they have made adequate provision of safety officers as per the *Works Information*. The *Contractor* must ensure that the 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) A computer with access to all necessary systems, including access to e-mail and the internet;
- b) A mobile telephone on contract or with adequate pre-paid airtime; and
- c) A vehicle where required or instructed by a nominated project management representative (depending on the size and location of the project site(s)).
- d) A Health and Safety Officer must be computer literate, fluent in English, and must have the following minimum qualifications, training, and experience:
- e) At least 5 years' experience as a Health and Safety Officer on construction, and mechanical projects;
- f) SAMTRAC or NEBOSH or Modern SHEQ Risk Management training course as a minimum qualification;
- g) Experience and appropriate training with regard to implementing and maintaining a health and safety management system compliant with national legislation or an international standard;
- h) Experience and appropriate training with regard to construction related hazard identification and risk management processes;
- i) Competence, experience and relevant training with regard to incident investigation procedures and causation analysis;
- j) Health and safety auditing experience and training;
- k) A valid First Aid certificate of competency;
- l) Fire prevention and protection training; and
- m) A valid Driving License (light motor vehicle).

- n) Registered as a Health and Safety Officer with SACPCMP.
- o) Before placing a SHE Officer on the project site(s), the *Contractor* must forward a copy of the person's CV to the nominated project management representative or to TPT Health and Safety Manager and TPT Project Environmental Resource for review and acceptance. A proposed candidate may be rejected should he not meet the experience and/or qualification requirements, or due to poor work performance on previous projects.

5.3.5 *Contractor's Safety Manual*

The *Contractor* must provide a hard copy of its safety manual, policies and procedures to the *Project Manager* for acceptance prior to the commencement of any site work. The *Contractor* must ensure that his personnel, at all times, strictly observe and comply with the procedures set out therein. The *Project Manager* or the *Project Manager's* nominated Representative may from time-to-time request safety procedures applicable to the area of operations. The *Contractor* must forward to the *Project Manager* any updates or revisions to its safety manuals, policies or procedures as soon as practicable following revision or update.

The *Project Manager* may require the *Contractor* from time to time to supplement its safety manual, policies and procedures with guidelines and/or operating standards provided to the *Contractor* by the *Project Manager*. The *Contractor* must comply with such requests where the request is consistent with the requirements of the Contract. The *Contractor* must give prompt written notice to the *Project Manager* of any objection to the requested supplement, including the reasons for objection. The *Project Manager's* rights under this Clause are not intended, and must not be construed, to relieve the *Contractor* from any obligations to ensure compliance with all provisions of this Contract.

5.3.6 Performance Measurement and Reporting

a) Health and Safety Statistics

The *Contractor* and each of its Subcontractors must complete and submit Health and Safety statistics to the *Project Manager* or the *Project Manager's* nominated representative, or as amended by the *Project Manager*, before mid-day on the Friday of each week. The *Contractor* must submit monthly Health & Safety Statistics before mid-day on the last day of each month to the *Project Manager's* nominated representative.

b) Safety Management Records

The *Contractor* must submit to the *Project Manager* for acceptance a schedule of the specific Health and Safety records it intends to maintain for the Contract. As a minimum, such records are as specified by applicable legislation. Copies are provided

to the *Project Manager* or the *Project Manager's* nominated Representative if requested.

c) Field Technical/Safety Audit by the *Project Manager*

The *Project Manager* or the *Project Manager's* nominated Representative has the right to conduct audits/inspections of the Consultant, Professional Service Provider (PSP) and *Contractor* Safety Management Plan implementation, operations, equipment, emergency procedures, etc., at any time, and the *Contractor* must fully cooperate with the *Project Manager* or the *Project Manager's* nominated Representative during such audits/inspections. The *Project Manager's* rights under this clause does not, must not and will not relieve the Consultant, Professional Service Provider (PSP) and *Contractor* of its own obligations to conduct audits and reviews of its own Health and Safety performance.

Where such audits/inspections reveal deficiencies in the *Contractor* procedures, drills, training or equipment, or non-conformities with the *Contractor* accepted project Safety Management Plan, of a minor nature (Risk Rating of 6 or less), the *Contractor* must investigate the cause of the nonconformity and initiate corrective and preventive action to rectify such deficiencies and non-conformities and prevent recurrence as soon as practicable.

Where such audits/inspections reveal deficiencies of a major nature (Risk rating of 7 or greater), the *Contractor* must stop work on the operation/activity concerned, immediately investigate the cause of the non-conformity, and initiate corrective actions to rectify such deficiencies and non-conformities and to prevent recurrence. These corrective action plan(s) is submitted to the *Project Manager* for review and comment within 24 hours of the audit finding.

Where such deficiencies include an unsafe practice or a breach of the statutory or the Contract's requirements, the *Project Manager* or the *Project Manager's* nominated Representative may in accordance with the General Conditions of Contract suspend the work associated with the unsafe practice or breach until the deficiency is rectified. The *Project Manager* or the *Project Manager's* nominated Representative will establish a schedule of regular field safety audits which will be based on an audit tool aligned to the *Contractor* Safety Management Plan and site operations and activities. The *Contractor* audit conformance will be assessed as a percentage and where conformance is better than 90% it will be considered satisfactory and the *Contractor* must develop and implement an action plan within 4 weeks, to be reviewed at the next regular audit. Where the *Contractor* level of conformance is between 80 – 90%, a corrective action plan will be required to be developed and implemented within 2 weeks, and a follow up audit will be carried out. Where the *Contractor* conformance is less than 80% the *Contractor* must stop work until an investigation of the cause/s

has been completed and corrective actions have been developed and implemented by the *Contractor*.

The *Contractor* must provide to the *Project Manager* or the *Project Manager's* nominated Representative, at a time to be agreed, but not to exceed monthly intervals, a regular status report on all outstanding corrective actions until they are successfully closed out.

d) Unsafe Act/Condition Auditing

The *Contractor* must implement a system to recognize, correct, and report unsafe acts/conditions (Unsafe Act/Condition Auditing) associated with all Site activities.

All such observations must be recorded and delivered to the TPT Health and Safety Manager.

e) Involvement, Communication and Motivation

The *Contractor* and Subcontractor's workforce must, through their supervision, safety notice boards, toolbox meetings and daily pre-start meetings be kept aware of safety related matters.

f) Safety Meetings

The *Contractor* must implement and comply with OH&S Act, Section 19

The *Contractor* must conduct weekly safety meetings with his employees to foster safety awareness. Copies of minutes and action items arising from such Toolbox meetings is submitted or otherwise made available for review by the *Project Manager* or the *Project Manager's* nominated Representative.

Such meetings should at least address:

- Accident / safety incidents
- Hazardous conditions
- Hazardous materials / substances
- Work procedures
- Protective clothing / equipment
- Housekeeping
- General safety topics
- Job or work look-ahead issues
- Safety statistics
- Significant Safety Occurrences (SSO)

The *Contractor* must conduct at least one formal safety meeting per month and must maintain appropriate records of attendance and meeting content. Such records are made available to the *Project Manager's* Representative. In addition to Daily Safe

Task Instructions, the *Contractor* must conduct at least weekly "toolbox" meetings to discuss safety issues and procedures.

g) Pre-Start Safety Briefings

The *Contractor* must hold documented Daily Safe Task Instructions with each work team before the start of each shift. Attendance records and brief topic notes is kept for auditing and record purposes. Safety Review Meetings

- The *Contractor* Site Manager and a Site Safety Representative must take part in weekly safety review meetings between the *Contractor* and the *Project Manager* or the *Project Manager's* nominated Representative.
- The *Contractor* must attend all project safety meetings as outlined in the Project Safety Management Plan.

h) Site Safety Review Committee

The *Contractor* complies with the requirements of the SSRC with respect to his own activities and others on the Site and Working Areas.

i) HAZOP Review

The *Contractor* participates in HAZOP reviews upon the instruction and direction of the *Project Manager*.

The reviews may include, but not be limited to, studies to ensure that the Plant is built and operated as designed and that personal safety, employee health and environmental protection systems conform to the *Employer's* and legislative requirements.

j) Job Safety Analysis

The *Contractor* completes a JSA prior to carrying out any operation on the Site and/or Working Area to the approval of the *Project Manager*.

k) Lines of Communication

The following personnel act on behalf of the *Project Manager* and may communicate directly with the *Contractor* and his key persons with respect to the SMP:

- Construction Manager (CM)
- Project Site Safety Manager (PSSM)

5.3.7 Roles and responsibilities

The roles and responsibilities of the various personnel acting on behalf of the *Project Manager* with respect to the SMP and health and safety issues are as stated in the paragraphs following:

5.3.7.1 Construction Manager

- a) The CM is responsible (in the context of the SMP only) for health and safety on the Site and Working Areas and reports to the *Project Manager*.
- b) The CM specific tasks (in the context of the SMP) are:
- c) Implement the safety management system
- d) Monitor compliance to the established safety management system
- e) Ensure risk is at an acceptable level
- f) Ensure Consultant Construction Management Team are competent
- g) Provide for:
- h) Planning, organisation, leadership and control
- i) Particular technical competencies for critical work
- j) Supervision and control on each shift
- k) Regular monitoring and assessment
- l) Workplace inspections

5.3.7.2 Project Site Safety Manager:

- m) The PSSM is responsible for ensuring that the *Contractor* complies with the SMP. The PSSM acts on behalf of the *Project Manager*.
- n) The PSSM specific tasks (in the context of the SMP) are:
- o) Define, in accordance with the HSSP, the:
- p) Safety program (instructions, training, meetings, inspections, incentive)
- q) Health and medical program
- r) Checks that *Contractors* have issued their Health and Safety plans, PPSPS and procedures before the beginning of work
- s) Organizes safety awareness campaigns
- t) Promotes communication on all health and safety matters (awards, incentives, meeting/inspections/audits reports)
- u) Checks conformance of equipment to technical requirements and regulations.
- v) Issues and address the site EHS activities reports
- w) Promotes everybody's best efforts to keep accident frequency and severity ratios at their lowest level
- x) Promotes a proper and continuous housekeeping of Plant and temporary facilities in order to create the most suitable conditions for workers to work and to be encouraged to follow HSE requirements
- y) Conducts *Worksite* EHS walks with all *Contractors*, and directs appropriate corrective actions

- z) Monitors that all factors likely to improve health and safety are taken into consideration, particularly those which lead to:
 - aa) Promoting personnel protection as an absolute requisite
 - bb) Investigating, identifying and neutralizing potential hazards
 - cc) Close coordination with all parties involved in construction in order to avoid overcrowded areas and dangerous operations
 - dd) Thorough preparation of work critical phases
 - ee) Close contacts to local EHS authorities
 - ff) Continuous follow-up in order to correct immediately unsafe acts and situations
 - gg) In case of accident, he takes actions necessary to:
 - hh) Initiate quick interventions of the emergency means.
 - ii) Check that first aid and evacuation of injured persons are properly carried out.
 - jj) Obtain a clear accident report from the sub-*Contractor* concerned.
 - kk) Report immediately to the Construction Manager.
- ll) Investigate to identify the root causes of all incidents and near misses.

5.3.8 Commissioning Safety Study

The *Project Manager*, through his Construction Management Team, will facilitate and coordinate a formal Commissioning Safety Study and ensure that required procedures are prepared prior to the commencement of the commissioning phase.

The Commissioning Safety Study will provide a final checkpoint for the completed work and is part of the process for ensuring that all necessary actions have been completed.

The elements to be considered include:

- a) Electrical integrity systems are in place (e.g. equipment tests and inspections of critical equipment, quality control procedures, etc.) which will confirm that construction, equipment and materials are in accordance with design specifications
- b) Formal hazard analyses for pre-commissioning and commissioning activities have been completed, appropriately documented, and communicated, and are available to all personnel.
- c) Punch-list work has been sufficiently completed so that installations are safe to apply hazardous energy.
- d) Documentation relevant to any modifications has been created/updated.
- e) Safe operating, maintenance and emergency procedures are in place.
- f) Operating and maintenance manuals are available and training of commissioning employees has been completed.
- g) As Built drawings are available.
- h) A Commissioning Permit (to apply hazardous energy) is developed and implemented.

The *Project Manager* will ensure that after commissioning there is a formal documented hand over to operations and maintenance personnel and others who will be impacted by hazards that have been identified during project activities. This will involve communication of any changes to the process hazards, procedures, and operating philosophy. Safe systems of work will be established and updated throughout the Project. Safe systems of work will be subject to on-going review to ensure their effectiveness. Site-wide Permits to Work will be used as the basis of safe systems of work for specified hazardous activities.

5.3.9 Housekeeping

Accidents can occur as a result of poor housekeeping. Hazards at construction site are the same for both day and night shift while the risks of injury are much higher during night *Works* because of the inherent poor illumination. It is essential that the workplace is kept clean and tidy to ensure safety and prevent accidents.

5.3.10 Document Control

All safety documents shall comply with the Project Document Control Procedures.

5.3.11 Medicals

Pre-employment medicals, including chest X-ray examinations, specific for the Contract will be required for all employees working on the Site regardless of duration spent on Site. Exit medicals, including chest X-ray examinations will be required at the end of the Contract. These medical examinations must be carried out by a registered Occupational Health Practitioner.

The *Contractor* must ensure that budget provision for SHE requirements are in place.

5.4 Environmental Constraints and Management

5.4.1 All work is to be conducted in accordance with the principles of the National Environmental Management Act, 1998 (Act no 107 of 1998) but not limited to other applicable regulations as well acceptable environmental good practices. In addition, the *Contractor* is expected to comply with all applicable eThekweni Municipal bylaws.

5.4.2 The following documents, included in Annexure of the Works Information, provide the minimum acceptable standards that shall be adhered to:

- a) Standard Operating Procedure for Construction Environmental Management (SOP: CEM)
- b) Contractor Environmental and Sustainable Specifications Guideline (CESSG)
- c) Transnet Integrated Management Policy Commitment Statement (TIMS)
- d) Project Environmental Specifications (PES) as contained in:
 - Project Environmental Specification (PES) includes eThekweni bylaws such as:

TRANSNET PORT TERMINAL

CONTRACT NUMBER: ICLM HQ 641/TPT

DESCRIPTION OF THE WORKS: DESIGN, SUPPLY, DELIVERY, INSTALLATION AND COMMISSIONING OF BBC PERIMETER FENCE FOR TRANSNET SOC LTD (REG.NO 1990/000900/30) OPERATING AS TRANSNET PORT TERMINALS (HEREINAFTER REFERRED TO AS "TPT") AT THE PORT OF DURBAN POINT TERMINAL (MPT), AGRI-PORT AND MAYDON WHARF TERMINAL



- *Schedule Trades and Occupations Bylaws*
- *Interim Code* relating to fire prevention and flammable liquids and substances

The above requirements shall be applicable to the main *Contractor* and its service providers. The *Contractor* must comply with all the requirements of the SOP: CEM, CESSG and the PES as mentioned above. The *Contractor* must pay special attention to all PES conditions. These conditions must strictly be adhered to and shall be monitored.

The *Contractor* must sign the Declaration of Understanding as a commitment (Commitment to conform to the SOP: CEM) abide with TPT's Environmental Control Framework and Project Environmental Specifications. Sufficient environmental budget must be allocated to meet all the project environmental requirements for the duration of the contract.

The *Contractor* shall perform 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 SOP: CEM, PES and CESSG.

The SOP: CEM defines how environmental management will be practiced on construction projects under Transnet's management and to ensure that that the environment is considered that negative impacts are avoided, or minimised and positive impacts are enhanced. The SOP: CEM further describes the main roles and responsibilities of the project team with respect to Environmental Management.

The CESSG describes the minimal requirements for environmental management to which the contractors must comply.

- 5.4.3 The *Contractor* must appoint a Safety, Health & Environmental Officer (SHEO) to monitor and manage compliance to Environmental Specification and all applicable environmental legislation. The SHEO must as a minimum have at least 5 years work experience in environmental management within the civil/structural and/or construction projects.
- 5.4.4 The *Contractor* will be required to submit a SHE file to TPT post award of tender. Requirements of the *Employer* will be made known on award of the contract. Site access certificate shall not be granted until the environmental file has been approved by the Employer.
- 5.4.5 The overarching obligations of the *Contractor* under the CESSG before construction activities commence on the Site and/or Working Areas is to provide environmental method statements (as contained under section 5.10 of the CESSG) for all construction operations at the Site and/or Working Area by the *Contractor* and where requested by the CM and to comply with the following:
- 5.4.6 The *Contractor* shall identify the kinds of environmental impacts that will occur as a result of their activities and accordingly prepare separate method statements describing how

each of these impacts will be prevented or managed so that the standards set out in the CESSG document are achieved. The method statements will be prepared in accordance with the requirements set out in the SOP: CEM. These method statements shall form part of the environmental file.

- 5.4.7 The *Contractor* shall ensure that his management, foremen and the general workforce, as well as all suppliers and visitors to Site have attended the Environmental 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 Environmental Induction Programme and are made aware of the environmental specifications on Site.
- 5.4.8 Where required, one of the first actions to be undertaken by the *Contractor* shall be to erect and maintain a temporary fence along the boundaries of the Site and Working Areas as applicable, and around any no-go areas identified on the layout plans, to the satisfaction of the *Project Manager*.
- 5.4.9 During the construction period, the *Contractor* complies with the following:
- a) A copy of the SOP: CEM and CESSG shall be available on Site, and the *Contractor* shall ensure that all the personnel on Site (including Subcontractors and their staff) as well as suppliers are familiar with and understand the specifications.
 - b) Method statements need to be compiled by the *Contractor* throughout the Construction and Commissioning phase of the project. These Method Statements must be approved by the *Supervisor* and TPT *SHEQ Manager or Project Environmental Resource*. Approval must at least be two weeks prior to the proposed commencement of the activity. Emergency construction activity method statements may also be required. The activities requiring method statements cannot commence if they have not been approved by the TPT Environmental Manager or Project Environmental Resource.
 - c) Where applicable, the *Contractor* shall provide job-specific training on an *ad hoc* basis when workers are engaged in activities, which require method statements.
 - d) The *Contractor* shall be responsible for rehabilitating and or re-vegetating all areas to the satisfaction of the TPT Environmental Manager or Project Environmental Resource as detailed in the CESSG. Sufficient environmental budget must be allocated to achieve this.
- 5.4.10 The *Contractor* must ensure that its Subcontractors comply with the Environmental Specification. The *Contractor* shall retain proof of having conducted adequate training / awareness with the sub-contractor, in terms of these requirements.

5.5 Quality Assurance Requirements

- 5.5.1 The *Contractor* shall have, maintain, and demonstrate its use to the *Project Manager* (and/or the *Supervisor* to satisfy the requirements of *The Works Information* as



appropriate) the documented Quality Management System to be used in the performance of *The Works*.

- 5.5.2 The *Contractor's* Quality Management System shall conform to International Standard ISO 9001 (or an equivalent standard acceptable to the *Project Manager*) and as a minimum to the requirements of specification **EAM-Q-009**, General Quality requirements for Suppliers and contractors as contained in the Annexure to this *Works Information*.
- 5.5.3 The *Contractor* submits his Quality Management System documents to the *Project Manager* as part of his programme under ECC Clause 31.2 to include details of:
 - a) Typical Project Quality Plan (PQP) for the contract;
 - b) Valid ISO 9001 Certificate
 - c) Index/List of Procedures/Method statement to be used
 - d) Qualification and experience of Quality personnel
 - e) Project specific Quality Control Plan
 - f) Typical Quality Data Book Index
- 5.5.4 The *Contractor's* PQP includes or references to the quality plans of his Subcontractors and Suppliers.
- 5.5.5 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.
- 5.5.6 The *Project Manager* indicates those documents required to be submitted for either 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 *Project Manager* 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*.
- 5.5.7 The Project Quality Plan means the *Contractor's* statement, which outlines strategy, methodology, resources allocation, QA and Quality Control co-ordination activities to ensure that the *works* meet the standards stated in the Works Information. Site Access will not be granted unless the PQP has been accepted by *The Employer*.
- 5.5.8 The Quality Control plans shall identify all inspection, test and verification requirements to meet Contractual obligations, specifications, drawings and related details including destructive, non-destructive testing, witness and hold points. The *Contractor* shall not commence fabrication or manufacture prior to review and acceptance of the applicable QCP's by *The Employer*.
- 5.5.9 The Index of Procedures means the *Contractor's* system for management of:
 - Documentation Control
 - Design Control
 - Procurement

5.5.10 The Inspection and testing mean:

- a) Quality Control Plans
- b) Inspection Points
- c) Schedule of Inspections
- d) Field Inspection Checklists
- e) Inspection Notification
- f) Inspection release
- g) Inspection and testing
- h) Special processes
- i) Welding Procedures
- j) Material traceability and certification

5.6 Programming constraints

5.6.1 The *Contractor's* construction WBS as a minimum shall include but not be limited to the following WBS Elements:

- a) Procurement and delivery of all long lead items necessary to Provide the *works* in line with the stipulations of the *Employer's* Works Information. Long lead items include but are not limited to; Plant, equipment, materials and any other resources, as required to provide both temporary and permanent *works*.
- b) *Contractor's* design as well as associated procedure for *Contractor's* design submission and acceptance of any portion of the *works* and/or approval of Plant as stipulated under Sections 1 Clause 2 of the Works Information in accordance with the stipulations for submission, acceptance and approval as stipulated under the relevant section(s) of the *Employer's* Works Information; including any other additional design requirements, interfacing and or alterations in existing design which may stem from the aforementioned.
- c) Manufacturing and or Fabrication both on and off-site which may include but is not limited to; Plant, equipment, materials and any other resources, as required to provide both temporary and permanent *works*.
- d) Preparation and Approvals of Health & Safety, Environmental and Quality Documentation.
- e) Approval of any applicable permits, permissions and licenses, including inductions.

5.6.2 The *Contractor's* construction programme shall correspond with the *Contractor's* Method Statements, Quality Control Plans and Risk Assessments, as drafted in line with the *Employer's* stipulations.

5.6.3 The *Contractor* uses the latest version of MSP for his programme submissions, or similar approved software with the prior written consent of the *Project Manager*. In the event that the *Contractor* will be using earlier or later versions of the software, the onus is on the



Contractor to ensure that a conversion is done in order for the file to be compatible with MSP.

- 5.6.4 The *Contractor* shows on each programme he submits to the *Project Manager*, the requirements of the [SOP: CEM, PES and CESSG] as described under the relevant sections of the Works Information, together with the associated environmental method statements.
- 5.6.5 The *Employer* (including the agents of the *Employer*) operates on *Site* during dates or timings when the *Contractor* has completed certain elements of the *works* and/or during the contract period as stipulated in this Works Information.
- 5.6.6 Others operate on *working area* during dates or timings when the *Contractor* has completed certain elements of the *works* as stipulated in this Works Information
- 5.6.7 The *Contractor's* first programme submitted for acceptance shall be agreed during the pre-contract negotiation period, and no later than the period stipulated under Contract Data Part One (2 weeks after the Contract Date).
- 5.6.8 The *Contractor* complies with the *Employer's* high-level programme when he submits his first programme for acceptance.
- 5.6.9 The *Contractor* presents his first programme for acceptance and all subsequently revised programmes (see ECC Clauses 31.2 and 32.1) in hard copy and soft copy format.
- 5.6.10 The *Contractor* shows on his programme submitted for acceptance and all subsequently revised programmes, the critical path or paths and all necessary logic diagrams demonstrating sequence of operations.
- 5.6.11 The *Contractor's* programme shows duration of operations in working days as per the stipulated definition of the workdays and hours in the *Employer's Works Information*.
- 5.6.12 Each programme submitted by the *Contractor* to the *Project Manager*, is fully Cost and Resource Loaded (People, Equipment, Plant, Materials & Other Resources) with the exception of the *Contractor's* tender programme submission.
- 5.6.13 The *Contractor* shows on each programme he submits to the *Project Manager*, the requirements as listed in the NEC 3, ECC, Clause 31.2.
- 5.6.14 The *Contractor* attends, participates in and makes a meaningful contribution to, planning initiation & set-up meetings held during the pre-contract negotiation period and no later than the period stipulated under *Contract Data Part One* (2 weeks after the Contract Date); to agree and set-up including but not limited to - the first schedule for acceptance; monitoring, control and reporting requirements; proposed templates and planning/scheduling procedures to be complied with for the duration of the project.
- 5.6.15 The *Contractor* shows on each revised programme he submits to the *Project Manager* a resource histogram showing planned progress versus actual, deviations from the Accepted Programme and any remedial actions proposed by the *Contractor*, including a spread



sheet identifying instances of resource over-allocation and/or conflicts, accompanied by proposed resolutions.

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

- a) Level 1 Master Schedule – defines the major operations and interfaces between engineering design, procurement, fabrication and assembly of Plant and Materials, transportation, construction, testing and pre-commissioning, commissioning and Completion.
- b) Level 2 Project Schedule – summary schedules 'rolled up' from Level 3 Project Schedule described below.
- c) Level 3 Project Schedule – detailed schedules generated to demonstrate all operations identified on the programme from the starting date to Completion. Individual operations will be assigned a code. The *Employer* notifies any subsequent layouts and corresponding filters on revised programmes.
- d) Level 4 Project Schedule –detailed discipline/speciality level schedule decomposed to the appropriate levels of detail in order to accurately substantiate activity scope and activity duration estimates; developed and maintained by the *Contractor* relating to all operations identified on the programme representing the daily activities by each discipline, with activities and operations adequately decomposed in order to accurately represent the effort required to execute said activity/operation and support accurate duration estimates.
- e) A narrative status report, which includes but is not limited to status and performance of operations on the *Site* and Working Areas; status and performance of operations outside the Working Areas; manpower histograms; critical action items (top 10) and deviations from the Accepted Programme and action plan to rectify.
- f) Basis of Programme/Schedule document detailing but not limited to the following minimum requirements:
 - Basis of latest accepted programme, including an overview of assumptions, constraints, specific and quantified resource allocations, productivity assumptions and basis of calculation, identification and justification of general scheduling provisions such as calendars and working times, lags, date constraints, activity durations longer than one reporting period, etc.
 - Description of network logic and sequencing.
 - Description of general construction approach.
 - Description of approach to allocation, use and management of all resources dedicated to the project.
 - Description of and trend analysis of critical risks as identified through schedule risk analysis and included in schedule contingency and or Time Risk Allowance provisions.



- Discussion regarding the basis, method of calculation and validity of the critical path and near critical paths, (interrogate longest path and total float as contained in the programme).
- Reporting on change management, i.e. identify and record any deviations/changes that have taken place within the previous reporting cycle, and their resultant impact on the remaining *works* and as identified and highlighted in the current revision of the programme for acceptance.
- Identification critical activities, as well as top 10 near critical activities and undertake trends analysis on such activities with the aim to identify any deviations from planned performance.
- Identification of any recovery and or mitigation action required in order to neutralise any deviations.

5.7 Reporting and Monitoring

- 5.7.1 The *Contractor* attends meetings as included but not limited to Section 2 Clause 5 of the *Employer's Works Information*.
- 5.7.2 The *Contractor* attends weekly planning meetings. Meeting agenda to include progress reporting as detailed under Section 2 Clause 5.10 of the *Employer's Works Information*, recovery/optimisation, contractual matters in line with NEC ECC core clauses 31, 32 and main option clause, Option B.
- 5.7.3 The *Contractor* submits programme narrative report to the *Project Manager* at fortnightly intervals in addition to the intervals for submission of revised programmes stated under *Contract Data Part One*. The *Contractor* also submits monthly programme narrative report to *Project Manager*.
- 5.7.4 The *Contractor* completes an assessment of all activities in progress and to completion to determine physical percentage complete, forecasted completion dates, deviations from the Accepted Programme and proposes remedial action to rectify deviations.
- 5.7.5 The *Contractor* shows on each revised programme he submits to the *Project Manager* a resource histogram showing planned progress versus actual, deviations from the accepted programme and any remedial actions proposed by the *Contractor*.
- 5.7.6 The *Contractor* submits the programme narrative report detailing the status and performance of operations on the Site and Working Areas, status and performance of operations outside the Working Areas, man-power histograms, Plant and equipment histograms, and critical action items (top 10). Report shall indicate "progress this period" and "progress to date".
- 5.7.7 The *Contractor's fortnightly* project progress report (narrative report) includes but is not limited to:



- a) 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.
- b) Progress Spreadsheet detailing actual progress achieved (target/planned quantity versus actual quantity) on current (critical) activities for the previous week, planned progress for the current week, deviations and proposed recovery for each activity in question. A 1-week Look Ahead Spreadsheet in line with the aforementioned stipulations to be included. Priority to be given to identification of critical activities, progress and any deviations from planned performance in this regard.
- c) 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.
- d) Dependencies/Deliverables matrix detailing interim approvals and/or any other inputs/requirements from *Employer/Supervisor/Project Manager/Others* or any other project *Stakeholder* in line with the activities identified in the 3-week Look Ahead Schedule.
- e) Interfacing Matrix, detailing timeous identification of any requirements for providing the *works* and/or *works* to be executed by *Others* and any other *Stakeholders* party to this contract in line with the stipulations of the *Works Information*.
- f) Manpower Histogram – reflecting actual, forecasted and planned activities.
- g) Plant and Equipment Histogram – reflecting actual, forecast and planned activities.
- h) Identification critical activities, progress and any deviations from planned performance.
- i) Adherence and actual performance achieved with regards to Environmental, Health & Safety and Quality Management.
- j) The *Contractor* shall submit to the *Project Manager*, a bi-weekly report on progress of any off-site manufacturing activities undertaken during the previous half-month.
- k) Based on the Accepted Programme/ latest programme submitted for acceptance the *Contractor* submits a cash flow forecast report that details the anticipated monthly cash flow, represented by the expected assessment of the amounts due, to the *Project Manager*. The cash flow forecast is to be extrapolated from the latest Accepted Programme through the mechanism of the cost loaded schedule or other similar methodologies with the prior approval of the *Project Manager*.

5.7.8 The *Contractor's* **monthly** project progress report includes but is not limited to:

- a) Monthly, the Contractor completes an assessment of all activities in progress and to completion, and accordingly revises and submits the updated programme for acceptance and cash flow forecast report detailing any variances and proposes remedial actions to rectify deviations.

- b) The *Contractor's* monthly programme narrative report is submitted a week before the last Friday of each month, or as required by the *Project Manager*. The report shall indicate "progress this period" and "progress to date" and shall include, but is not limited to, the following;
- Summary of progress achieved during the reporting period.
 - Latest Accepted Programme.
 - Deviations from the current Accepted Programme and action plans to rectify.
 - Project milestones table – planned versus actual and forecast.
 - Status and performance of operations on the site and Working Areas.
 - Status and performance of operations outside Working Areas.
 - Cash flow forecast report.
 - Digital photographic record of the progress of the *works*.
 - Manpower histograms, including a control spread sheet detailing specific over allocation and/or conflicts in allocation of resources.
 - *Contractor's* Plant and equipment histograms, including a control spread sheet detailing specific over-allocation and/or conflicts in allocation of resources.
 - S-curves of overall progress.
 - Critical action items list (top 10).

5.8 Contractor's management, supervision, and key people

- 5.8.1 The *Contractor* shall make an adequate, experienced, and stable project team available for the duration of the contract. Every effort must be exercised by the *Contractor* to minimise the replacement of project team members in order to ensure optimum contract management continuity and efficiency.
- 5.8.2 No sharing of key personnel roles will be permitted in this project.
- 5.8.3 The *Contractor* employs full time, fully qualified and experienced key persons who have been delegated sufficient authority to manage the contract efficiently on-site during completion of the *works* including and not limited to:

a) Project Manager

- The Project Manager must have a national diploma qualification in Built Environment, national diploma in Project Management and at least 5 years post qualification experience managing construction projects.
- The Project Manager should further provide evidence in working with the NEC suit of contracts and must have experience working in similar projects.

b) Site Supervisor (building and civil infrastructure)

- The Site Supervisor must have a minimum of NTC 3/Grade 12 with at least 5 years of experience in building services and civil /building construction.

c) Safety Health and Environmental Officer (SHEO)

- SHE Officer must have a minimum and completed SAMTRAC/NEBOSH or MSRM (Modern SHEQ Risk Management Qualification course) in safety management, registered with SACPCMP as CHSO (Construction Health and Safety Officer) and a minimum of 5 years' experience as a SHE Officer within the civil/ structural and/ or construction projects. Proof of environmental training must be attached to the C.V. and experience in environmental management to be included in the C.V.

d) Construction Manager/Site Agent

- The Construction Manager must have a minimum qualification of a Diploma in Civil Engineering and at least 5 years of experience in building construction projects. The Construction Manager must have experience working with the NEC suit of contracts and must have experience working in similar projects. (Fencing, demolitions, and civil works).

e) Civil / Structural Engineer

- The Civil / Structural and design Engineers must be professionally registered (Pr. Tech. Eng. or Pr. Eng.), for final sign off and provision of relevant compliance certifications (Attach ECSA registration certificate).
- The Civil / Structural and design Engineers must have a minimum of 2 years' experience in design post registration (Attach CV and qualifications).

f) Planner

- The planner should at least have an Engineering Diploma and a minimum of 5 years' experience working in building and civil projects as planner.

5.8.4 The *Contractor* employs personnel listed above but not limited to those mentioned in order to perform the functions of key persons under NEC3 ECC Clause 24.1. These appointments shall have the necessary experience and be suitably qualified.

5.8.5 The *Contractor* provides 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 such key people communicate with the *Project Manager* and the Supervisor and their delegates all as stated at paragraph 2.5 of C3.1 *Employer's Works Information*.

5.9 Contract change management

5.9.1 For ease of communication standard templates shall be used for contract change management. The *Contractor* forwards all correspondence with respect to contract change management, i.e. Early Warnings and notifications of Compensation Events, on the standard templates provided.

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

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

- a) Records of design employees location of work or professional engineers engaged by the *Contractor*
- b) Records of people and Equipment within the working areas
- c) Records of Equipment used and people employed outside the Working Areas
- d) Records of quotations, invoices and pay slips.

6 List of Annexures

6.1.1 All the annexures listed hereunder shall be deemed to form part of *The Works* Information.

Description / Discipline
Annexure - Project Health and Safety Specification
Annexure - CAD Standards
Annexure - Contractor Environmental and Sustainable Specifications (TRN-IMS-GRP-GDL-014.4)
Annexure - Standard Operating Procedure for Construction Environmental Management
Annexure - DOC-STD-0001 Rev.03 <i>Contractor</i> Documentation Submittal Requirements
Annexure - TPT Structural Steelwork EEAM-Q-006
Annexure - TPT Corrosion Protection EAM-Q-008
Annexure - TPT Quality Management EAM-Q-009
Annexure - TIMS Policy Commitment Statement
Annexure - CAD PALISADE_FENCE_AMEND 9
Annexure - CAD PALISADE SLIDING GATE DETAILS
Annexure - CAD PALISADE SWING GATE DETAILS
Annexure - General Spec High Security Fence

TRANSNET PORT TERMINALS

NUMBER: ICLM HQ 641/TPT

DESCRIPTION OF THE WORKS: DESIGN, SUPPLY, DELIVERY, INSTALLATION AND COMMISSIONING OF BBC PERIMETER FENCE FOR TRANSNET SOCLTD (REG.NO 1990/000900/30) OPERATING AS TRANSNET PORT TERMINALS (HEREINAFTER REFERRED TO AS "TPT") AT THE PORT OF DURBAN POINT CAR TERMINAL (MPT), AGRI-PORT TERMINAL AND MAYDON WHARF TERMINAL.

PART 4: SITE INFORMATION

Core clause 11.2(16) states

"Site Information is information which

- describes the Site and its surroundings and
- is in the documents which the Contract Data states it is in."

In Contract Data, reference has been made to this Part 4 of the contract for the location of Site Information.

1. Description of the Site and its surroundings

1.1. General description – Durban Point Terminal

Port of Durban Bulk, Break Bulk and Car Terminal (BBC Terminal) is made up of Point Terminal, Agri-Port Terminal, and Maydon Wharf Terminal. The Terminal's core business is to import and export a large range of cargoes including cars, containerised and general cargo.

TPT has various cargo handling equipment such as haulers, trailers, reach stackers and mobile harbour cranes, forklifts to facilitate the movement of the cargo to and from the Quayside and transfer it to sheds, warehouses, railway wagons, trucks, etc. The said equipment uses diesel to operate, however most of it does not have license to operate in the public road. TPT has fuel tank facilities across all the terminals to service their equipment.

Access is available through the main TNPA and TPT Security check points. At all times the Contractor will familiarise and adhere to ALL Employers (TPT) rules and regulations regarding security / access control. The Contractor shall however be responsible for his / her own security and the Employer (TPT) will not be held liable / responsible for any stolen / lost property, tools, and equipment by the Contractor.

1.2. Existing buildings, structures, and plant & machinery on the Site

Point Terminal has Multi-Purpose Terminal and Car Terminal, it is surrounded by workshops, stacking areas, and moving machinery. The vicinity of work area and site offices has a traffic flow of the cargo handling equipment, trucks as well as the employees'. During the construction/ installation, the contractor must always maintain a safe access to port users.

Note: TPT will clear the site for the contractor to be able to establish site offices.



TRANSNET PORT TERMINALS

NUMBER: ICLM HQ 641/TPT

DESCRIPTION OF THE WORKS: DESIGN, SUPPLY, DELIVERY, INSTALLATION AND COMMISSIONING OF BBC PERIMETER FENCE FOR TRANSNET SOCLTD (REG.NO 1990/000900/30) OPERATING AS TRANSNET PORT TERMINALS (HEREINAFTER REFERRED TO AS "TPT") AT THE PORT OF DURBAN POINT CAR TERMINAL (MPT), AGRI-PORT TERMINAL AND MAYDON WHARF TERMINAL.



Figure 1: Source: Google Earth – Arial view for Point Terminal

1.3. Subsoil information

If required, the contractor will need to perform necessary tests as indicated in the works information.

1.4. Hidden services

If required, the contractor will need to perform necessary tests as indicated in the works information.

1.5. Other reports and publicly available information

Contractor will be responsible for traffic management to all sites and Client's access to and from the surrounding area shall always be maintained in safe manner. It is envisaged that the construction site will be available to the contractor through the duration of the works.

1.6. Site Establishment

During the constructions works, the contractor site establishment will be situated at Point terminal.

Transnet Port Terminals

Tender Number: ICLM HQ 641/TPT

Description of the Works: SUPPLY, DELIVERY, INSTALLATION AND COMMISSIONING OF BBC PERIMETER FENCE FOR TRANSNET SOCLTD (REG.NO 1990/000900/30) OPERATING AS TRANSNET PORT TERMINALS (HEREINAFTER REFERRED TO AS "TPT") AT THE PORT OF DURBAN POINT CAR TERMINAL (MPT), AGRI-PORT TERMINAL AND MAYDON WHARF TERMINAL.

PART 4: SITE INFORMATION

Core clause 11.2(16) states

"Site Information is information which

- describes the Site and its surroundings and
- is in the documents which the Contract Data states it is in."

In Contract Data, reference has been made to this Part 4 of the contract for the location of Site Information.

1. Description of the Site and its surroundings

1.1. General description – Maydon Wharf and Agri-Port Terminal (Durban)

Maydon Wharf and AGRI terminal form part of Bulk, Break Bulk and Car (BBC) Terminal in Durban. Transnet Port Terminals' (TPT) Maydon Wharf and AGRI terminal are situated in the Maydon Wharf precinct in the Port of Durban. The terminal footprint is aligned to six (6) berths, namely, MW7 to MW12 with storage facilities and sheds with additional common user berths MW1 to MW14. The Agriport Terminal imports and exports agricultural products such as wheat, maize, soya beans, soya bean meal and woodchips while Maydon Wharf Terminal operates as import and export facility for neo-bulk cargo i.e., Manganese Ore, Ferro Chrome, Chrome Ore, Anthracite Ore, etc.

The Terminals are physically enclosed with a fence along the perimeters for security purposes, safeguarding of commodities, life, properties, TPT assets, and provision of a physical barrier to prevent stowaway instances.

Access is available through the main TNPA and TPT Security check points. At all times the Contractor will familiarise and adhere to ALL Employers (TPT) rules and regulations regarding security / access control. The Contractor shall however be responsible for his / her own security and the Employer (TPT) will not be held liable / responsible for any stolen / lost property, tools, and equipment by the Contractor.

1.2. Existing buildings, structures, and plant & machinery on the Site

Maydon Wharf and Agri-port, is surrounded by workshops, stacking areas, and moving machinery. These two terminals are generally dusty due to the cargo that is stored in the terminal. The vicinity of work area and site offices has a traffic flow of the cargo handling equipment, trucks as well as the employees'. During the construction/ installation, the contractor must always maintain a safe access to port users.



Transnet Port Terminals

Tender Number: ICLM HQ 641/TPT

Description of the Works: SUPPLY, DELIVERY, INSTALLATION AND COMMISSIONING OF BBC PERIMETER FENCE FOR TRANSNET SOCLTD (REG.NO 1990/000900/30) OPERATING AS TRANSNET PORT TERMINALS (HEREINAFTER REFERRED TO AS "TPT") AT THE PORT OF DURBAN POINT CAR TERMINAL (MPT), AGRI-PORT TERMINAL AND MAYDON WHARF TERMINAL.

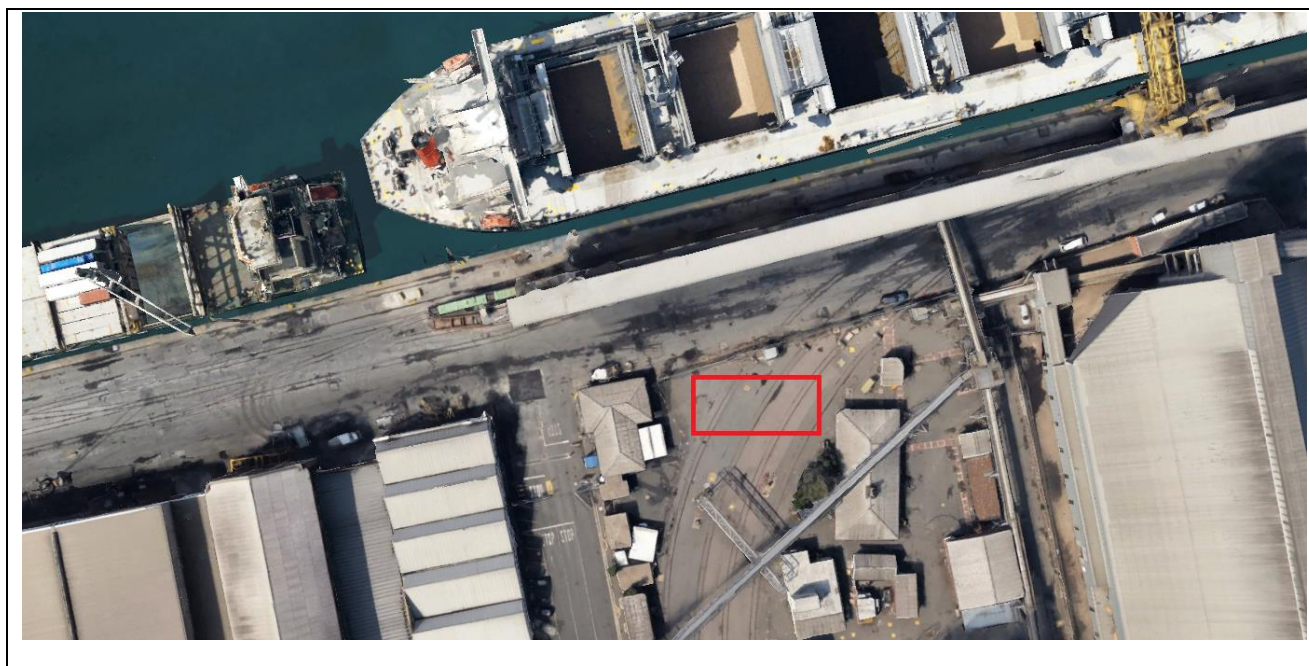


Figure 1: Source: Google Earth – (1) Proposed site for Site Offices

Note: TPT will clear the site for the contractor to be able to establish site offices.

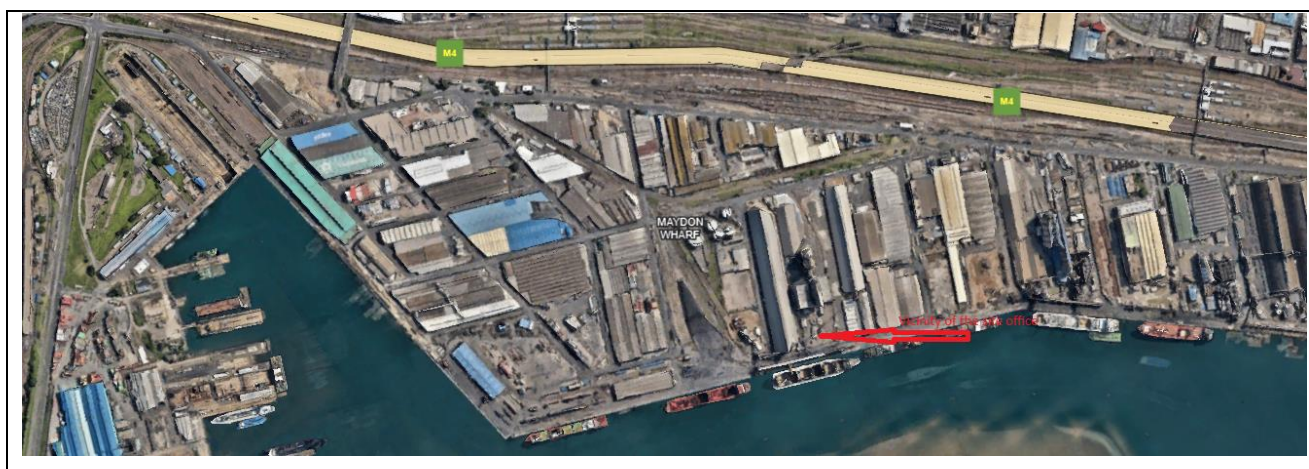


Figure 2: Source: Google Earth – Arial view for Maydon Terminal & Agri-port Terminal

1.3. Subsoil information

If required, the contractor will need to perform necessary tests as indicated in the works information.

1.4. Hidden services

If required, the contractor will need to perform necessary tests as indicated in the works information.

1.5. Other reports and publicly available information

Transnet Port Terminals

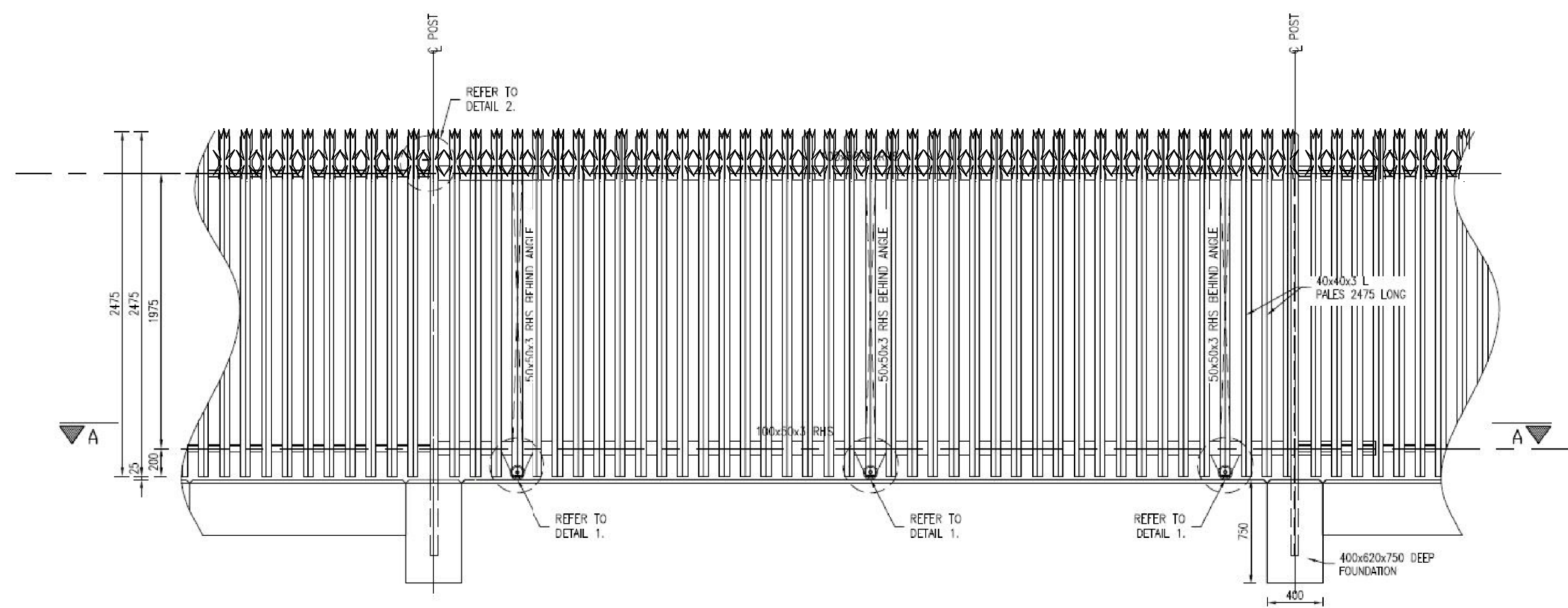
Tender Number: ICLM HQ 641/TPT

Description of the Works: SUPPLY, DELIVERY, INSTALLATION AND COMMISSIONING OF BBC PERIMETER FENCE FOR TRANSNET SOCLTD (REG.NO 1990/000900/30) OPERATING AS TRANSNET PORT TERMINALS (HEREINAFTER REFERRED TO AS "TPT") AT THE PORT OF DURBAN POINT CAR TERMINAL (MPT), AGRI-PORT TERMINAL AND MAYDON WHARF TERMINAL.

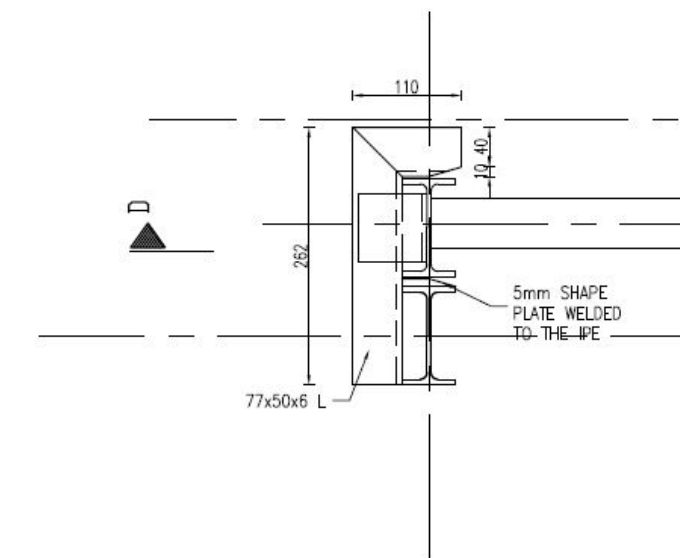
Contractor will be responsible for traffic management to all sites and Client's access to and from the surrounding area shall always be maintained in safe manner. It is envisaged that the construction site will be available to the contractor through the duration of the works.

1.6. Site Establishment

During the constructions works, the contractor site establishment will be situated at Agri-port terminal.

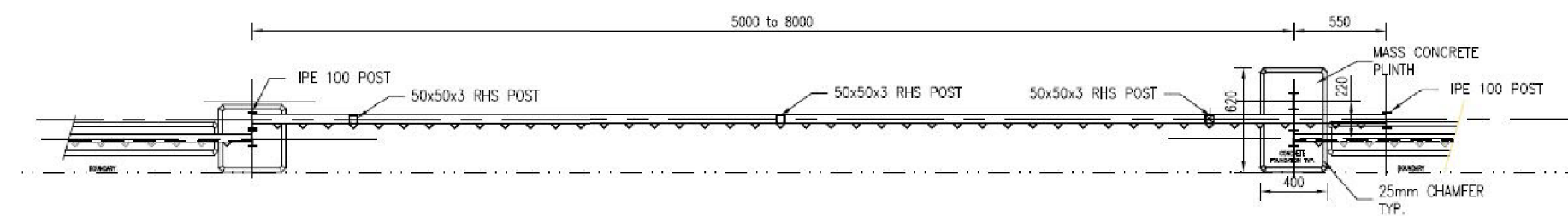


Elevation

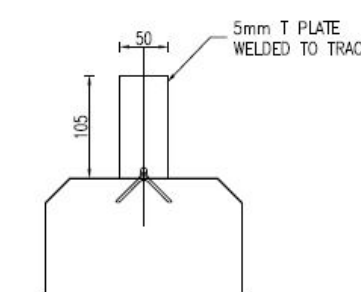


Detail 2 - Plan

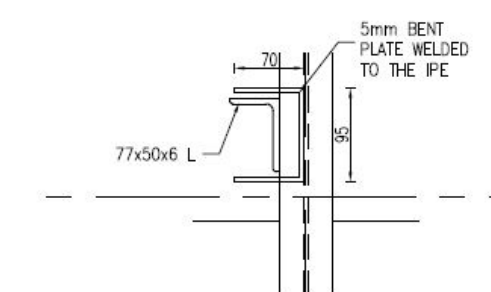
- GENERAL NOTES**
1. ALL WORK BE IN ACCORDANCE WITH THE RELEVANT SECTIONS OF SABS 1200.
 2. THE CONTRACTOR IS TO SET THE FENCE BY SURVEY INSTRUMENT AND AS DIRECTED BY THE TECHNICAL OFFICER ON SITE. NO CONCRETING OF THE POSTS WILL BE ALLOWED UNTIL EACH SUITABLE SECTION OF THE FENCE IS SET OUT AND APPROVED BY THE TECHNICAL OFFICER.
 3. THE CONTRACTOR IS TO VERIFY ALL LEVELS, HEIGHTS AND DIMENSIONS ON SITE AND IS TO CHECK THESE AGAINST THE DRAWINGS BEFORE ANY WORK COMMENCES.
 4. THE CONTRACTOR IS TO LOCATE AND IDENTIFY EXISTING SERVICES ON THE SITE AND TO PROTECT THESE FROM DAMAGE THROUGHOUT THE DURATION OF THE CONTRACT.
 5. 100mm STEPS IN THE CONCRETE PLINTH AND STEEL FENCE PANEL MUST BE ACCOMMODATED IN THE POST FOUNDATION DEPTH.
 6. A 10mm EXPANSION JOINT BETWEEN THE POST FOUNDATION AND CONCRETE PLINTH AND STEEL PANEL MUST BE ALLOWED FOR EVERY 5TH PANEL (i.e. 9.75m).
 7. FOUNDATIONS
 - ALL EXCAVATIONS TO BE DONE BY HAND, CONTRACTOR TO EXERCISE CARE DURING EXCAVATIONS AS UNDERGROUND SERVICES MAY BE ENCOUNTERED.
 - EXCAVATIONS FOR POSTS AND PLINTHS TO BE NEAT DIMENSIONS OF CONCRETE. ALL IN-SITU FOUNDING MATERIAL TO BE COMPACTED TO 95% MOD AND INSPECTED BY THE TECHNICAL OFFICER PRIOR TO POURING CONCRETE.
 8. CONCRETE
 - CONCRETE STRENGTHS @ 28 DAYS
 - BLINDING : 15 MPa / 19mm
 - BASES : 25 MPa / 19mm
 - GROUND BEAMS : 25 MPa / 19mm
 - ALL SHARP EXPOSED EDGES TO BE CHAMFERED 25 x 25mm.
 9. STEEL PANELS
 - ALL STEEL TO BE HOT-DIPPED GALVANIZED WITH MINIMUM ZINC COATING THICKNESS BEING 105 MICRONS (HEAVY DUTY GALVANIZING) (SABS 738).
 - ALL WELDS 6mm CONTINUOUS FILLET.
 - ALL BOLTS, WASHERS & NUTS TO BE GALVANIZED, ALL BOLTS 10mm DIA, THREAD PROJECTION BEYOND NUT TO BE 'DAMAGED' ONCE FASTENED AS SECURITY MEASURE.
 - NO CUTTING OF STEEL OR WELDING ON SITE WILL BE ALLOWED WITHOUT PRIOR APPROVAL FROM THE TECHNICAL OFFICER.
 - CONTRACTOR TO CALCULATE ALL CUTTING DIMENSIONS AND TO PRODUCE SHOP DETAILS FOR APPROVAL BY THE TECHNICAL OFFICER PRIOR TO FABRICATION.
 - WHERE 100mm STEPS ARE ENCOUNTERED, 100mm OF THE BOTTOMS OF THE FIRST PALE TO BE CUT AND PROTECTED WITH 2 COATS COLD GALV.
 - 10. ALL PALES TO 40 x 40 x 3 ANGLE IRON WITH CROWN 7 SPIKE HEADS



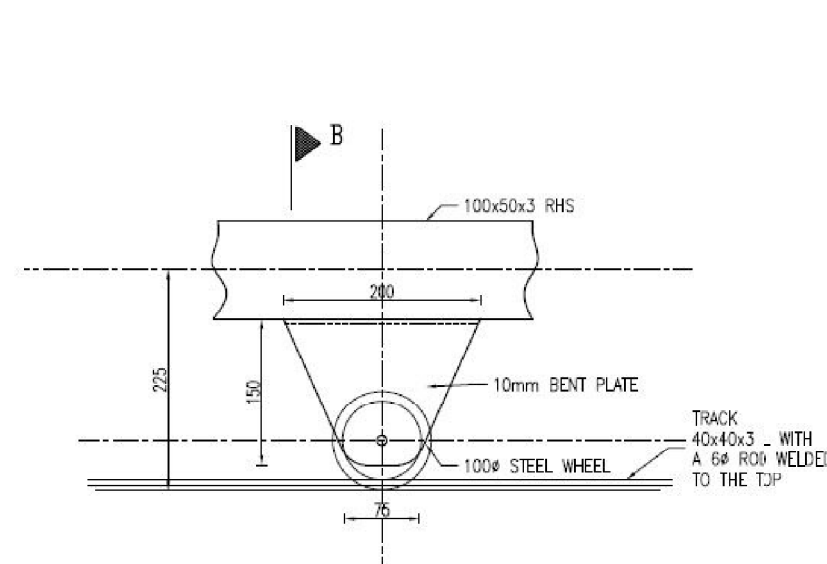
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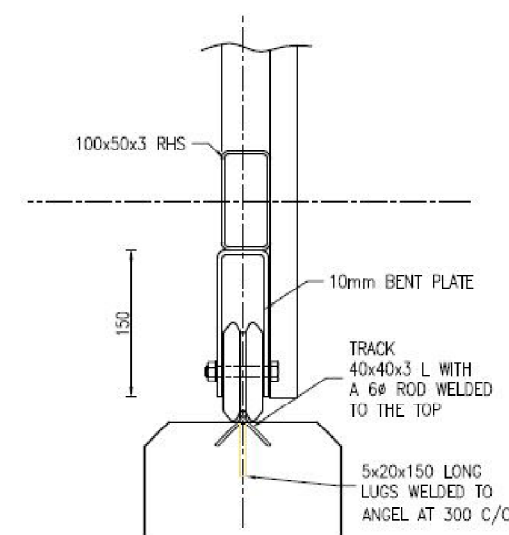
Section C-C



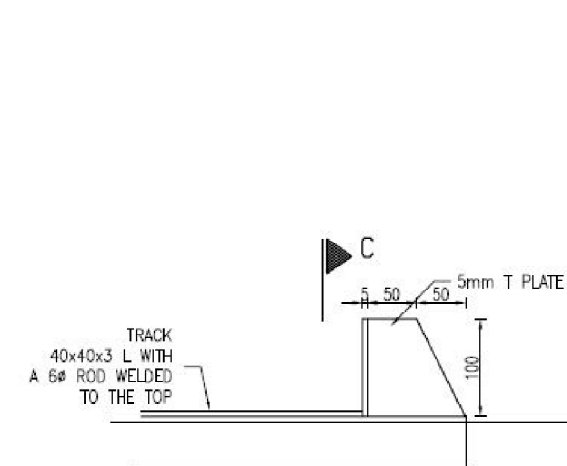
Section D-D



Detail 1



Section B-B



Track stop end

PORT OF RICHARDS BAY
HARBOUR AREA



Port Palisade Fencing

New Sliding Gate Details

DESIGNED D JOYCE SCALE NTS

DRAWN D NAIDOO FILE REF.

CHECKED DATE 2019-03-18

(B NGCOBO Pr Eng) PORT ENGINEER DATE <u></u>	CAD NO.	Palisade Sliding Gate Details
	DRG NO.	RBH 80-I-1 SH6
	AMEND.	

SCALE 1 : 5

PLAN
SCALE 1 : 5

76 x 38 x 3 mm RECTANGULAR HOLLOW SECTION
40 x 40 x 3 mm ANGLE @ 150 mm c/c

76 x 38 x 3 mm RECTANGULAR HOLLOW SECTION

200

40

20

80

80

20

65

45

M25 BOLT

BUSH SIZE 4 mm THICK

Ø 140 mm GATE POST

WELD

M20 BOLT

WELD

PLAN VIEW OF A HINGE DETAIL

SCALE 1 : 2,5

76

GATE

BUSH SIZE
4 mm THICK

WELD

Ø 140 mm GATE POST

M20 BOLT

6 mm THICK

Ø 18 mm HOLES

M25 BOLT

HINGE DETAIL

SCALE 1 : 2,5

CROWN 7 SPIKE 40 X 40 X 3 ANGLE IRON @ 150 mm c/c

Ø140 mm x 6 mm x 2 500 mm CIRCULAR HOLLOW SECTION CLOSED WITH CONE PLATE AT THE TOP

SECTION

mm c/c

300 x 300 x 12 mm PLATE WITH 4 x Ø 18 mm HOLES

GROUND LEVEL

SCALE: NTS

PORT OF RICHARDS BAY HARBOUR AREA



STEEL PALISADE SWING GATE DETAILS

DESIGNED D JOYCE SCALE AS SHOWN

DRAWN	D NAIDOO	FILE REF
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CHECKED	DATE	2019-03-15
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(D JOYCE)
PORT
SECURITY MANAGER
DATE

(B NGCOBO Pr Eng) PORT ENGINEER DATE	CAD NO.	STEEL PALISADE SWING GATE DETAILS				
	DRG NO.	RBH 80-I-3 sh 5				
	AMEND					

NOTES

1. SETTING OUT

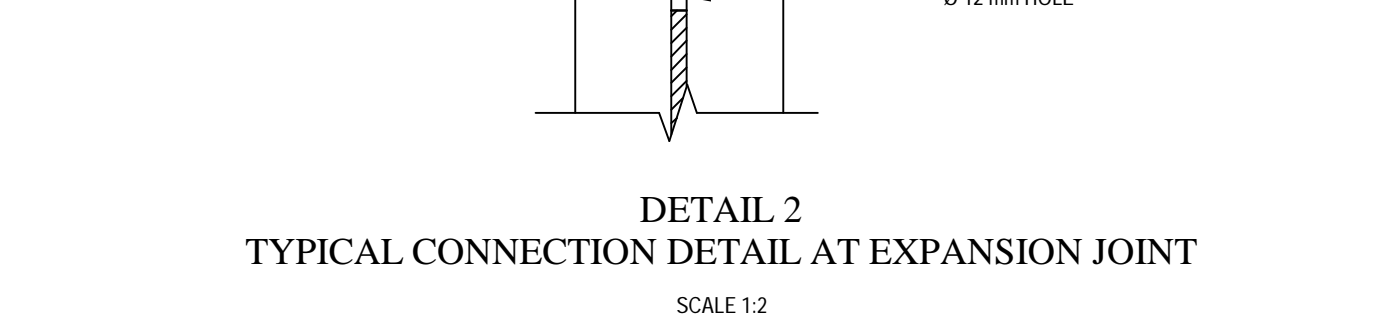
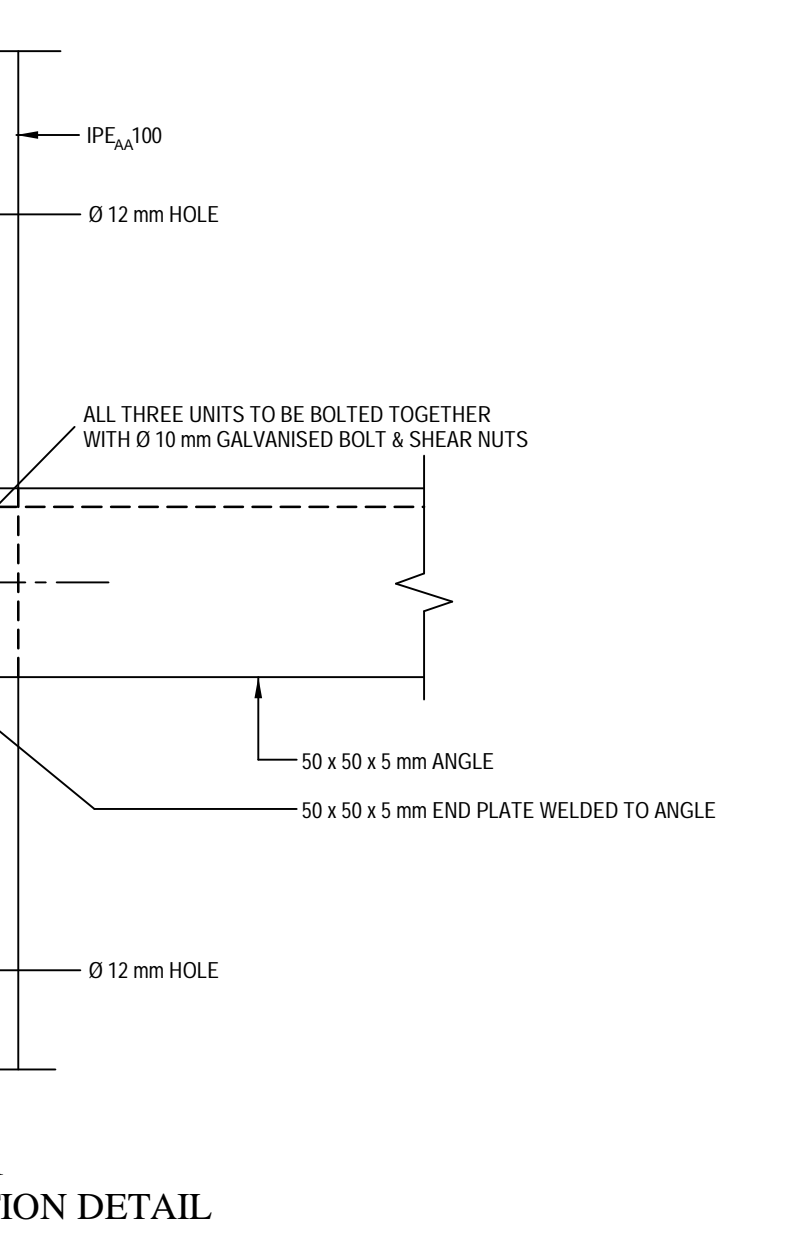
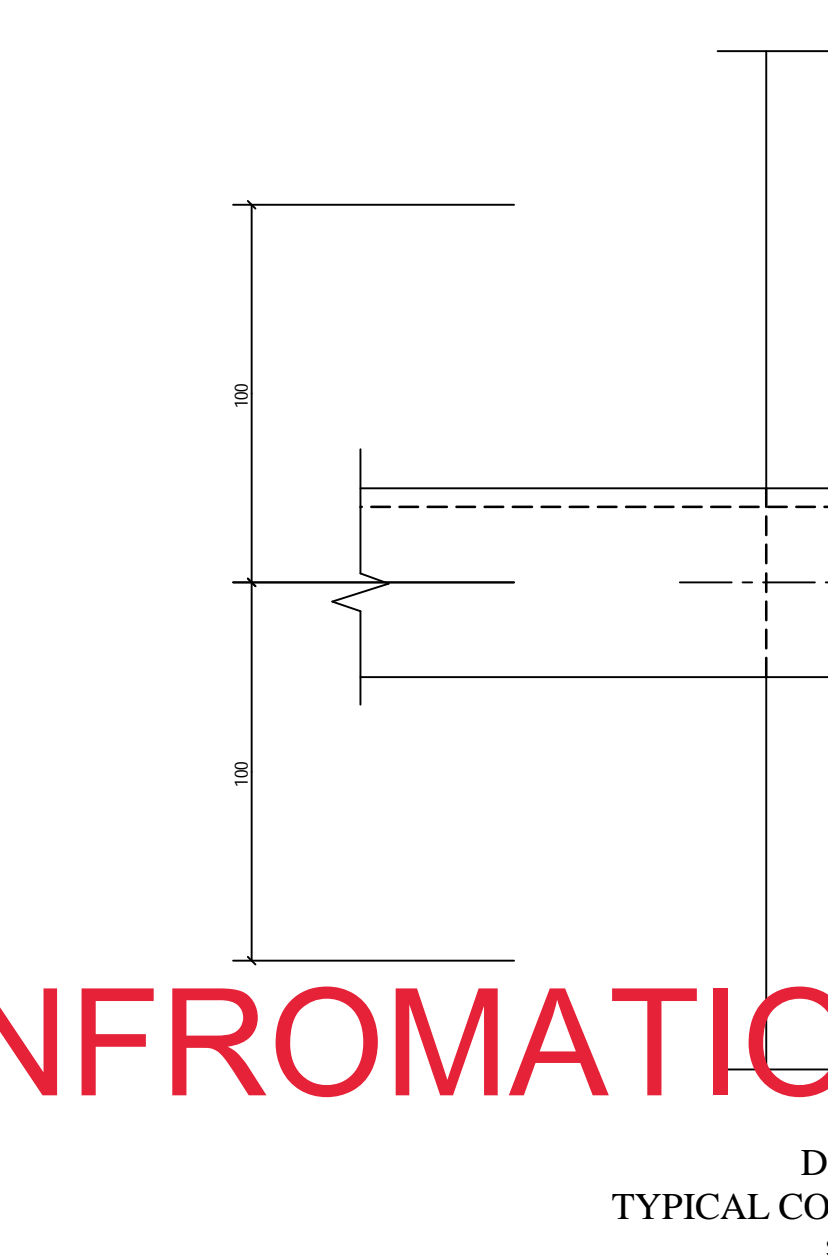
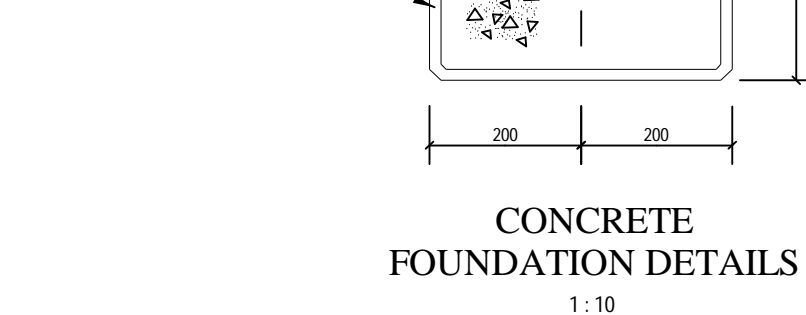
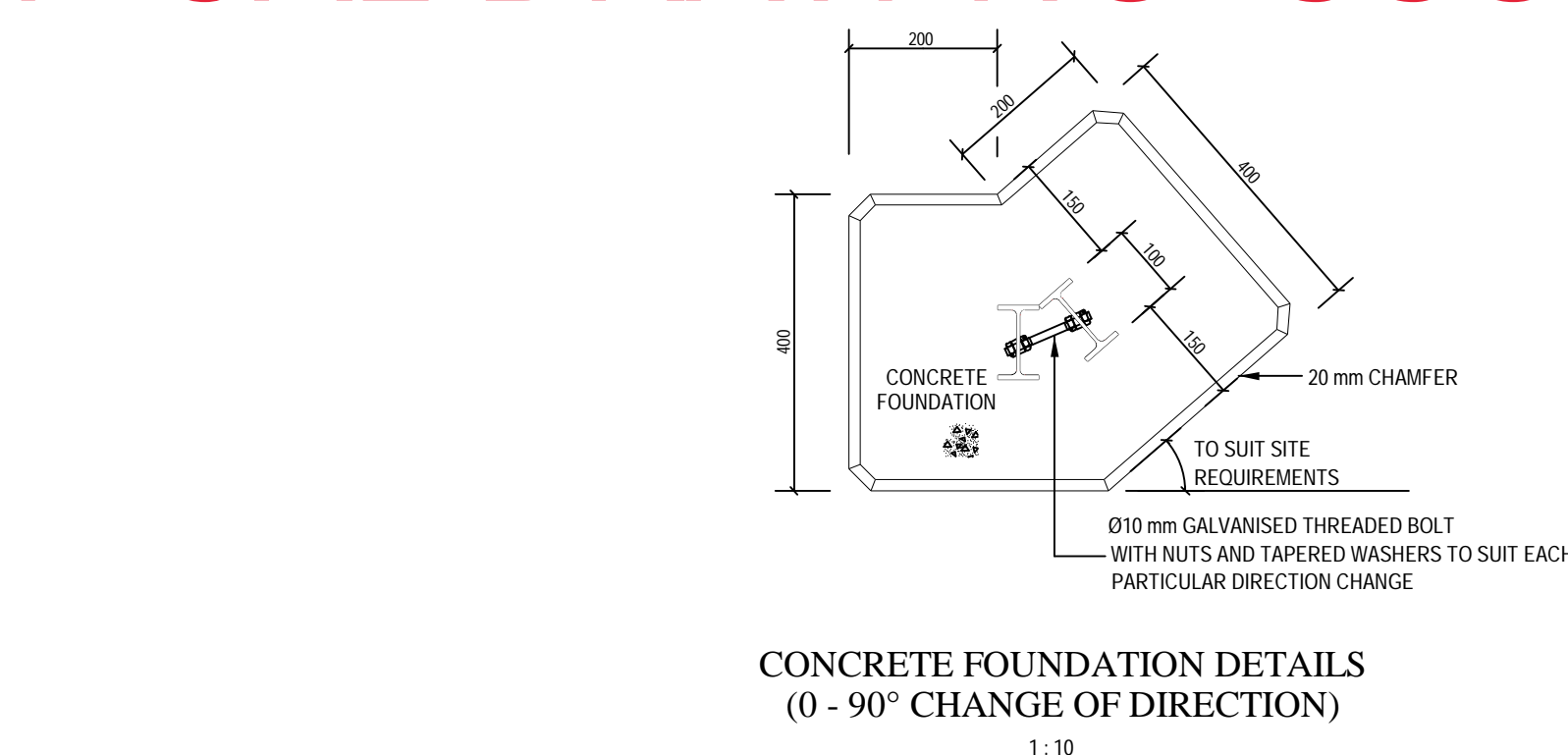
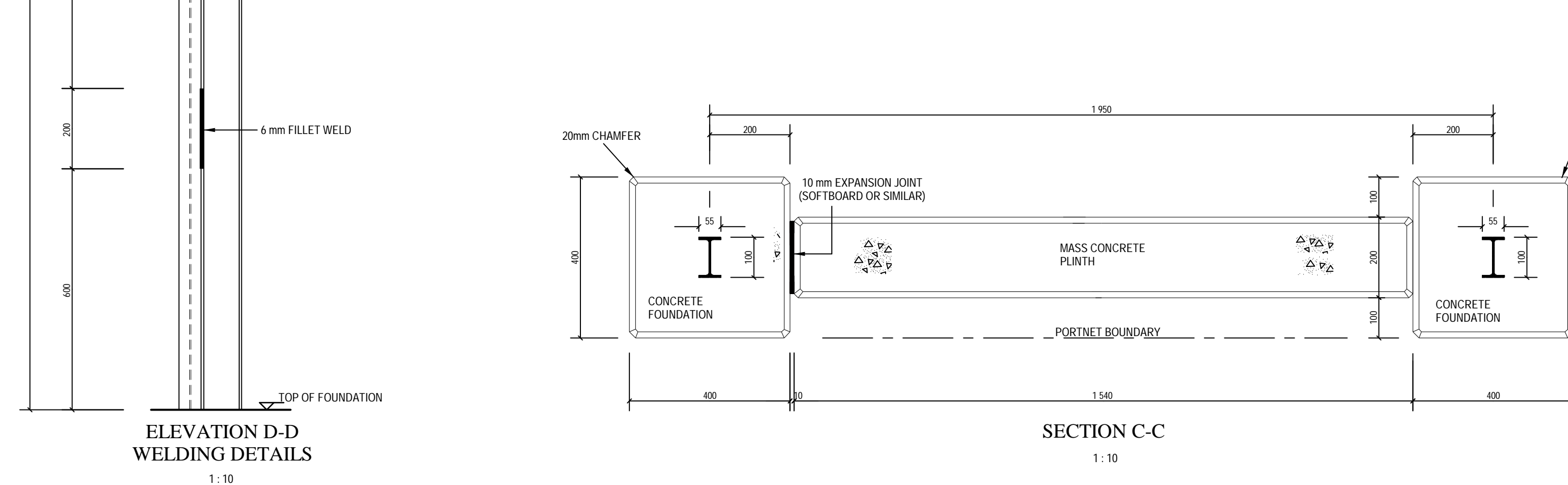
- a) THE CONTRACTOR IS TO SET THE FENCE OUT BY SURVEY INSTRUMENT AND AS DIRECTED BY THE TECHNICAL OFFICER ON SITE.
NO CONCERNING OF THE POSTS WILL BE ALLOWED UNTIL EACH SUITABLE SECTION OF THE FENCE IS SET OUT AND APPROVED BY THE TECHNICAL OFFICER.
- b) 100mm STEPS IN THE CONCRETE PLINTH AND STEEL FENCE PANEL MUST BE ACCOMMODATED IN THE POST FOUNDATION DEPTH.
- c) A 10 mm EXPANSION JOINT BETWEEN THE POST FOUNDATION AND CONCRETE PLINTH AND STEEL PANEL MUST BE ALLOWED FOR EVERY 5TH PANEL (ie. 9.75 m)

2. FOUNDATIONS

- a) ALL EXCAVATIONS TO BE DONE BY HAND.
- CONTRACTOR TO EXERCISE CARE DURING EXCAVATIONS AS UNDERGROUND SERVICES MAY BE ENCOUNTERED.
- b) EXCAVATIONS FOR POSTS AND PLINTHS TO BE NEAT DIMENSIONS OF CONCRETE.
- c) ALL IN SITU FOUNDING MATERIAL TO BE COMPACTED TO 93% MOD. AND INSPECTED BY THE TECHNICAL OFFICER PRIOR TO POURING CONCRETE.

3. CONCRETE

- a) ALL CONCRETE TO BE MIN. 15MPa AT 28 DAYS. PBFC CONTAINING NOT LESS THAN 4% BLASTFURNACE SLAG OR A 50/50 BLEND OF EITHER OPC OR PC5 AND BLASTFURNACE CEMENT.
- b) ALL EXPOSED CONCRETE EDGES AND CORNERS TO HAVE 20 mm CHAMFER.



TYPICAL DRAWING ISSUED FOR INFORMATION

CONTRACTOR ENVIRONMENTAL AND SUSTAINABILITY SPECIFICATION GUIDELINES

Document number	TRN-IMS-GRP-GDL-014.4
Version number	3.0
Classification	Unclassified
Effective date	01 October 2023
Review date	30 September 2028


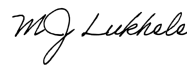
SUMMARY VERSION CONTROL

VERSION NO.	NATURE OF AMENDMENT	PAGE NO.	DATE REVISED
3.0	<ul style="list-style-type: none"> • Addition of reference documents (section 3) • Inclusion of additional definitions • Removal of DEA and replacing it with DFFE • Removal of Transnet EO and replacing with Transnet Environmental Resource (PER) • Inclusion of additional abbreviations • Inclusion of minimum environmental requirements for construction (section 5) • Inclusion of details of site inspections/audits (table 1) • Inclusion of Records Management 	6-7 7-10 11 12 12-23 23 45	June 2023

Note: Only latest amendments and/or additions are reflected in italics in the body of the document.

DOCUMENTATION SIGN-OFF SHEET

I, the undersigned hereby approve this procedure.

ROLE	CAPACITY/ FUNCTION	SIGNATURE	DATE
Process Owner:	Senior Specialist: Environmental Risk and Compliance		01/10/2023
Accepts document for adequacy and practicability. Comments:			
Approval Committee:	GM: Corporate Sustainability		01/10/2023
Approves document for use. Comments:			

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1. PURPOSE

This document describes the minimum requirements for environmental management to which Contractors must comply. This document must be read in conjunction with the Transnet Construction Environmental Management Standard Operating Procedure (CEM SOP).

In this document, unless the context clearly indicates otherwise:

- Words importing any one gender shall include the other gender;
- The singular shall include the plural and vice versa; and
- Any reference in this document to legislation or subordinate legislation is to such legislation or subordinate legislation at the date of promulgation thereof and as amended and/or re-enacted from time to time.

2. APPLICABILITY

This standard applies to Contractors that work on site under the authority of Transnet SOC Ltd.

3. REFERENCE DOCUMENTS

Name	Applicable Section
Constitution of South Africa, Act 108 of 1996	Section 24
National Environmental Management Act, 107 of 1998	Section 2 National Environmental Management Principles
National Water Act, 36 of 1998	Section 164, Permissible Water Use
National Environmental Management: Waste Act, 58 of 2008	Part 1 15 (1) (i) and (2) Part 6 26 (10) (a) and (b) Schedule 3, Defined Wastes Category A: Hazardous Wastes Part 8: Contaminated Land
Environment Conservation Act, 73 of 1989	Section 20
Occupational Health and Safety Act, 85 of 1993	Asbestos Regulations, 2001

Name	Applicable Section
	Government Notice R155 in Government Gazette 23108 of February 2002 General Safety Regulations-Reg. 2 (2) PPE
GNR 326, 7 April 2017 as amended, EIA Regulations	Chapter 15, Appendix 4
Transnet Environmental Risk Management strategy and Framework	2015:42
Environmental Management Systems ISO 14001: 2015	Clause 5, 6, 7, 8, 9 and 10

4. DEFINITIONS AND ABBREVIATIONS

4.1 Definitions

Compliance	Meeting of all the organization's regulatory requirements
Conformance	The action or fact of conforming to this standard and other internal Transnet policies, procedures, guidelines and best practice.
Construction Environmental Management Standard Operating Procedure	Is a document which is used to define how environmental management will be practiced on any construction site under the management of Transnet to ensure that the environment is considered, negative impacts avoided or minimized, and positive impacts are enhanced.
Contractor	The Principal Contractor as engaged by Transnet for infrastructure construction operations, including all sub-contractors appointed by the main contractor of his own volition for the execution of parts of the construction operations; and any other contractor from time to time engaged by Transnet directly in connection with any part of the construction operations which is not a nominated sub-contractor to the Principal Contractor.

Contractor Environmental and Sustainability Specification Guidelines	A set of minimum environmental standards for all Transnet SOC Ltd-managed construction sites.
Environmental Aspect	Element of an organization's activities or products or services that interacts or can interact with the environment.
Environmental Impact	Change to the environment whether adverse or beneficial, wholly or partially resulting from an organization's environmental aspects.
Environmental Risk	The product of the likelihood and severity of an unforeseen occurrence/incident/aspect and the impact it would have, if realised, on the environment.
Fauna	A group of animals specific to a certain region or time period.
Flora	A group of plants specific to a certain region or time period.
General waste	Waste that does not pose an immediate hazard or threat to health or to the environment; and includes:- <ul style="list-style-type: none"> (a) domestic waste; (b) building and demolition waste; (c) business waste; (d) inert waste;
Indigenous vegetation	Plants that naturally occur in an area.
Liquid waste	Waste that appear in liquid form such as used oil, grease and/or contaminated water or waste water.

Method statement	A document that describes how the Contractor will apply environmental management measures associated with a particular activity during construction.
Monitoring	Determining the status of a system, a process or an activity
Natural Vegetation	All existing species, indigenous or otherwise, of trees, shrubs, groundcover, grasses and all other plants found growing on the site.
Responsible Authority	A Responsible Authority, according to the National Water Act 36 of 1998, relates to specific power or authority in respect of water uses that is assigned by the Minister to a Catchment Management Agency or to a Regional Office.
Rehabilitation	Refers to measures that must be put in place to restore the site to its pre-construction or enhanced state, subsequent to construction taking place.
Scope of Work	The construction work for which the Contractor has been appointed in terms of the Contract with Transnet.
Sensitive area	Any area that is denoted as sensitive by this Specification due to its particular attributes, which could include the presence of rare or endangered vegetation, the presence of heritage resources (e.g. archaeological artefact or graves), the presence of a unique natural feature, the presence of a watercourse or water body, the presence of sensitive social receptors etc. As a minimum, habitats that fall under this definition include: mountain catchments, Ramsar wetland sites, coastal shores, estuaries and endangered ecosystems.
Solid waste	All solid waste, including construction debris, chemical waste, excess cement/ concrete, wrapping materials, timber, tins and cans, drums, wire, nails, food and domestic waste (e.g. plastic packets and wrappers).

Spoil	Excavated material which is unsuitable for re-use as material in the Works or any other use; or is material which is surplus to the requirements of the Works.
Sub -Contractor	<p>is a person or organisation who has a contract with the contractor to:</p> <p>Construct or install part of the contractor's work.</p> <p>Provide a service necessary to provide the works; or</p> <p>Supply plant and materials which the person or organisation has wholly or partly designed specifically for the works.</p>
Temporary Storage	A once-off storage of waste for a period not exceeding 90 days.
Topsoil	Means a varying depth (up to 300 mm) of the soil profile irrespective of the fertility appearance, structure, agricultural potential, fertility and composition of the soil.
Waste	Any substance, material or object, that is unwanted, rejected, abandoned, discarded or disposed of, or that is intended or required to be discarded or disposed of, by the holder of that substance, material or object, whether or not such substance, material or object can be re-used, recycled or recovered and includes all wastes. Waste or a portion of waste ceases to be a waste only once the waste is, or has been re-used, recycled or recovered.
Wastewater	means water containing waste, or water that has been in contact with waste material
Watercourse	<p>Refers to -</p> <p>a river or spring;</p> <p>a natural channel in which water flows regularly or intermittently;</p>

a wetland, lake or dam into which, or from which, water flows;
and

any collection of water gazetted by the National Water Act, 36 of 1998 as a watercourse, and a reference to a watercourse includes, where relevant, its bed and banks.

Wetland

Land which is transitional between terrestrial and aquatic systems where the water table is usually at or near the surface, or the land is periodically covered with shallow water, and which land in normal circumstances supports or would support vegetation typically adapted to life in saturated soil.

4.2 Abbreviations

Acronym	Meaning In Full
CEM SOP	Construction Environmental Management Standard Operating Procedure
CM	Construction Manager
CV	Curriculum Vitae
DEFF	Department of Environment, Forestry and Fisheries
EA	Environmental Authorisation
ECO	Environmental Control Officer
EIA	Environmental Impact Assessment
CESSG	Contractor Environmental and Sustainability Specification Guidelines
EO	Environmental Officer

Acronym	Meaning In Full
EMP	Environmental Management Plan
EMPr	Environmental Management Programme
EGF	Environmental Governance Framework
NEMA	National Environmental Management Act 107 of 1998
NEM:BA	National Environmental Management: Biodiversity Act 10 of 2004
NWA	National Water Act 36 of 1998
PER	Project Environmental Resource
PES	Project Environmental Specification
PM	Project Manager
SAHRA	South African Heritage Resource Agency
SDS	Safety Data Sheet
SHEQ	Safety, Health, Environment and Quality
TRANSNET	Transnet SOC Ltd

5. MINIMUM ENVIRONMENTAL REQUIREMENTS FOR CONSTRUCTION

5.1 Tender Documents

Any construction-related tender issued to the market must include:

- Transnet Integrated Management System Policy Statement;
- The Transnet Construction Environmental Management Standard Operating Procedure (CEM SOP);
- The Contractor Environmental & Sustainability Specification Guideline; and
- The Project Environmental Specification (PES).

Any construction-related tender must be recommended for issue by the Transnet Project Environmental Resource/s before it is released to the market.

5.2 Project Environmental Specification (PES)

Must incorporate all relevant recommendations of the Environmental Impact Assessment (EIA) and other environmental studies for the project and the relevant conditions of the EA and/or other applicable environmental permit(s) and licence(s), and the Transnet Operating Division's Environmental Management requirements (where applicable) into an environmental performance specification for implementation during the construction phase of the project.

The PES need not be a separate document; however it can be in a format of an appendix/addendum making reference to environmental authorisation(s), permit(s) or licence(s) applicable to the project. In cases where the project does not trigger any of the NEMA listed activities or any permit(s)/licence(s); the PES may be compiled to prescribe additional environmental management measures over and above the measures stipulated in the MERC.

5.3 Contractor's Environmental Policy

The Contractor's Environmental Policy must be signed and dated by Top Management.

The content of the Contractor's Environmental Policy must:

- be appropriate to the purpose and context of the Contractor's organization, including the nature, scale and environmental impacts of its activities, products and services;
- provide a framework for setting environmental objectives;
- include a commitment to the protection of the environment, including prevention of pollution and other specific commitment(s) relevant to the context of the Contractor's organization;
- include a commitment to fulfil compliance obligations; and
- include a commitment to continual improvement of the Contractor's environmental management system to enhance environmental performance

5.4 Contractor's Environmental Management Plan (EMP)

The Contractor's EMP must include:

- the name of the person who compiled the EMP;
- the expertise of the person who compiled the EMP, including a CV;
- a description of the Contractor's scope of work;
- a detailed description of the environmental aspects related to the Contractor's scope of work;
- a map at an appropriate scale which depicts all construction activities including associated structures, and infrastructure and environmental sensitivities affected by the construction footprint , as well as no go-areas and associated buffers;
 - The map must include the following:
 - an accurate indication of the project site position as well as the positions of the alternative sites, if any;
 - road names or numbers of all the major roads as well as the roads that provide access to the site(s)
 - a north arrow;
 - a legend;
 - the prevailing wind direction;
 - site sensitivities, including but not limited to vegetation, wetlands, watercourses, heritage sites, critical biodiversity area/s, World Heritage Site, etc. and it must be overlaid by the study area; and

- GPS co-ordinates (Indicate the position of the proposed activity with the latitude and longitude at the centre point for each alternative site. The co-ordinates should be in degrees and decimal minutes. The minutes should be to at least three decimal places. The projection that must be used in all cases is the WGS-84 spheroid in a national or local projection).
- a description of the impacts and risks that need to be avoided, managed and mitigated during the execution of the Contractor's scope of work including (as relevant);
 - planning and design;
 - pre-construction activities;
 - construction activities;
 - rehabilitation; and
 - operation of Transnet assets.
- a description and identification of impact management outcomes required for the identified aspects;
- a description of proposed impact management actions, identifying the manner in which the impact management objectives and outcomes contemplated above will be achieved, and must, where applicable, include actions to:
 - avoid, modify, remedy, control or stop any action, activity or process which causes pollution or environmental degradation;
 - comply with any prescribed environmental management standards or practices; and
 - comply with any applicable local, provincial and national legislation.
- the method of monitoring the implementation of the impact management actions contemplated above;
- the frequency of monitoring the implementation of the impact management actions contemplated above;
- an indication of the persons who will be responsible for the implementation of the impact management actions;
- the timeframe within which the impact management actions contemplated above must be implemented;
- the mechanism for monitoring compliance with the impact management actions contemplated above;

- a program for reporting on compliance, taking into account the requirements of this document;
- an environmental awareness plan describing the manner in which:
 - the Contractor intends to inform his employees of any environmental risk which may result from his scope of work; and
 - risks must be dealt with in order to avoid pollution or the degradation of the environment.
- any specific information that may be required by Transnet.

5.5 Contractor's Environmental Officer (EO)

The Contractor's EO should have relevant environmental qualifications and experience required for the project. The level of qualifications and experience must be in line with the complexity of the Contractor's scope of work coupled with the sensitivity of the site. The level of competency will be determined by Transnet during tender.

5.6 Management of Sub-Contractors

The Contractor must ensure that all his sub-contractors comply with this document in so far as it relates to their specific scope of work or services.

5.7 Pre-Site Access Environmental Governance

The Contractor must appoint the EO recommended in his tender proposal. Should the EO no longer be available, the Contractor must submit a CV of an alternative EO with similar or better qualifications and experience for approval by the Transnet PM and PER. The same principle will apply if the Contractor's EO is replaced for whatever reason at any stage. No construction may take place without a duly appointed Contractor's EO.

The Contractor must provide his EO with all environmental documents provided by Transnet during tender and submitted as a part of the Contractor's proposal.

The Contractor must obtain the contact details of the responsible Transnet PER and Transnet PER and provide these details to his EO.

The Contractor's EO must develop an appropriate environmental file for approval by the Transnet PER, including but not necessarily limited to (the environmental file must always be available and up to date on the construction site):

- Documents from the tender as described above.
- His CV.
- An organogram indicating reporting lines of all Contractor's staff (with names included).
- Contact Information for: the overall responsible person acting on behalf of the Contractor to execute the construction works; Contractor's Construction Manager (CM); Contractor's EO; and all relevant emergency personnel.
- A list of the Contractor's plant and equipment indicating a description of the plant/equipment, its fuel capacity, any hazardous components (oils, greases etc.), individual service/maintenance cycles and noise levels.
- A list of hazardous substances to be used during construction indicating: official substance name from Material Safety Data Sheets (MSDS)/ Safety Data Sheet (SDS); quantity on site; storage method; transport method to site; and period to be used on site. All substances listed must have MSDS/ SDS on site in the environmental file.

The MSDS/ SDS should contain the following minimum requirements:

- Section 1: Product and company name
- Section 2: Hazard identification
- Section 3: Composition/information on ingredients
- Section 4: First aid measures
- Section 5: Fire fighting measures
- Section 6: Accidental release measure
- Section 7: Handling storage
- Section 8: Exposure controls/personal protection
- Section 9: Physical and chemical properties
- Section 10: Stability and reactivity
- Section 11: Toxicological Information
- Section 12: Ecological Information
- Section 13: Disposal Consideration

- Section 14: Transportation
- Section 15: Regulatory Information
- Section 16: Other Information
- Photographic pre-construction report that details the site before any activities commence.
- Site Layout Plan indicating but not necessarily limited to,: access roads, site offices, material laydown areas, stockpile areas and parking areas, waste and effluent storage and handling facilities, entire construction footprint, no-go-areas, sewage and sanitary facilities. The plan must be appropriately drawn on a computer and must be clearly visible and properly scaled.
- A site establishment method statement (minimum requirements for method statements are described below in this document).
- Environmental Induction Material to be used to educate site staff and visitors (minimum requirements for environmental induction are described below in this document).
- An activity-based environmental risk assessment.

The Contractor's EO must submit the environmental file for acceptance to the Transnet PER.

The Contractor must obtain a Site Access Certificate from the Transnet PM before accessing the site.

5.8 Safety Data Sheets

Each hazardous substance used on site must have a valid SDS. The SDS must comply with the requirements of the Occupational Health and Safety Act, 85 of 1993.

5.9 Environmental Induction

The Contractor will ensure that all management, foremen and the general workforce, as well as all sub-contractors, suppliers and visitors to site have attended the Transnet Environmental Induction Programme prior to commencing any work on site. Where new personnel commence work on site during the construction period, the Contractor will ensure that these personnel also undergo the Transnet Environmental Induction Programme and are made aware of the environmental specifications on site.

The Contractor must ensure that all of his personnel understand the requirements of the CEM SOP; MERC; EA, EMPr, relevant permits and licences and PES as relevant to their scope of work.

5.10 Environmental Method Statements

- Environmental Method Statements as identified by the Transnet PER based on the Contractor's activity-based environmental risk assessment will be written submissions by the Contractor to the Transnet CM and PER describing:
- The proposed activity, setting out the plant, equipment, materials, labour and method the Contractor proposes using to carry out an activity;
- The environmental management of site conditions – waste management, housekeeping, site establishment etc;
- Transportation of the equipment to and from site;
- How the equipment/ material will be moved while on site;
- How and where material will be stored;
- The containment (or action to be taken if containment is not possible) of leaks or spills of any liquid or material that may occur;
- Timing and location of activities;
- Description of potential positive and negative environmental impacts and how they will be managed;
- Conformance/ non-conformance with this document and any other statutory and best practice standards;
- Monitoring and reporting requirements;
- Records Management; and
- Any other information deemed necessary by the Transnet CM and Transnet PER as well as ECO where applicable.

The Environmental Method Statements will enable the potential positive and negative environmental impacts associated with the proposed construction activity to be identified and mitigation measures put in place. All method statements must be signed by the Contractor, Transnet CM and PER, with the addition of the ECO on authorized projects, thereby indicating that the works will be carried out according to the methodology described therein.

Activities may only commence once the Environmental Method Statements have been approved by the Transnet CM, Transnet PER and ECO (where relevant). In some instances, local authorities may also need to approve the method statements. This will be highlighted in the Project Environmental Specification, where applicable.

All changes to the original Environmental Method Statements must be approved by the Transnet PER and Transnet CM prior to implementation.

To enable timely approvals, the environmental method statements will be submitted to the Transnet CM and Transnet PER for review two (2) weeks prior to the intended date of commencement of the activity, or as directed by the Transnet Project Manager/CM.

Emergency construction activity Environmental Method Statements may also be required. The activities requiring Environmental Method Statements cannot commence if they have not been approved by the CM and PER or ECO.

NOTE: No advice, approval of method statements or any other form of communication from Transnet will be construed as an acceptance by Transnet of any obligation that indemnifies the Contractor from achieving any required level of performance. Further, there is no acceptance of liability by Transnet which may result from the Contractor failing to comply with the specifications, i.e. the Contractor remains responsible for achieving the required performance levels.

5.11 Environmental Occurrences (Incidents)

The Transnet PER shall provide the Contractor with the procedure to follow in managing environmental occurrences during pre-site access governance.

The Contractor shall follow the procedure provided to him by the Transnet PER and maintain required records thereof.

In the event of an environmental occurrence, the Contractor must, as soon as is reasonably practicable:

- classify an environmental occurrence in line with the Transnet Environmental Management Occurrence process flow;

- take all reasonable measures to contain and minimise the effects of the occurrence, including its effects on the environment and any risks posed by the occurrence to the health, safety and property of persons;
- undertake cleanup procedures;
- remedy the effects of the occurrence; and
- assess the immediate and long-term effects of the occurrence on the environment and public health

5.12 Environmental Non-Conformances (Defects)

Environmental Non-Conformances shall be handled as per the terms and conditions of the Contract.

The Transnet PER shall provide the Contractor with the procedure to follow in managing environmental non-conformances during pre-site access governance.

The Contractor shall follow the procedure provided to him by the Transnet PER and maintain required records thereof.

The Transnet Project Manager shall ensure that all Non-conformances are appropriately closed out within the timeframe specified in the Non-Conformance Report.

Any environmental non-conformance will be dealt with similarly to a Defect as defined in the Contract. A defect is due to non-compliance with the Works Information and it is the responsibility of the Contractor to correct the defect in order to ensure that the work takes place in accordance with the Works Information. Similarly, non-conformance/non-compliance with any other permit or licence will be regarded as a non-conformance with the Works Information. The Contractor is responsible for rectifying any defect (non-conformance) as defined above promptly.

The Contractor's EO shall be responsible to search for and identify non-conformances with the environmental specifications at inspection intervals agreed to with the Transnet PER. The Transnet PER shall also undertake such inspections on a monthly basis. If such monthly inspections indicate that any part of the Contractor's work is non-conformant with the environmental requirements, the Transnet PER shall advise the Transnet PM to issue a Defects Notification to the Contractor accordingly. The Contractor shall correct the non-

conformance (defect) within the timeframes specified in the report and notification and submit proof of such correction to the Transnet PER.

The Transnet PER shall not recommend that a Site Closure Certificate be issued to the Contractor if any non-conformances have not been properly closed out. In such an event, the Transnet Project Manager may also make use of any reasonable contractual means to rectify the non-conformance(s) as allowed by the Contract (retention moneys etc.).

5.13 Community Grievances (Public Complaints)

The Transnet PER shall provide the Contractor with the procedure to follow in managing community grievances during pre-site access governance.

The Contractor shall follow the procedure provided to him by the Transnet PER and maintain required records thereof.

5.14 Environmental Inspections and Audits

Environmental inspections and audits may be conducted using five basic techniques:

- Interviews with Contractor's staff including Sub-contractors and suppliers;
- Document review;
- Observations;
- Monitoring; and
- Measurement and verification.

Table 1 sets out the areas and aspects of the construction site that will be inspected or audited, the frequency of such inspections/audits, the inspector/auditor and the inspected party/auditee. It should be noted that the list is not exhaustive and that each site will have specific issues that will need to be inspected/audited.

Table 1: Details on Environmental Inspections/Audits (where Transnet is the Inspected Party/Auditee, respective Contractors must give full cooperation).

Place	Inspector/Auditor	Inspected Party/Auditee	Inspection/audit frequency
Construction Site	Contractor's Environmental Officer	Contractor	Daily/Weekly Inspection
Project (including all construction sites).	Transnet Project Environmental Resource/Project Environmental Manager	Contractor	Monthly Inspection
Project (including all construction sites)	Transnet Environmental Specialist: Assurance	Transnet Project Environmental Resource	As stipulated on the annual audit plan
Project (as defined in Environmental Authorisation)	Environmental Control Officer	Transnet (represented by Transnet Environmental Resource)	As stipulated in the Environmental Authorisation
Project (as defined in Water Use Authorisation)	Independent Auditor	Transnet (represented by Transnet Environmental Resource)	As stipulated in the Water Use Authorisation

The Contractor's EO will be required to conduct inspections of all work areas for which the Contractor is responsible, at intervals agreed to with the Transnet PER. Monitoring shall

be conducted as per the Contractor's approved EMP and all required records shall be maintained by the Contractor.

The Transnet PER will be required to conduct inspections of all work areas for which the Contractor is responsible on a monthly basis or at intervals agreed to with the Transnet Project Environmental Manager. Monitoring shall be conducted as per the Project Environmental Specification. The Inspection Checklist to be used shall be approved by the Transnet PER prior to each inspection.

5.15 Contractor's Environmental Performance

The Transnet PER will explain how the Contractor's performance will be scored during pre-site access governance to the Contractor's EO. The standard/minimum requirement for all environmental inspections will be 90%.

5.16 Site Planning and Establishment

The Contractor shall establish his construction camps, offices, workshops, eating areas and any other facilities on the site in a manner that does not adversely affect the environment. These facilities must not be sited in close proximity to sensitive areas; the buffer to be determined by the ecological requirements of the fauna/flora found on-site.

The site offices should not be sited in close proximity to steep areas. It is recommended that the offices, and in particular the ablution facilities, aggregate stockpiles, spoil areas and hazardous material stockpiles be located as far away as possible from any watercourse.

5.16.1 Site Layout Plan

The Site Layout Plan must as a minimum include but not limited to:

- Detailed layout of the construction works areas including access roads, site offices, material laydown areas, temporary stockpile areas and parking areas;
- Detailed locality and layout of all waste storage and handling facilities for litter, kitchen refuse and workshop-derived effluent;
- Proposed areas for the stockpiling of topsoil and excavated spoil material;
- Demarcation of the construction footprint including areas not to be disturbed by the development;

- Location of sewage and sanitary facilities at the site offices and staff accommodation at all localities where there will be a concentration of labour.

Any changes to the location of the facilities and site activities as per the approved site layout plan shall be re-submitted to the Transnet CM and Transnet PER for approval prior to implementation.

The Contractor may be required to submit a separate layout plan dealing only with his site camp. If so this will be specified in the PES.

5.16.2 Identification and Establishment of Suitable Access Routes/Roads

Existing access routes to the construction/works areas must be used as far as possible. The building of access roads must be restricted to prevent unnecessary disturbance of the surrounding environment. Access tracks must be maintained in a good condition at all times during construction to minimize erosion and dust generation.

5.16.3 Demarcation of Site Limits

Prior to the commencement of construction, the site must be clearly demarcated by means of visible barriers. Vegetation within the demarcated zone may be cleared only upon obtaining approval from the Transnet PER. No activities are allowed outside of the approved footprint on the Site Layout Plan.

5.16.4 Eating Areas

The Contractor is responsible for providing adequate eating facilities within the works area to ensure that workers do not leave the site to eat during working hours. Refuse bags/bins must be provided at all established eating areas and when full it should be disposed of appropriately.

5.16.5 Liquid Waste Management

Liquid waste water from site shall be stored on-site in a properly designed and constructed system, situated so as not to adversely affect water courses. Only domestic type wastewater, i.e. toilet, shower, basin, kitchen water shall be allowed to enter the designated system.

5.17 Sewage and Sanitation

The Contractor is responsible for providing adequate sanitary facilities including toilets, toilet paper, wash basins etc. to all workers on site and for enforcing the proper use of these facilities.

Toilet facilities shall be serviced regularly and the waste material generated from these facilities shall be disposed of at a registered waste water treatment works/macerator and relevant permits for transportation of waste and proof of servicing and disposal shall be maintained.

Toilets and latrines shall be easily accessible and shall be positioned within walking distance from wherever employees are employed on site, and away from sensitive areas. Use of open areas (i.e. the veld) is not allowed. For projects of high mobility a mobile toilet facility shall be made available by the Contractor.

Outside toilets shall be provided with locks and doors and shall be secured to prevent them from blowing over. Toilets must not be placed in areas susceptible to flooding and high winds. The Contractor shall arrange for regular emptying of toilets and shall be entirely responsible for enforcing their use and for maintaining such facilities in a clean, orderly and hygienic condition to the satisfaction of the Transnet CM.

5.18 Waste Management

Waste shall be grouped into “**general**” or “**hazardous**”, depending on its characteristics. The classification shall determine handling methods and the ultimate disposal of material.

General waste which is likely to be generated on site during construction include but not limited to the following:

- Trash (waste paper, plastics, cardboard, etc.) and food waste from offices, warehouses and construction personnel;
- Uncontaminated construction debris such as used wood and scrap metal; and
- Uncontaminated soil and non-hazardous rubble from excavation or demolition.

The Contractor shall classify all waste expected to be generated during the construction period. Examples of typical construction waste which could be expected on the site and how they should be classified are indicated in the following table:

TABLE 2: EXAMPLE OF CONSTRUCTION WASTE CLASSIFICATION

Waste	Classification	
	Hazardous	General
Aerosol containers	X	
Batteries, light bulbs, circuit boards, etc.	X	X
Clean soil		X
Construction debris contaminated by oil or organic compounds	X	
Domestic waste		X
Empty drums (depends on prior use)	X	X
Empty paint and coating containers		X
Explosive waste	X	
PCB waste	X	
Rubble (not contaminated by oil or organic compounds)		X
Waste Cable		X
Waste plastic		X
Waste paint and/or solvent	X	
Waste oil	X	
Waste concrete		X
Waste cement powder	x	
Waste empty cement bags (must be thoroughly decanted)		x
Waste containing fibrous asbestos	X	
Waste timber		X
Sewerage sludge	X	
Scrap metal		X

Waste	Classification	
	Hazardous	General
Chemically-derived sanitary waste	X	

Waste will be managed in accordance with the Waste Management Hierarchy depicted in Figure 1 below:

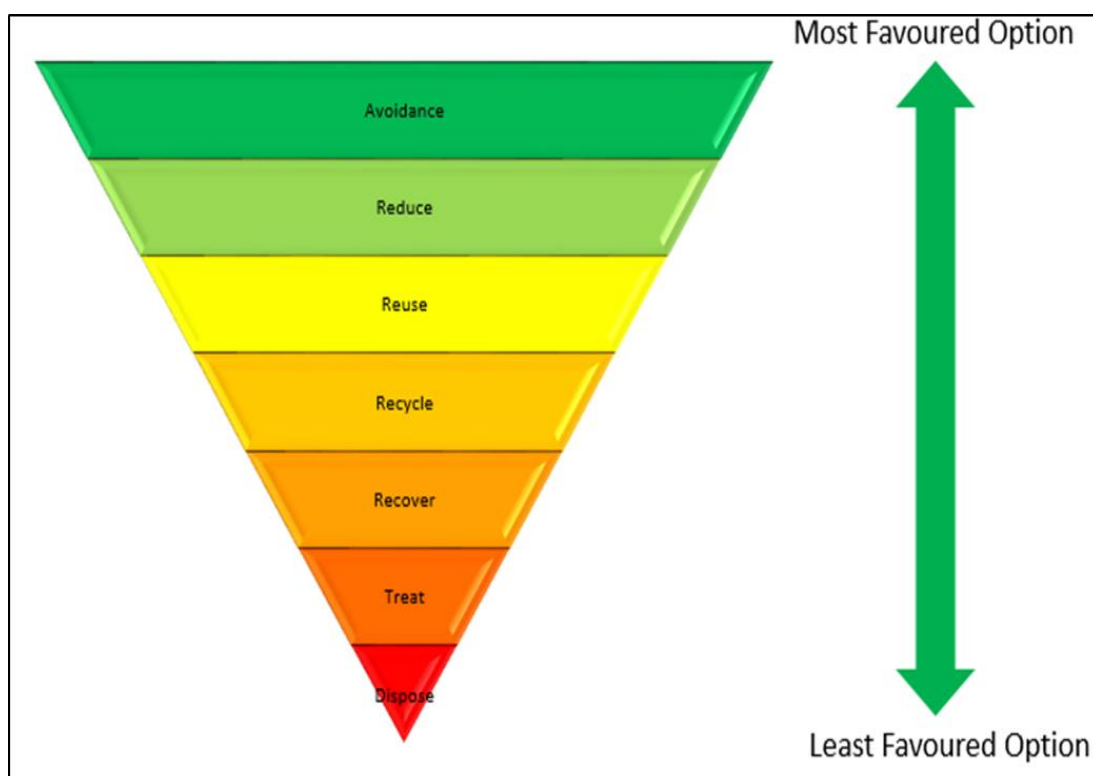


FIGURE 1: THE WASTE MANAGEMENT HIERARCHY

(Transnet Environmental Risk Management strategy and Framework, 2015:42)

- 1. Avoidance/Prevention:** using goods in a manner that minimises their waste components
- 2. Reduction/Minimisation:** reduction of the quantity and toxicity of waste generated during construction
- 3. Re-use:** removing an article from a waste stream for use in a similar or different purpose without changing its form or properties

- | | |
|----------------------|---|
| 4. Recycling: | separating articles from a waste stream and processing them as products or raw materials |
| 5. Recovery: | reclaiming particular components or materials, or using the waste as a fuel |
| 6. Treatment: | processing of waste by changing its form or properties in order to reduce toxicity and quantity |
| 7. Disposal: | burial, deposit, discharge, abandoning or release of waste |

The Contractor is responsible for the removal of all waste generated from site. The Contractor shall ensure that all waste is removed to appropriate licensed waste management facilities. (For the identification of an appropriate facility, the following source may be utilized: <http://sawic.environment.gov.za/>).

The Contractor shall manage **GENERAL WASTE** that is anticipated to be generated by operations as follows:

- Notify waste hauler when container is full so that it can be removed and replaced with an empty container/skip;
- No littering is allowed on site. In the event where staff mobility is high, refuse bags will be made available by the Contractor;
- Provide documented evidence of proper disposal of waste (Waste Disposal Certificate)

The Contractor shall recycle **GENERAL WASTE** (as far as practically possible) that is anticipated to be generated by its operations as follows:

- Obtain and label recycling containers for the following (whichever relevant) and locate them at secure designated locations on site:
 - Office Waste;
 - Aluminium;
 - Steel;
 - Glass;
 - Ferrous Metals;

- Non Ferrous Metals; and
- Waste Timber
- Establish recycled material collection schedule;
- Arrange for full bins to be hauled away;
- Spent batteries, circuit boards, and bulbs, while non-hazardous, require separate storage, special collection and handling; and
- No burning, burying or dumping of waste of any kind will be permitted.

The Contractor shall manage **HAZARDOUS WASTE** anticipated to be generated by his operations as follows:

- Obtain and provide an acceptable container with correct and visible classification label;
- Place hazardous waste material in allocated container;
- Inspect the container on a regular basis as per the Contractor's EMP;
- Track the accumulation time for the waste, haul the full container to the registered hazardous disposal site;
- Notify the waste hauler when container is full so that it can be removed and replaced with an empty container/skip; and
- Provide documented evidence of proper waste disposal of the waste (Waste Disposal Certificate).

The Contractor shall maintain the following waste records for submission to the Transnet PER on request:

- Date of waste management activity;
- Activity Type (reuse, recycle, recover, treat, dispose);
- Description (e.g. contaminated soil, medical waste, tyres, plastic, domestic waste etc.)
- Classification (General/Hazardous);
- Estimated Quantity in kilograms
- Disposal Site Name and Reference Number (where relevant);
- Method of Transport; and
- Signed Collection or Disposal Records

5.19 Workshops, equipment maintenance and storage

All vehicles and equipment must be kept in good working order to maximise efficiency and minimise pollution. Maintenance, including washing and refueling of plant on site must be done at designated locations approved on the Site Layout Plan. The Contractor must ensure that no contamination of soil or vegetation occurs around workshops and plant maintenance facilities.

All machinery servicing areas must be bunded. Stationary plant that leak harmful substances shall not be permitted on site. Washing of equipment should be restricted to urgent maintenance requirements only. Adequate wastewater collection facilities must be provided and the wastewater should be disposed of appropriately in accordance with its waste classification.

5.20 Vehicle and Equipment Refueling

5.20.1 Stationary/Designated Refuelling

No vehicles or machines shall be serviced or refueled on site except at designated servicing or refueling locations included on the approved Site Layout Plan.

The Contractor shall provide details of his refueling activities in his EMP or Refueling Method Statement. Facility design shall comply with the regulations of the National Water Act, (Act 36 of 1998), the Hazardous Substances Act, (Act 15 of 1973), the Environmental Conservation Act, (Act 73 of 1989), National Environmental Management Act, (Act 107 of 1998), and the Occupational Health and Safety Act, (Act 85 of 1993), mainly the Construction - and Hazardous Chemical Substances Regulations.

5.20.2 Mobile Refuelling

In certain circumstances, the refueling of vehicles or equipment in a designated area is not a viable/practicable option and refueling has to be done from a tank, truck, bowser or container moved around on site. In such circumstances, the Contractor may request approval from the Transnet CM to conduct mobile refueling subject to the following control measures:

- Secondary containment equipment shall be in place. This equipment shall be sized to contain the most likely volume of fuel that could be spilt during transfer.

- Absorbent pads or drip trays are to be placed around the fuel inlet prior to dispensing.
- Mobile refueling units are to be operated by a designated competent person.
- The transfer of fuel must be stopped prior to overflowing. Fuel tanks or refueling equipment on vehicles may only be filled to 90% carrying capacity.
- Mobile fuelling equipment must be stored in areas where they are not susceptible to collisions.
- Mobile refueling operations shall not take place within 30 meters of any watercourses or 7.5 meter from other structures, property lines, public ways or combustible storage.

All mobile refueling tanks are to be properly labelled and fire extinguishers with valid service dates shall be located near the fuel storage areas. These extinguishers must be of a suitable type and size.

5.21 Spill Response

The Contractor shall have adequate spill response materials/equipment on site which must be aligned with the volumes of hazardous substances used on site and the risk of pollution to sensitive environmental features.

The Contractor shall have an approved Spill Response Plan, either in his EMP or in the form of a method statement approved by the Transnet CM and Transnet PER.

The Contractor shall instruct construction personnel on the following spill prevention and containment responsibilities:

- All plants to be inspected daily to ensure that they are in good condition;
- Immediately repair all leaks of hydrocarbons or chemicals;
- Take all reasonable measures to prevent spills or leaks;
- Do not allow sumps receiving oil or oily water to overflow;
- Prevent storm water runoff from contamination by leaking or spilled drums of oil or chemicals; and
- Do not discharge oil or contaminants into storm water or sewer systems.

If a spill occurs on land, the Contractor must:

- Immediately stop or reduce the spill;

- Contain the spill;
- Recover the spilled product;
- Remediate the site;
- Implement actions necessary to prevent the spill from contaminating groundwater or off-site surface water; and
- Manage the contaminated material in accordance with Waste Management requirements in this document.

Any spill to water has the potential to disperse quickly, therefore, the spill must be contained immediately using appropriate containment equipment.

If a spill to water occurs, the Contractor must:

- Take immediate action to stop or reduce the spill and contain it;
- Notify the appropriate on-site authorities;
- Implement actions necessary to prevent the spread of the contamination by deploying appropriate absorbent material;
- Recover the spilled product; and
- Manage the contaminated material in accordance with Waste Management requirements in this document. Water samples to be taken downstream from where the spill took place to trace the extent of pollution.

All spills must be recorded as occurrences and managed in accordance with the requirements for Occurrences in this document.

5.22 Spray Painting and Sandblasting

Spray painting and sandblasting must be kept to a minimum. All painting must, as far as practicable, be done before equipment and material is brought on site. Touch-up painting is to be done by hand painting or as per the approved EMP or Method Statement.

The relevant Contractor will inform his EO when and where spray painting or sandblasting will be carried out prior to commencement of work. The Contractor's EO will monitor these activities to ensure that adequate measures are taken to prevent contamination.

Sand may only be acquired from approved commercial sources and in instances where sand is collected from the natural surrounds, such collection must be approved by the Transnet PER.

If the area is in confined or high (elevated) areas, a protection plan must be issued for approval by the Transnet PER.

5.23 Dust Management

The usage of water for dust management will be minimized as far as practically possible. Discretion must be applied in this regard especially relating to drought conditions. Only water from approved sources may be used. Dust control measures must be approved by the Transnet PER prior to commencement of the Works.

The following minimum dust management practices must be implemented on site:

- Vehicles must be operated within speed limits, where no speed limit has been specified, the limit shall be 40km/h;
- Haulage distances must be minimized as far as reasonable practicable;
- Where water suppression is insufficient or impractical, environmentally friendly soil stabilizers must be used;
- Stockpiles and open areas that may cause dust must be stabilized and vegetated where required;
- Dust suppression measures must be implemented on inactive construction areas. (An inactive construction site is one on which construction will not occur for a month or more);
- Disturbance of natural vegetation must be minimized to reduce potential erosion, runoff, and air-borne dust;
- Material in transit must be loaded and contained within the load bin of the vehicle in such a way as to prevent any spillage or creation of dust clouds. If necessary, the load bin of the vehicle shall be covered with a tarpaulin;

5.24 Storm Water and Dewatering Management

Apart from runoff from overburden emplacements and stock piles, storm water can also be contaminated from batch plants, workshops, vehicle wash-down pads, etc., and contaminants during construction may include hydrocarbons from fuels and lubricants, sewerage from employee ablutions and excess fertilizer from rehabilitated areas, etc.

Discharges to controlled waters such as the sea, rivers, and groundwater or to sewerage systems are controlled under South African Water Legislation. The following specific measures are required:

- Temporary drainage must be established and maintained on site during the construction period until permanent drainage is in place. Secondary drainage that prevents erosion must be provided, where necessary.
- Contractors must employ good housekeeping in their areas to prevent contamination of drainage water.
- Stagnant water shall be cleared at a frequency approved by the Transnet PER.
- Any surface water flows off-site must be approved by the Transnet PER. Where necessary, silt traps shall be constructed to ensure retention of silt on site and cut-off ditches shall be constructed to ensure no runoff from the site except at points where silt traps are provided. The Contractor shall be responsible for checking and maintaining all silt traps for the duration of the project.
- The removal from groundwater is defined as a water-use under the National Water Act 36 of 1998. Therefore, it must be ensured that the project has been authorised by the Responsible Authority to remove and discharge groundwater prior to dewatering taking place. If applicable, the Contractor shall be responsible for collection, management, and containment within the site boundaries of all dewatering from all general site preparation activities.
- On-site drainage shall be accomplished in accordance with a plan approved by a suitably qualified civil engineer.

5.25 Erosion Control

Erosion control measures will be designed, implemented, and properly maintained in accordance with best management practices which will include, but not limited to the following:

- Activities must be scheduled to minimise the extent of disturbance of an area at any one time;
- Re-vegetation must be implemented as early as feasible;
- Construction traffic must be properly managed and controlled;
- Areas must be graded to the extent feasible at drainage ditches;
- Loose soil will be compacted as soon as possible after excavation, grading, or filling;
- Silt fences, geo-textiles, temporary rip-rap, soil stabilisation with gravel, diversionary berms or swales, small sedimentation basins must be used;
- The transport of sediment must be minimised;
- An erosion and sedimentation control plan must be developed, approved by the Transnet PER and communicated to staff; and
- The Contractor shall be responsible for checking and maintaining all erosion and sedimentation controls.

5.26 Noise Management

- The following specific measures are required:
- Keep all equipment in good working order;
- Operate equipment within its specification and capacity and don't overload machines;
- Apply regular maintenance, particularly with regards to lubrication;
- Operate equipment with appropriate noise abatement accessories, such as sound hoods;
- Relevant stakeholders shall be notified of any excessive noise-generating activities that could affect them;
- Ensure that the potential noise source will conform to the South African Bureau of Standards recommended code of practice, SANS 10103:2004 or the latest at the time, so that it will not produce excessive or undesirable noise when released;

- All the Contractor's equipment shall be fitted with effective exhaust silencers and shall comply with the South African Bureau of Standards recommended code of practice, SANS 10103:2004 or the latest at the time, for construction plant noise generation
- Contractor's vehicles shall comply with the Road Traffic Act, (Act 29 of 1989) when any such vehicle is operated on a public road.
- If on-site noise control is not effective, protect the victims of noise by ensuring that all noise-related occupational health provisions are met. (Occupational Health and Safety Act, (Act 85 of 1993).

5.27 Protection of Heritage Resources

5.27.1 Archaeological Sites

If an artefact on site is uncovered, work in the immediate vicinity shall be stopped immediately. The Contractor shall take reasonable precautions to prevent any person from removing or damaging any such article and shall immediately upon discovery thereof inform the Transnet CM and Transnet PER of such a discovery. The South African Heritage Resources Agency (SAHRA) or relevant Authority is to be contacted and will appoint an Archaeologist to investigate the find. Work may only resume once clearance is given in writing by the Archaeologist.

5.27.2 Graves

If a grave is uncovered on site, or discovered before the commencement of work, all work in the immediate vicinity of the grave shall be stopped and the Transnet CM and PER informed of the discovery. The South African Heritage Resources Agency (SAHRA) or relevant Authority should be contacted and in the case of graves, arrangements made for an undertaker to carry out exhumation and reburial. The undertaker will, together with the SAHRA, be responsible for attempts to contact family of the deceased and for the site where the exhumed remains can be re-interred.

5.28 Fire Prevention

Fires shall only be allowed in facilities or equipment specially constructed for this purpose.

A firebreak shall be cleared and maintained around the perimeter of the camp and office sites where and when necessary. In cases where construction is taking place in a Critical Biodiversity Area as listed under NEM:BA; it must be ensured that the requirement of a firebreak is screened against the NEMA Listing Notice 3 to confirm legislative requirements.

All conditions incorporated in the requirements of the Occupational Health and Safety Act shall be implemented.

5.29 Water Protection and Management

No water shall be abstracted from any water course (stream, river, or dam) without the expressed permission of the Transnet CM and Transnet PER. Such permission shall only be granted once it can be shown that the water is safe for use, that there is sufficient water in the resource to meet the demand, and once permission has been obtained from the Department of Water and Sanitation in accordance with the requirements of the National Water Act (Act 36 of 1998).

Water for human consumption shall be available at the site offices and at other convenient locations on site. The generally acceptable standard is that a supply of drinking water shall be available within 200m of any point on the construction site.

Method Statement(s) must be prepared by the Contractor for the various water uses. The Contractor shall keep a record of the quantities of water used on-site during construction (including use by sub-contractors), irrespective of the purpose of use.

5.30 Protection of Fauna and the collection of firewood

On no account shall any hunting or fishing activity of any kind be allowed. This includes the setting of traps, or the killing of any animal caught in construction works.

On no account shall any animal, reptile or bird of any sort be killed. This specifically includes snakes or other creatures considered potentially dangerous discovered on site. If such an animal is discovered on site, an appropriately skilled person should be summoned to remove the creature from the site. Consideration should be given to selection and nomination of such a person prior to site establishment. If no-one is available, training should be provided to at least two site staff members.

The Contractor shall provide adequate facilities for all his staff so that they are not encouraged to supplement their comforts on site by accessing what can be taken from the natural surroundings. The Contractor shall ensure that energy sources are available at all times for construction and supervision personnel for heating and cooking purposes.

5.31 Environmental Awareness Training

An Environmental Awareness Program is considered a necessary part of the Construction Environmental Management Plan for the Project. Training of the appropriate construction personnel will help ensure that all environmental regulations and requirements are followed which must be defined in the relevant Method Statement to be prepared by the Contractor.

Objectives of environmental awareness training are:

- Environmental Management – protecting the environment from the effects of construction by making personnel aware of sensitive environmental resources.
- Regulatory compliance – complying with requirements contained in project – specific permit conditions, also complying with requirements in regional and local regulations.
- Problem recognition and communication – training personnel to recognise potential environmental problems, i.e. spills, and communicate the problem to the Contractor's EO for a solution.
- Liability control - non-compliance with regulatory requirements can lead to personal and corporate liability.

All individuals on the Project construction site will need to have a minimum awareness of environmental requirements and responsibilities. However, not all need to have the same degree of awareness. The required degree of knowledge is greatest for personnel in the Safety, Health, and Environmental Sections and the least for the manual personnel.

The Contractor shall present environmental awareness programmes on a weekly/bi-monthly basis (depending on project requirements) and keep record of all the environmental related training of the personnel.

5.32 Handling and Batching of Concrete and Cement

Concrete batching shall only be conducted in demarcated areas which have been approved by the Transnet CM and Transnet PER.

Such areas shall be fitted with a containment facility for the collection of cement-laden water. This facility shall be bunded and have an impermeable surface protection so as to prevent soil and groundwater contamination. Drainage of the collection facility will be separated from any infrastructure that contains clean surface runoff.

The batching facility will not be placed in areas prone to floods or the generation of stagnant water. Access to the facility will be controlled so as to minimise potential environmental impacts. Hand mixing of cement and concrete shall be done on mortarboards and/or within the bunded area with impermeable surface or concrete slab. Bulk and bagged cement and concrete additives will be stored in an appropriate facility at least 10m away from any watercourses, gullies and drains.

Waste water collected in the containment facility shall be left to evaporate. The Contractor shall monitor water levels to prevent overflows from the facility. It is acknowledged that all waste water will evaporate; it must be ensured that the remaining water can be pumped into sealed drums for temporary storage and must be disposed of as liquid hazardous waste at an authorised hazardous waste management facility.

All concrete washing equipment, such as shovels, mixer drums, concrete chutes, etc. shall be done within the approved washout facility. Water used for washing shall be restricted as far as practically possible.

Ready-mix concrete trucks are not allowed to wash out anywhere other than in an area designated and approved by the Transnet CM and PER for this purpose.

The Contractor shall periodically clean out hardened concrete from the wash-out facility or concrete mixer, which can either be reused or disposed of as per accepted waste management procedures.

Empty cement and bags, if temporarily stored on site, must be collected and stored in weatherproof containers. Used cement bags may not be used for any other purpose and

must be disposed of on a regular basis in accordance with the Contractor's solid waste management system.

Sand and aggregates containing cement will be kept damp to prevent the generation of dust.

Concrete and cement or any solid waste materials containing concrete and cement will be disposed of at a relevant registered disposal facility and SDCs kept on the file. Where disposal facilities for general waste are utilised, written consent from the relevant municipality must be obtained by the Contractor and filed in the Green file.

5.33 Stockpiling, Soil Management and Protection of Flora

The Contractor shall measure the extent of all areas cleared for construction purposes and keep this figure updated. Sensitive areas shall be cordoned off and avoided in this regard.

Stockpiling may only take place in designated areas indicated on the approved site layout plan. Any area to be used for stockpiling or material laydown shall be stripped of all topsoil.

Clearance of vegetation shall be restricted to that which is required to facilitate the execution of the works. Vegetation clearance shall occur in a planned manner, and cleared areas shall be stabilised as soon as possible when and where necessary. The detail of vegetation clearing shall be subject to the Transnet CM's approval and shall occur in consultation with the Transnet PER.

Stockpiles must be positioned in areas sheltered from the wind and rain to prevent erosion and dispersion of loose materials. Stockpiled soil shall be protected by adequate erosion-control measures. Soil stockpiles shall be located away from drainage lines, watercourses and areas of temporary inundation. Stockpiles containing topsoil shall not exceed 2m in height unless otherwise permitted by Transnet.

Topsoil shall be stockpiled separately from other materials and prevented from movement. Excavated subsoil, where not contaminated, must be used for backfilling, if possible, and topsoil for landscaping and rehabilitation of disturbed areas. Where topsoil

has become mixed with subsoil or is not up to the original standard, fertiliser or new topsoil shall be provided by the Contractor.

No vegetation located outside the construction site shall be destroyed or damaged. As far as is reasonably practicable, existing roads must be used for access to the site. Before site clearance takes place, vegetation surveys must be conducted and protected species identified.

No protected plant species shall be removed without written consent from the relevant authorities. The development of new embankments or fill areas must be undertaken in consultation with the Transnet PER.

No dumping of solid waste or refuse shall be allowed within or adjacent to areas of natural vegetation.

The Contractor shall identify and eradicate all declared alien and invasive plant species occurring on site.

5.34 Traffic Management

Vehicles usage is permitted only on access roads. Vehicles should only be parked within designated parking areas as demarcated on the site layout plan.

Turning of vehicles should only take place within a clearly demarcated "turn area" located within the approved construction footprint.

The Contractor must co-ordinate the loading and offloading of material during the construction phase so as to ensure that vehicular movement is in one direction only at any one time and that side-tracks are not created on the site.

5.35 Transportation of Materials

The Contractor is responsible for ensuring that all suppliers and delivery drivers are aware of procedures and restrictions (e.g. no-go areas) in terms of the SOP CM and this Specification. Material must be appropriately secured to ensure safe passage between destinations during transportation. Loads must have appropriate cover, where ADTs are not utilised, to prevent spillage from the vehicles. The Contractor will be held responsible for any clean-up resulting from the failure to properly secure transported materials.

5.36 Borrow Pits and Quarries

The Contractor shall ensure that suppliers of rock and sand raw materials are in possession of the required permit/license and keep record of the quantity of material supplied.

The Contractor will not make direct use of any borrow pits and quarries unless the borrow pit has a valid permit, he has obtained written approval from the Transnet CM and Method Statement has been submitted and approved. The Method Statement will provide the detailed description of the location of the borrow pits and/or quarries and the procedures that will be followed to adhere to any pertinent national or local legislation (e.g. mineral extraction, rehabilitation, safety and noise levels).

5.37 Social and Labour Issues

The criteria for and selection of labourers, sub-contractors and suppliers for the project shall demonstrate preference for the local community and shall be aligned with the criteria set by Transnet SOC Ltd in appointing the Contractor. The Contractor shall keep records of the identity of all staff.

Under no circumstances shall the Contractors engage in formal discussions with landowners without prior consent by the Transnet CM.

No activity on private property shall be allowed without written consent by the relevant landowner and Transnet CM/Transnet PER.

Any damage to private property caused by the Contractor during the construction period, shall be repaired to the satisfaction of the Transnet CM, the Transnet PER and the landowner.

The Contractor shall keep record of any complaint raised during the construction period relating to the Contractor's activities.

No job-seekers shall be allowed on site and signs reflecting such shall be displayed on the notice boards.

5.38 Energy Management

The Contractor shall measure and keep updated records of the following:

- Electricity consumption (to be measured in Kilowatt Hours)
- Fuel consumption (to be measured in liters)

5.39 Handling, Storage and Management of Hazardous Substances

All hazardous materials/substances shall be stored in a secured, designated area that is fenced, bunded and has restricted entry.

All storage shall take place using suitable containers to the approval of the Transnet CM and PER.

All hazardous liquids shall be located in a secure, demarcated area and an adequate bund wall (110% of the total volume stored) shall be provided. The floor and wall of the bund area shall be impervious to prevent infiltration of any spilled/leaked liquids into the soil.

No spillages or accumulated stormwater within this bunded area will be allowed to be flushed from the bund into the surrounding area.

Hazard signs indicating the nature and volume of the stored materials shall be displayed on the storage facility or containment structure.

Weigh bills of hazardous substances shall be sourced from suppliers and kept on site for inspection by the Transnet PER.

The Contractor must provide a method statement detailing the hazardous substances that are to be used during construction, as well as the storage, handling and disposal procedures for each substance. Emergency procedures in the event of misuse or spillage that might negatively affect the environment must be specified.

Information on each hazardous substance will be available to all persons on site in the form of MSDS/SDS. Training and education about the proper use, handling, and disposal of the material will be provided to all workers handling the material.

The Contractor's EO must be informed of all activities that involve the use of hazardous substances to facilitate prompt response in the event of a spill or release.

5.40 Housekeeping

The Contractor must ensure proper housekeeping of the site for the duration of the project. If practical the contractor shall amongst construction personnel, assign one to be responsible for good housekeeping

Materials shall be stored in a neat and tidy manner in designated areas as per the approved site layout plan.

5.41 Rehabilitation

Contractors shall rehabilitate the entire site upon completion of work. Where applicable, rehabilitation must be in line with the measures outlined in the Project Environmental Specification. A rehabilitation plan will be submitted to the Transnet CM and PER for approval at least six weeks before project completion. The following, but not limited are critical issues to be included in the rehabilitation plan:

- Details of soil preparation procedures including proposed fertilisers or other chemicals being considered for use;
- A list of the plant species that will be used in the rehabilitation process. Note that these should all be indigenous species, and preferably species that are endemic to the area. The assistance of an appropriately qualified Botanist/Horticulturist should be sought in developing this list;
- Procedures for watering the planted areas (frequency of watering, methodology proposed etc.);
- An indication of the monitoring procedures that will be put in place to ensure the successful establishment of the plants (duration and frequency of monitoring, proposed criteria for declaring rehabilitation as being successful); and
- Procedures for the prevention of the establishment and spread of alien invasive species.

5.42 Documentation and Records Management

The Contractor's EO will complete and maintain copies of all documents and records and ensure that these documents and records are kept up to date.

The Contractor's EO will submit these documents to the Transnet PER on a frequency as agreed to with the Transnet PER, except where documents have remained unchanged in which case written notification to this effect must be provided to the Transnet PER. The Contractor's EO must ensure that electronic copies of these documents are saved on the Transnet system.

Once the construction activities have been completed and the Transnet PER has conducted a site closure inspection and notified the Contractor that site closure will be granted, all documents described above must be handed over to Transnet after which a Site Closure Certificate will be issued by the Transnet Project Manager.

NOTE: All documents/records are to be retained, within the Transnet Document Control System, for a period of 10 years. In the event of environmental documentation/record being lost before receiving a Site Closure Certificate, the Contractor will be penalised according to the specifications laid down in the Contract.

6. RECORDS

Refer to CEM SOP.

7. ANNEXURES


None.


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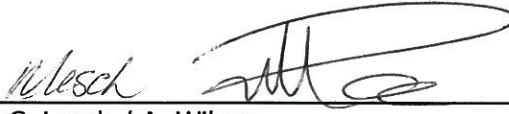
Transnet Capital Projects Document Management

Contractor Documentation Submittal Requirements

DOC-STD-0001

Prepared by:  21/09/2009
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Reviewed by:  6/09/2009
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1. Purpose

This standard outlines the documentation requirements that are to be implemented by the *Contractor* for the preparation, submission, receipt, review, and collection of Technical and (or) Deliverable Documentation, as detailed in the Contractor Documentation Schedule (CDS).

Contractor documentation is of the utmost importance for the in-house Engineering activities as the information contained in the *Contractor's* documentation interfaces with several other disciplines for the Engineering, e.g., Mechanical, Structural, Piping, Control and Instrumentation, Electrical, etc.

The supply of high quality documentation within the time required as defined in the '*Works Information*', Contractor Documentation Schedule (CDS), and *Contract* must be considered as one of the main objectives by the *Contractor*.

2. Scope

This scope defines the *Contractor's* responsibilities in terms of the preparation of all the *Contractor* Deliverables required for each *Contract*.

3. References

- ISO 9001:2000 - Quality Management Systems Requirements
- SANS 10111 - Code of Practice for Engineering Drawings
- SANS 10143 - Building Drawing Practice
- DOC-FAT-0001 - Contractor Documentation Schedule (CDS)
- DOC-FAT-0002 - Contractor Documentation Register (CDR)
- DOC-FAT-0003 - Contractor Review Label (CRL)
- DOC-FAT-0004 - Contractor Review Label (CRL) for drawings

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4. Definitions / Abbreviations

4.1 Definitions

'As-Built' Document	Is a final record of what was actually installed / constructed according to the Fabrication / Construction <i>Contractor</i> , and includes all deviations or changes from the approved AFC document(s). As-Built document(s) are required to reflect the same degree of detail as the original document(s). As-Built document(s) shall be done by all <i>Contractors</i> .
<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 Procedure).
<i>Contractor</i>	The party to a contract that provides services to the <i>Employer</i> (generic term used for Vendors, Suppliers, Contractors, Consultants, etc.).
Controlled Document	Any document where its revision and distribution are recorded to ensure that Project Team Members holding a copy of the document have the current revision, and will receive future revisions, subject to a formal review and approval process.
Documentation	Collective term used to describe drawings and documents, e.g., letters, faxes, drawings, specifications, reports, manuals, standards, publications, software, etc.
Document Control	The function that ensures systematic registration, distribution, retrieval, status reporting, and storage of revision controlled documentation, typically Technical and (or) Deliverable documentation.
Document Management	Is the over-arching term used to describe the management of documentation on a Project.
<i>Employer</i>	The party to a Contract or Purchase Order to whom the goods are supplied or for whom the work or services are performed. For this project Transnet Capital Projects is the <i>Employer</i> .
<i>Employer's</i> Documentation	Shall mean all documentation issued to <i>Contractors</i> by the Project.
Engineering Deliverables	Technical documentation generated by Engineering, i.e. drawings, drawing registers, Engineering Document Registers, calculations, requisitions, equipment lists, design specifications, etc.

Note: If hardcopy, check electronic system for latest revision

'For Record' Document	A set of record drawings / documents conforming to the marked up prints, drawings and other data, handed over to the <i>Employer</i> as part of the Project Handover Procedure.
Master Document	The original wet signed (signature) document which is held by Project Office Document Control.
Native/Source Document	Original electronic file format of documentation.
Project Deliverables	Is any document, drawing, report, register, task, etc.
<i>Project Manager</i>	The Project Manager is appointed by the <i>Employer</i> , and his role is to manage the Contract for the <i>Employer</i> .
Squad Checking	The review of technical documentation by multiple Engineering disciplines in order to ensure co-ordination, communication and interface between the various disciplines; done in an area specifically allocated for the review of documentation; the process / activity is controlled by Document Control but the work is executed by the Engineering Team.
Tender Document	The formal document that expresses the terms, both Commercial and Technical, against which a Tenderer submits its Tender for Contracts.
Transmittal	Is documented evidence of the formal distribution of documentation to recipients which display Transmittal No., Title, Date, Issue Reason, Revision No. etc. It is evidence of distribution and receipt of documentation.
Uncontrolled Document	Any copy of a document where distribution is not required to be recorded, and that does not require revision control or formal review.
Working Document	The main working copy of an original document where proposed changes are recorded for incorporating into subsequent revisions.
'Works Information'	Shall refer to the <i>Works Information</i> as defined in the Contract

4.2 Abbreviations

AB	As-Built / Recorded Documentation
----	-----------------------------------

Note: If hardcopy, check electronic system for latest revision

AFC	Approved For Construction
CDR	Contractor Documentation Register
CDS	Contractor Documentation Schedule
CRL	Contractor Review Label
DC	Document Control
DCIS	Document Control Instruction Sheet
EDMS	Electronic Document Management System
FN	Final
RE	Responsible Engineer

5. Responsibilities

5.1 *Contractor*

The *Contractor* is responsible for submitting all documentation, required by the Contract, via Document Control to the relevant *Project Manager*, to comply with the requirements of this standard.

The *Contractor* is responsible for setting up and maintaining his own internal Document Control Process to ensure traceability and accountability for all information submitted to the *Project Manager*, and all information issued to Sub-Contractors.

5.2 *Sub-Contractors*

The *Contractor* is responsible for providing the *Sub-Contractors* with all the relevant information, and for ensuring that the *Sub-Contractors* applies the Standard, and submit their data via the *Contractor* for formal submission to the *Project Manager*. (If the *Contractor* sub-contracts work, he is responsible for providing the Works as if he had not sub-contracted.)

6. Procedure

6.1 Documentation to be Submitted

6.1.1 Contractor Documentation Schedule (CDS) (DOC-FAT-0001)

The CDS states the Employer's requirements for:

Note: If hardcopy, check electronic system for latest revision

- The document types to be submitted by the *Contractor* at various stages of the Contract
- The timing for documentation to be submitted by the Contractor
- The *Project Manager* completes the Contractor Documentation Schedule (CDS) and includes it with the Enquiry and Contract as an attachment / annexure to the 'Works Information' document. The *Contractor* submits documentation as required by the Contractor Documentation Schedule (CDS), within the time specified in the Contract. All documentation shall be submitted according to the dates specified in the Contractor Documentation Schedule (CDS).

6.2 Contractor Documentation Register (CDR) (Annexure B)

The Contractor Documentation Register (CDR) is a list of documentation that the *Contractor* is to submit in accordance with the *Contract*. The *Contractor* is to use the Contractor Documentation Schedule (CDS) as the basis for developing the Contractor Documentation Register (CDR). The CDS is the minimum requirement, and the *Contractor* is still responsible to include all documentation on the CDR required for the successful completion of the contract even if no CDS has been included in the *Contract*.

The title of the documentation shall adequately define and describe the facility and equipment where applicable. The Contractor Documentation Register (CDR) must be submitted within 2 weeks of the *Contract* award date, unless otherwise indicated on the Contractor Documentation Schedule (CDS) or in the Contract. Once the Contractor Documentation Register (CDR) is submitted, the *Project Manager* in conjunction with Document Control assigns document numbers to each document. The Contractor Documentation Register (CDR) is reviewed and returned to the *Contractor* as defined elsewhere in this Standard. The *Contractor* is to use the exact document numbers and titles as provided and listed by the *Project Manager* on the Contractor Documentation Register (CDR), on each of the documents.

The Contractor Documentation Register (CDR) is a 'live' document that shall be updated and re-submitted by the *Contractor* on a regular basis to reflect any changes made, e.g., updated planned / actual submission dates or addition of new documents requiring new numbers. Changes to a row(s) of the register shall be highlighted in colour across the entire row(s).

The Contractor Documentation Register (CDR) shall be submitted in Excel (electronic format) as well as PDF format upon each submission to the Project, and shall also be submitted with the final documentation, unless otherwise agreed as per par 6.3.

The forecast and actual submission dates shall reflect the dates of the next issue of the documentation, and once this submission reaches conclusion the dates are to be updated to reflect the next issue, i.e., the as-built documentation submission dates.

6.3 Format in which Documentation is to be submitted

Although the aim of this Standard is to encourage all documentation to be managed and submitted electronically the *Contractor* can apply to the *Project Manager* to have these requirements changed to accept only paper copies of all documentation

Note: If hardcopy, check electronic system for latest revision

6.4 Documentation Preparation Requirements

6.4.1 Quality

Documentation shall be of the highest quality to allow immediate and accurate use by the Project Manager, i.e., without any need for interpretation due to possible illegibility, or prints / copies of poor quality.

Any illegible or indecipherable drawings will be systematically rejected and returned to the *Contractor*, who shall in no case allege documentation being rejected and returned as a reason for any delay affecting delivery.

All documentation shall have sufficient borders for punching as required for filing purposes.

6.4.2 Standards and Codes

All documentation shall conform to the latest revisions of the following, i.e.,:-

- SANS 10111 - Code of Practice for Engineering Drawings, or
- SANS 10143 - Building Drawing Practice, or
- ISO 9001:2000 - Quality Management Systems Requirements

6.4.3 Language

All drawings and documents shall be in English.

6.4.4 Units and Dimensions

All units and dimensions on the *Contractor's* documentation shall be in SI units, unless otherwise specified.

6.4.5 Sizes of Documentation

6.4.5.1 Drawings

The following standard drawing sizes shall be used:

- A3 - 277 x 420mm
- A2 - 420 x 594mm
- A1 - 594 x 841mm
- A0 - 841 x 1189mm

Note:

- Drawings wider than A0 are not acceptable to the *Project Manager*
- Hard copy drawings shall be printed out at actual size, e.g., shall not print A1 size when drawing size is A0
- A4 drawings are prohibited unless issued as part of a document.

Note: If hardcopy, check electronic system for latest revision

6.4.5.2 Other Documents

All the *Contractor's* documentation other than drawings shall be prepared on standard A3 or A4 size sheets suitable for insertion into an A4 (W71) hard-core binder (file).

All documentation shall have sufficient borders to allow for punching.

6.4.6 Documentation with Multiple Sheets

6.4.6.1 Drawings

If a series of drawings of a particular area is produced by the *Contractor* (e.g., loop diagrams which may have fifty (50) or more sheets) one sequential drawing number shall be used with a series of sheet numbers.

Where more than one sheet is used, the first sheet (numbered 01) shall incorporate an index for all the other sheets in the series, including their current revision status and date.

6.4.6.2 Documents

The *Contractor's* documents with several sheets (e.g., data sheets, reports, etc.) shall be compiled as sets, i.e., a multi sheet document identified as a single document with a single document number. Thus, each sheet is identified individually, e.g., "sheet 10 of 15" and all documents shall be numbered from page 2 onwards.

Each set shall include a Table of Contents and the identification data shall as a minimum contain the following, i.e., the document number, revision number, page number and continuation information shall appear on every page of the multiple page documents. The front sheet of each document shall be page 1; however the number or wording "page 1" is not shown on the first page.

6.4.7 Details Required on Documentation

Each drawing and document shall be identified with the following information, i.e.,:-

- Project Name and Number
- Contract Number or Purchase Order Number
- Equipment Tag Number(s) (if applicable)
- Manufacturer's model / type (if applicable)
- Official Name of *Contractor's* Company
- *Contractor's* Reference Number
- Project Document or Drawing Number
- Electronic File Name (identical to the *Employer's* Document or Drawing Number and not the *Contractor's* Document or Drawing Number)
- Identification and signature of Originator, Checker, Approver, PR Eng, etc.
- Complete Descriptive Title
- Revision

Note: If hardcopy, check electronic system for latest revision

- Date

6.5 Electronic Documentation Requirements

No "Protection" or "password" will be placed on electronic files.

Electronic submissions shall conform to the minimum quality standard as listed below, i.e.,:-

- File Formats to be submitted
- All deliverables submitted by the *Contractor* must be supplied in the formats listed below, and be editable using the software listed in Table 1. Only exceptions that have prior approval from the *Project Manager* will be accepted. Software used shall be the latest generation, and where appropriate, shall be regularly upgraded.

Note:

All electronic documents shall be submitted in Adobe Acrobat (PDF) format and the 'Native' file shall be included at the final submission.

6.5.1 Table 1: Acceptable File Formats

Document Type	Description
Drawings	Native: Micro Station 2003 or later
	Published In: Adobe Acrobat (PDF) version 7 or later
Data Sheets (other than instrumentation)	Native: MS Excel 2003 or later
	Published In: Adobe Acrobat (PDF) version 7 or later
Data Sheets (Instrumentation)	Native: As per software used or as otherwise specified in Contract
	Published In: Adobe Acrobat (PDF) version 7 or later
Engineering Data Lists	Native: MS Excel 2003 or later
	Published In: Adobe Acrobat (PDF) version 7 or later
Calculation Outputs / Results	Native: As per software used or as otherwise specified in Contract
	Published In: Adobe Acrobat (PDF) version 7 or later
Document Viewers – Redlining	Adobe Acrobat v7 minimum with "Comments" enabled
All Reports	Native: MS Word 2003 or later
	Published In: Adobe Acrobat (PDF) version 7 or later
Report supporting Data including: Calculations, Charts,	Native: As per software used or as otherwise specified in Contract

Note: If hardcopy, check electronic system for latest revision

Graphs, Indexes, etc.	Published In: Adobe Acrobat (PDF) version 7 or later
Manuals	Native: MS Word 2003 or later
	Published In: Adobe Acrobat (PDF) version 7 or later
General Documents	Native: MS Word 2003 or later
	Published In: Adobe Acrobat (PDF) version 7 or later
Presentations	Native: MS PowerPoint 2003 or later
	Published In: Adobe Acrobat (PDF) version 7 or later
Colour Photographs / Scanned Images	Native File format: JPG Compression level 1%
Graphic Imagery	Published images in: TIF uncompressed or WMF
	Native image format: Corel Draw 7 CDR file
	Adobe Photoshop 7.0 PSD
	PowerPoint 2000 PPT file
Project Schedules	Native: Primavera P6 (preferred)
	Native: MS Project
	Published In: Adobe Acrobat (PDF) version 7 or later
Databases (preferred)	MS SQL Server 2000
Databases (non-preferred)	ODBC compliant
	Microsoft Access 2003
Data Compression	Software: WinZip 8.0
Other General Project Data	Native: Microsoft Office 2003 application or later
	Published In: Adobe Acrobat (PDF) version 7 or later

6.5.1.1 Native File

Native files shall be clean of all extraneous fonts, formats and styles to ensure inadvertent reformatting and format adjustments or difficulties that do not eventuate in downstream handling of documents.

6.5.1.2 Adobe Acrobat (.PDF) Files

PDF files shall be of a high quality and without dark background shading as definition may otherwise become lost.

The quality of Adobe Acrobat (.PDF) files shall be such that a hardcopy of a laser printed A1 Adobe Acrobat (.PDF) drawing can clearly be read in A3 size. Similarly A3 and A4

Note: If hardcopy, check electronic system for latest revision

Adobe Acrobat (.PDF) file quality shall be such that hardcopy of a laser printed A3 or A4 Adobe Acrobat (.PDF) document can clearly be read in A4 size.

The Contractor shall physically test and confirm this prior to transmitting Adobe files.

PDF files shall be saved as "Reader Extent" to make provision for the use of electronic signatures.

PDF files shall be "Optimized" to improve Quality and then "Reduce File Size" through Adobe.

6.5.1.3 Databases

Databases shall be presented in compatible format on CD Rom as specified in Table 1. Multi format documents (created from several files) shall be combined and submitted as a single Adobe Acrobat (.PDF) file.

6.5.1.4 Drawing Files

These shall be submitted in Adobe Acrobat (.PDF) and the 'Native' file format shall be submitted on the final submission unless otherwise specified. 'Native' files shall include reference / border files, etc.

A single file shall be submitted per document, i.e., under no circumstances shall different drawings with different numbers appear on one sheet under one file name, nor shall a drawing with multiple sheets be saved into one electronic file.

All CAD drawings shall be contained in one single merge file, any form of ex Ref or Reference File will not be accepted.

6.5.1.5 Sketches

These shall be A3 or A4 size scanned as Adobe Acrobat (.PDF) file.

6.5.1.6 Text Documents

Each page of a single document shall be collated into one file. (The "wet" signature Contractor Review Label (CRL) coversheet, where required, is inserted at the beginning of the document prior to review).

6.5.1.7 Tables / Diagrams

These shall be A4 and A3 size only.

6.5.1.8 Reports

Reports containing Word, Excel, DGN, DWG, brochures, etc., shall be compiled as one Adobe Acrobat (.PDF) file.

Note:

Note: If hardcopy, check electronic system for latest revision

Original colour hardcopies shall be scanned in colour to ensure all details of paper documents.

6.5.1.9 Photo's / Video's

Prints should be submitted of conventional photographs or prints and digital files of electronic images, or as specified by the Project Manager.

6.5.2 Security

Files shall be clear of known viruses and extraneous (irrelevant) macro's. The *Contractor* shall at all times have the latest generation of virus protection software. The *Contractor* shall ensure appropriate security systems are in place to prevent unauthorized electronic distributions and (or) unauthorized editing or manipulation of electronic files.

6.5.3 Scanning Requirements

Where possible 'native' files shall be converted to PDF rather than scanned from hardcopy.

Where this cannot be done all drawings and documents shall be manually scanned black and white except where colour image and fonts are required or necessary.

The settings below should be adhered to where possible and may vary depending on scanning software used. Where images rendered with these settings are unreadable, operators shall use their discretion, and adjust colour depth and resolution accordingly.

6.5.3.1 Scan Settings

- Resolution:-

Black and White - 200 dpi

Colour - 100 dpi

Fine Line Drawings - 300 dpi

- Image Type:-

Black and White - 1 Bit

Colour Line Drawings - 8 Bit (256 colours) minimum

Colour photos and rendered images - 24 Bit

Use automatic threshold to determine the white and black points

- Other Criteria to Adhere to:-

Rotate to correct reading (i.e., viewable at correct orientation)

De-skew (i.e., straighten if on a slant)

Note: If hardcopy, check electronic system for latest revision

De-speckle (i.e., remove background dirt)

Optimized (i.e., reduce file size)

Note:

When a scanned drawing is printed to be re-scanned, subsequent to, e.g., mark-ups or signatures, then it shall be scanned at a setting of 400 dpi.

6.6 Documentation Numbering

Once the Contractor Documentation Register (CDR) has been submitted by the *Contractor*, Document Control will allocate the *Employer's* documentation numbers on the Contractor Documentation Register (CDR) and return it to the *Contractor*.

A unique sequence number is allocated to each document and remains the same for each submittal of that specific document.

The *Contractor* shall use the *Employer's* document numbers and titles exactly as per the Contractor Documentation Register (CDR) on all documentation submitted.

Electronic file names for all documentation shall be exactly as per the *Employer's* documentation numbers, including the revision number.

7. Revising Documentation

All documentation carries a revision block, which must be completed in full before submitting to the *Project Manager*, and typically denotes the following:-

- NO. - Revision Number, e.g., 00, 01, etc.
- DESCRIPTION - Describes the status, e.g., Issued for Tender and a brief description of the changes made.
- BY - Person responsible for revising the document
- CHK'D - Person responsible for checking the revised document
- APP'D - Person responsible for approving the revised document
- DATE - Date of the revised document

7.1 Revision Notes

The revision block should record each change in revision with a brief but specific description of the changes made.

Terms such as "Minor Revision" or "General Revisions" shall be avoided in favour of a more specific notation.

More than one line may be used but only the revision number and date together with the relevant initials shall appear in the top line.

Note: If hardcopy, check electronic system for latest revision

7.2 Indicating Revisions

Revisions shall be clearly identified by placing a revision triangle with the correct revision number in the right hand column in the case of documents, and is adjacent to the area on the document that has been changed.

All revisions made on drawings shall be enclosed by a cloud except in cases where to add a cloud detracts from the readability of the drawing. At subsequent revisions all clouds and revision triangles from the previous formal revision shall be removed from the drawing.

7.3 As-Built / Final Revisions

Should documentation require changes upon completion of Construction, it shall be revised to an "As-Built" status, as well as bear the wording "Certified As-Built", which is indicated in the revision block of the documentation.

Should documentation not require any changes upon completion of Construction, it shall be revised to a "Final" status, as well as bear the wording "Certified Final", which is indicated in the revision block of the documentation.

8. Documentation Submission

8.1 Documentation Submission Format

All documentation shall be submitted under cover of a *Contractor's* Transmittal Note.

8.2 Electronic Transmission

The Contractor Documentation Schedule (CDS) defines which documentation shall be transmitted electronically. All electronic documentation shall be transmitted on CD ROM unless otherwise agreed as per Par 6.3.

Documentation submitted on CD ROM shall be contained in a zip file with the Transmittal Note enclosed.

Note:

In the event of documentation required urgently and the *Contractor* is not able to submit a CD ROM and (or) hard copy format timeously, then e-mail transmission may take place (but in extreme cases only)

Per e-mail - the file size may not exceed 5 MB and the Transmittal Note shall be attached.

The *Contractor* is still required to submit the relevant CD ROM to Document Control without delay.

When sending an e-mail the *Contractor* shall ensure that the subject field of the e-mail is completed as follows, i.e.,:

Note: If hardcopy, check electronic system for latest revision

- Contract Number – *Contractor's* Transmittal Number and Description of documentation transmitted.

8.3 Hard Copy Transmission

Documentation shall be submitted in printed hard copy format unless otherwise stated on the Contractor Documentation Schedule (CDS).

8.4 Transmittal Notes (Annexure A)

All documentation shall be submitted under cover of the *Contractor's* Transmittal Note indicating all *Contract* references (i.e., Project No, *Contract* No, etc.), Project Documentation Number(s), Revision Number, Title and Chronological listing of transmitted documentation.

The *Contractor's* Transmittal Note shall state the purpose / issue reason of the documentation submission.

Documentation for different purposes must be sent on separate *Contractor* Transmittal Notes. The *Contractor* shall note that documentation will be rejected if this requirement is not met.

The *Contractor* Transmittal shall be signed, date stamped and returned to the *Contractor* by Document Control.

8.5 Formats and Quantities of Documentation

The required number of copies and formats of documents / drawings shall be specified in the Contractor Documentation Schedule (CDS).

A typical example of quantities and formats would be as follows:-

- Pre-Construction – Hard copy and PDF (to be specified in 'CDS')
- Construction – Hard copy and PDF (to be specified in 'CDS')
- As-Built – Red Lined – Hard copies (Normally 3 off) (to be specified in CDS')
- Certified As-Built / Final – Hard copies (full size) and CD ROMs containing PDF and 'Native' file formats (to be specified in 'CDS')

8.6 Address for Submission

The address of submission will be as specified in the *Contract* and all submissions will be identified with the Contract Number, and the responsible *Project Manager*. All deliveries will be made to Document Control who will distribute the documentation to the relevant *Project Manager*.

9. Review and Acceptance of *Contractor* Documentation

The *Contractor* submits documentation as the *Contract* requires to the *Project Manager* via Document Control for review and acceptance.

Note: If hardcopy, check electronic system for latest revision

9.1 Contractor Review Label (CRL)

The purpose of the Contractor Review Label (CRL) is for the *Project Manager* to assign a review code to the reviewed documentation denoting the status of the documentation after consolidation of comments. The Contractor Review Label (CRL) is to be inserted by the *Contractor* as follows:-

9.1.1 First Submission of Documentation

The first revision is revision '0', with subsequent revisions '1', '2', '3', etc.

9.1.2 Review of Documentation

Acceptance of documentation by the Project will in no way relieve the *Contractor* of their responsibility for the correctness of information, or conformance with the requirements. This responsibility rests solely with the *Contractor*.

Once documentation has been reviewed by the Project, all comments are consolidated and a review code is assigned on the Contractor Review Label (CRL) to the original reviewed / marked-up drawing / document by the *Project Manager*.

9.1.2.1 Review Codes for Contractor Documentation

The Review Code resulting from the review is as follows, i.e.,:-

- Code C1 – Accepted

The *Contractor's* design / submission of documentation is accepted and the *Contractor* only needs re-submit documentation only if major changes have been made. The next submission will be the for Approval of "Redline" and / or "Final " documentation.

- Code C2 – Accepted with Comments. Revise and Resubmit

In the event that the Project returns documentation with comments noted, the *Contractor* shall, within the '*period of reply*' as defined in the *Contract Data*, make the required changes and submit the revised documentation for further review on the next revision.

- Code C3 – Not Accepted. Revise and Resubmit for Review

In the event that the Project returns documentation with "Not Accepted, Revise and Re-submit" the *Contractor*, within the '*period of reply*', make the required changes and re-submit the revised documentation on a new revision for further review. Should these revisions necessitate changes in other related documentation, the *Contractor* shall make the appropriate changes and re-submit all the revised related documentation for further review. The *Contractor* shall not proceed with any activities controlled by the *Contractor's* documentation until it has been re-submitted and acceptance indicated.

The *Contractor* revises and re-submits documentation but on the next revision until a review code 'C1' is achieved. This review process shall not entitle the *Contractor* to submit any claims due to time loss.

Note: If hardcopy, check electronic system for latest revision

- Code C4 – Review Not Required

Documentation signed at “Code C4” level is considered to be for information only and does not require further submission, and shall not be returned to the *Contractor*. However, Document Control shall issue a Transmittal only to the *Contractor* in this regard as notification.

9.1.2.2 Return of Reviewed Documentation

The original reviewed / marked-up drawing / document is scanned to PDF format and a copy is returned to the *Contractor* indicating the *Project Manager's* further instructions.

Return of the reviewed documentation is either in hard copy format, in which case the original reviewed / marked-up drawing / document is returned, or on CD.

Contractors will be advised by e-mail or fax (accompanied by a copy of the Project's Transmittal Note) that documentation is available for their collection.

9.1.3 Review Period

The *Contractor* shall allow the *Project Manager* the ‘*period of reply*’ to review and respond to the *Contractor's* submission of documentation, i.e., from time of receipt by the *Project Manager* to the time of dispatch by the *Project Manager*. 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*.

9.1.4 Revised Documentation

On receipt of the reviewed documentation the *Contractor* shall make any modifications requested / marked-up and re-submit the revised documentation within ‘*the period of reply*’ on the Contractor Documentation Schedule (CDS). 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 marked with the applicable review code and returned to the *Contractor* to be corrected and re-submitted. The *Contractor* shall re-issue the revised documentation incorporating all comments on a new revision and other specified details not included in the previous issue within ‘*the period of reply*’ of receipt of the marked-up documentation.

All revised data shall be submitted in its entirety and shall reflect the revision control numbers, and shall also indicate which documentation the revised documentation supersedes, if applicable.

In the case of drawings every sheet has its own revision number and is revised as an individual document.

In the case of documents all sheets under cover of one document number shall be under the same revision number and be re-submitted, even if the revision is a minor one.

Note: If hardcopy, check electronic system for latest revision

10. As-Built / Final Documentation

This is Certified 'As-Built / Final Accepted' documentation or documentation for which no further review is required. The final documentation shall form part of the final *Contractor* Manual(s) or Data Packs

Contractors shall provide the 'As-Built' documentation that form part of the Operating, Instruction and Maintenance Manuals that were issued and accepted prior to 'As-Built' conditions for inclusion in these types of manuals by the *Project Manager*.

10.1 Definition of Final and As-Built Status of Documentation

10.1.1 "Final" Documentation

This applies to "As Manufactured and Delivered to Site".

Documentation submitted subsequently by the *Contractor* once "Final" status is reached shall be indicated as such in the Revision Notes Block as "Final" and shall also reflect the New Revision Number on the document in the revision block provided.

10.1.2 "As-Built" Documentation

This applies to "As Constructed or As Installed".

The Contractor Documentation Schedule (CDS) shall indicate the documents which are to be brought to "As-Built" status, and must be submitted only after practical completion when the documentation qualifies for "As-Built" status, and the period after completion by which they must be finalized.

10.2 Preparation of As-Built Documents

10.2.1 Transnet Capital Projects Documents

The *Contractor* responsible for completing the construction / installation works shall prepare three (3) marked up hard copies of the applicable documents to represent the As-Built condition(s). The mark-ups shall be in RED pencil or pen and be complete and accurate.

Once prepared the As-Built mark-up documentation is transmitted to Transnet Capital Projects for updating of the original design documentation.

Documents / drawings updated with information known by the *Project Manager* and as provided by *Contractors* at the completion of their *Contracts* is utilized by the *Project Manager* to update Engineering Deliverables / drawings to this status, i.e., "For Record Purposes".

Note:

File naming convention on drawings / documents shall be in accordance with the Project numbers assigned on the Contractor Documentation Register (CDR).

Note: If hardcopy, check electronic system for latest revision

10.2.2 Design, Supply and Install Contractor Documents

Contractors responsible for the design, supply and installation of equipment are responsible for producing As-Builts of their own documentation.

The *Contractor* shall prepare three (3) marked up hard copies of the applicable documents to represent the As-Built condition(s). The mark-ups shall be in RED pencil or pen and be complete and accurate.

Once prepared the As-Built mark-up documentation is transmitted to the *Project Manager* for Approval through the normal process. Once approved C1 the *Contractor* can proceed to update his drawings and submit as part of the final package

The mark-ups are returned to the *Contractor* so that they can produce the As-Built revisions.

11. Installation, Maintenance and Operating Manuals and Data Books

These shall be supplied by the *Contractor* as manuals in an A4 hard covered, red, grease and waterproof binder using two (2) ring type binders.

Drawings and charts larger than A4 shall be folded and those greater than A3 shall be enclosed in an A4 plastic pocket of adequate strength.

Manuals shall be well indexed and user friendly. Manuals shall include a summarized Table of Contents and in manuals comprising a number of files / volumes there should be one summarized Table of Contents in each of the files / volumes. The draft Table of Contents shall be submitted for review to the Project Manager prior to the compilation and official submittal of the manuals. The technical content of manuals shall be specified by the *Project Manager*.

The originals of all brochures shall be issued to the *Project Manager*. When a general brochure is applicable to a range of equipment, then the specific item, catalogue number or model number shall be stated, which is best achieved by introducing a separate index page, which cross-references the specific item to a tag number.

The address, phone numbers, fax numbers and reference numbers of all *Sub-Contractors* shall be provided.

Where manuals include drawings that still need to be revised to "As-Built" status, and such manuals are required prior to 'As-Built' status, the manual will not be considered to be in its final form until the "As-Built" version of each such drawing has been incorporated.

The required number of copies of the manual(s) shall be as specified by the *Project Manager* and submitted per type or model number of equipment included in the contract, or as specified by the *Project Manager*.

Note: If hardcopy, check electronic system for latest revision

A typical example of what the binder / file(s) shall be marked with on the spine and the front cover is as follows: -

- Project Name
- Manual Title, e.g., Installation, Maintenance and Operating Manual
- FBS No. and Title
- Manual Numbering (e.g., Volume 1 of 2, etc.)
- Contract Number
- Contractor Name

12. Cancelling and Superseding Documentation

The Document Control Procedure for cancelling and superseding is as follows:-

12.1 Superseding

If the document / drawing has been transmitted anywhere and is to be replaced by a different document number / drawing number, then it is superseded. The superseded item should go up a revision and always have the new drawing or document number written across it, as the normal practice.

The Document Controller is to check that this has been done on the drawing or document, and the revision title block should be preceded with:-

- e.g. "SUPERSEDED by 222057-2-211-M-GA-0030"

12.2 Cancelling

If the item is to be cancelled, it means the item has been previously transmitted and it is not being replaced by another drawing number / document number. In this case the Document Controller should check that the revision has gone up, the word "CANCELLED" is written across the drawing / document and the word "CANCELLED" is placed at the beginning of the revision title block

13. Records

All documents generated in terms of this standard are to be retained by Transnet Capital Projects as records in accordance with the requirements of Project Procedure DOC-P-0013.

Annexure A – Typical Transmittal Note

TRANSNET

Document Transmittal Note

TO : _____	DATE : _____
LOCATION : _____	FROM : DOCUMENT CONTROL
ATTENTION : _____	ORIGINATOR : _____
	PROJECT No : _____
	TRANSMITTAL NO. : _____

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STRUCTURAL STEELWORK

**SPECIFICATION HE9/2/6
[Version 9] February
2005**

1. SCOPE

- 1.1. This specification covers TPT's requirements for the design, manufacture and erection of structural steelwork for dynamic structures like cranes, including associated components.

2. GOVERNING CODES AND STANDARDS

ANSI/AWS D1.1: Structural Welding Code – Steel

BS-EN 287 Part 1: Approval testing of welders/fusion welding

BS EN ISO 15614-1:2004+A2:2012 Specification and qualification of welding procedures for metallic materials. Welding procedure test Arc and gas welding of steels and arc welding of nickel and nickel alloys

BS EN 1011-2:2001 Welding. Recommendations for welding of metallic materials Arc welding of ferritic steels

BS EN 10025 Hot rolled products of structural steels

BS 2573: Part 1: Classification, stress calculations and design of structures

BS EN ISO 17640:2010 Non-destructive testing of welds. Ultrasonic testing. Techniques, testing levels, and assessment

BS EN ISO 17636-2:2013 Non-destructive testing of welds. Radiographic testing X- and gamma-ray techniques with digital detectors

DIN 1026	Metric channels
ISO R657	Angles
BS EN 14399-7:2007	High-strength structural bolting assemblies
BS EN ISO 898-1:2013	Mechanical properties of fasteners made of carbon steel and alloy steel Bolts, screws and studs with specified property classes. Coarse thread and fine pitch thread
BS 3692:2001	ISO metric precision hexagon bolts, screws and nuts. Specification
BS 4620:1970	Specification for rivets for general engineering purposes

3. **STRUCTURAL STEELWORK**

- 3.1. The design of all structural steelwork shall be such as to provide a robust and rigid structure requiring the minimum of maintenance and providing a long service life.
- 3.2. In the design of steel structures, due cognisance shall be taken of environmental and wind load conditions as specified in the main specification.
- 3.3. Due to the highly corrosive conditions experienced in Transnet Port Terminals, the permissible stresses shall not exceed those set out in British Standard No. 2573 or other applicable standard as agreed with TPT. The minimum thickness of steel for load bearing members shall be 15mm for gussets, 10mm for angles, tees, plates and flats and 9mm for webs of channels and joists. Punching of holes over and above that permitted in BS 2573, shall not be permitted. Other structural steel shall be of not less than 6 mm thickness.
- 3.4. The design of mobile structures shall be such that the induced von Mises stress (effective stress in triaxial loading) will not exceed 90% of the elastic limit strength of the steel when the equipment is travelling at maximum speed and colliding with either other stationary equipment or fixed stop blocks. In calculating von Mises stresses, due cognisance must be taken of stress concentrations. If the elastic limit strength of the steel is not known, it will be determined by using a 0, 2% strain offset on the stress-strain curve of the material.

- 3.5. Where applicable, the design may be in bolted, riveted or welded box construction except that no site welding will be permitted in the final erection at the port except with the approval of TPT's Engineer.
- 3.5.1. Alternatively, a welded hollow section lattice type structure will be acceptable, subject to the following requirements:
- 3.5.1.1. The members must be structural sections manufactured from grade S275J0 weldable structural steel complying with BS EN 10025, or better... The hollow sections can either be seamless for all sizes or welded for sizes above 114.3mm outside diameter.
- 3.5.1.2. Tube wall thickness must not be less than 6mm.
- 3.5.1.3. All joints must be completely seal welded in accordance with BS EN 1011-2:2001. Special care must be taken to prevent the ingress of moisture into hollow section members by ensuring that each member is airtight. TPT reserve the right to request evidence of airtightness.
- 3.5.1.4. Bolted or screwed attachments which require drilled holes through a hollow section will not be permitted, unless a welded sleeve. Passing through the complete section, is used.
- 3.5.1.5. Non-hollow structural sections and plate used on the structure, in conjunction with the hollow section framework, must comply with the relevant requirements of this specification.
- 3.6. All steel sections shall be manufactured in accordance with the following standards: -
- | | |
|--|---------------|
| Weldable structural steel: | BS EN 10025 |
| I and H sections: | BS 4 Part 1 |
| Metric channels: | DIN 1026 |
| Structural steel, hot rolled sections: | BS 4 Part 1 |
| Angles: | ISO - R657 |
| Hot finished hollow sections: | BS EN 10210-2 |
| Cold formed sections: | BS EN 10219-2 |
| Forgings: | BS EN 10250-2 |
| Steel castings: | BS EN 10293 |
| Cast iron: | BS EN 1561 |
- 3.7. All steel plates and rolled steel sections used in the construction of the structures shall be of steel made by the open hearth process (acid or

basic) and shall comply in every respect with BS EN 10025 quality Structural Steel for Bridges and General Building Construction, Grade S275JR or Grade S355JR. That is, the percentage of phosphorous and sulphur shall not exceed 0, 06.

- 3.7.1. The above is laid down as a standard, but tenders will also be considered for rolled steel not conforming strictly to the above standard provided an internationally recognised alternative is proposed and accepted. Full particulars of the guaranteed properties of the steel tendered for should in this case be furnished, i.e. chemical composition, tensile strength, yield point, reduction in area, bend tests, etc.
- 3.7.2. All welded steel must have a maximum Carbon equivalence (CEV) of 0.41
- 3.8. Forgings and drop forgings shall be free from flaws and surface defects of any kind and be accurately finished to the prescribed dimensions.
- 3.9. Steel castings shall be sound, clean and free from all defects and distortion of any kind and should, except where otherwise specified, conform with the conditions and tests specified in BS EN 10293, ~~for~~ according to requirements. They shall be thoroughly annealed and all working parts and bearing surfaces shall be machined and turned accurately with correct finish.
- 3.10. Cast iron used throughout must be close grained, tough and free from all defects, and shall conform with the conditions and tests specified in BS EN 1561 according to requirements.
- This applies to functional components only. A lower grade is acceptable for portal and machinery house ballast. Tenderers to state grade of cast iron proposed.
- 3.11. The dimensional and out-of-square tolerance as specified in the above Standards shall also apply to built-up components. Edge preparations, welding techniques, straight beds and material fit-up shall be considered when welded joints are designed.
- 3.12. The shape of all members and connections must allow easy accessibility for maintenance painting of all surfaces. No members shall comprise a double member which cannot be painted and maintained.
- 3.13. Structural details must be so designed as to eliminate or seal off any cavities or pockets where water or condensation could collect and promote corrosion. Horizontal members with upstanding flanges require special drainage.
- 3.14. All hollow sections shall be completely closed and airtight, and all welding is to be of such size and quality as to ensure complete airtightness. No tapping or drilling of holes into sealed sections will be permitted.

4. WELDING

- 4.1. All the provisions of BS EN 1011-2 shall be complied with as far as applicable.
- 4.2. Design of weld joints shall be such that crevices, overlaps, pockets, arc strikes and dead ends do not exist.
- 4.3. All joints shall be completely seal welded in accordance with BS EN 1011-2:2001. Special care must be taken to prevent the ingress of moisture into the tubular members by ensuring that each such tubular member is airtight. "Stitch" welding will only be permitted inside sealed sections. Otherwise only continuous welding will be accepted.
- 4.4. Weld cracks, undercut, or pock marks will not be accepted.
- 4.5. All welds on the load bearing frame structure, containers, piping, pipe line flanges, etc., shall be continuous and shall be visually inspected for cracks and other discontinuities.
- 4.6. Welds on the main chords must be tested ultrasonically in accordance with BS EN ISO 17640 or X-rayed in accordance with BS EN ISO 17636-2 and those on minor joints by the dye-penetrant or Magnetic Particle methods. The equipment required for these tests must be supplied by the Contractor and the testing done at his cost.
- 4.7. Steel, except in minor details, which has been partially heated, shall be properly annealed. (Electrically welded structural members accepted.)
- 4.8. All brackets, clamps, lugs, straps, suspenders, etc. required for attaching mechanical and electrical equipment must be welded on prior to erection and special precautions must be taken not to damage welds or puncture tubes during erection.
- 4.9. The welding of all rails shall be done by an approved method.
- 4.10. Welding shall only be carried out by a coded welder according to BS-EN 287 Part 1 and procedures to BS EN ISO 15614-1 or ANSI/AWS D1.1.
- 4.11. All parts to be welded shall be thoroughly cleaned and dried before welding. The welding will only be done in dry surroundings and all steps taken to prevent hydrogen embrittlement.
- 4.12. Where materials of different compositions are joined by welding, especially carbon steel to chrome steel, the filler welding method and post welding treatment shall be such that embrittlement and other degradation of both steel and filler are prevented.
- 4.13. It must be ensured that welded joints are ductile.

5. FASTENERS

- 5.1. All bolts, nuts and rivets shall be manufactured in accordance with the following standards (or internationally recognised equivalents): -

Precision bolts and nuts Grades 4.6 8, 8: & 10.9 BS EN ISO 898-1

Friction Grip Bolts and nuts Grade General: EN 14399-7

Rivets: BS 4620:1970

- 5.2. All fasteners (excluding friction grip) shall be hot dipped galvanised (and their nuts and washers), structural rivets and Huck Bolts.

5.2.1. All holding down bolts and nuts and brackets, as well as all fixing bolts, washers, studs and nuts, less than 12mm diameter shall be of stainless steel. Fixing rivets shall be of either stainless steel or brass.

- 5.3. Bolts and setscrews shall be locked in an approved manner and shall not be stressed in tightening to beyond the recommended loads.

- 5.4. The quality of friction grip bolts, nuts and washers, bolt lengths, sizes of holes, tightening standards, surface condition of clamped components, shop and site assembling and acceptance inspection of friction grip joints shall comply with the latest edition of BS EN 14399-7.

- 5.5. Certificates shall be supplied for all bolts of grade 8.8 and 10.9.

- 5.6. All bolt and rivet holes must be accurate to size and location, the centres of holes shall not be placed nearer the edge of a plate than 1, 5 diameters with an extra allowance of 3mm for sheared edges. All holes in the structural work shall be drilled or otherwise punched to a diameter not exceeding 1,5mm less than the diameter of the finished hole on the die side, and afterward reamed out to the exact size

Where possible the adjoining parts forming a connection shall be drilled or reamed together, with holes not exceeding 1, 5 mm diameter greater than the rivet or bolt for which it is made. No rough or broken edge shall be left around any of the holes.

- 5.7. For turned and fitted bolts, the holes shall be accurately drilled or reamed, the diameter of the hole shall not exceed the finished diameter of the bolt by more than 0,25mm.

- 5.8. The holes, after assembly of the parts, shall be true throughout the thickness of all the parts and perpendicular to the axis of the member.

- 5.9. Rivets shall be cup-headed or countersunk as required, unless otherwise specified. No rivet head shall contain less metal than does a length of the rivet equal to 1, 25 times its diameter. All loose and defective rivets shall be cut and replaced by sound ones; also others when required for the purpose of examining the work. Rivets shall be

driven with pressure tools whenever possible and pneumatic hammers shall be used in preference to hand driving.

- 5.10. All field rivets must be supplied with shanks of suitable length for pneumatic riveting.
- 5.11. Bolts shall be of such length as to accommodate a full nut and washer when tightening up, and protrude a minimum of two thread pitches beyond the nut. Excessive projection of threads beyond the nut must be avoided. Bolts that are flush or under top of nut are not acceptable.
- 5.12. All bolts having countersunk heads shall have strong feathers forged on the neck and head to prevent turning and the bolt holes shall be cut to receive same. All nuts and bolts (excluding countersunk bolts) shall be furnished with circular washers of sufficient thickness, the outside diameter being at least twice the nominal diameter of the bolt, and washers fitted correctly.
- 5.13. Where bolt heads or nuts are seated on bevelled surfaces of beams or channel flanges, appropriate bevelled washers must be inserted.

6. JOINTS AND MATING SURFACES OF MEMBERS

- 6.1. Mating surfaces of members to be joined by high tensile steel bolts in friction grip shall be cleaned and primed as specified for the rest of the steelwork. Mating surfaces shall lay flat against each other to eliminate gaps which may allow ingress of water. After joining, the edges shall be sealed with an approved brand of Butyl/ Rubber sealing compound by means of a suitable caulking gun, or shall be seal welded.
- 6.2. Other joints shall be formed by one of the following methods:
 - 6.2.1. The mating surfaces of members shall be blast cleaned, primed and protected prior to sub-assembly by the liberal application of caulking compound. While the compound is still wet, the members shall be bolted together and caulking compound which is squeezed out shall be completely removed.
 - 6.2.2. The mating surfaces shall be protected with the full corrosion protection system as specified, the surfaces joined together and the joint so formed shall be sealed with butyl rubber sealer.
 - 6.2.3. After being cleaned and primed the surface shall be joined together and the joint so formed shall be seal welded.
- 6.3. The primer coating on mating surfaces must be applied not more than 4 hours after cleaning and the edges must be sealed within 3 weeks of assembly of the part.

7. FABRICATED PARTS

- 7.1. All fabricated parts shall be properly fitted during assembly to result in properly aligned equipment having a neat appearance. Fabrications of load bearing members shall have no abrupt changes in cross section and regions of severe stress concentration. All sharp corners accessible by personnel during erection or operation shall be ground, rounded, or removed by other methods. Burrs, welding spatter and stubs of welding wire shall be removed.

8. BALLAST OR COUNTER MASS

- 8.1. Tenderers must include for the supply of all necessary ballast or counter mass.
- 8.2. These must preferably be of cast iron and be removable for maintenance of structural steelwork.
- 8.3. Concrete ballast is not recommended but will be accepted provided the Tenderer satisfies TPT that it will not cause corrosion of any steel parts.
- 8.4. Fastenings used for removable pieces must be of non-corrosive material.
- 8.5. Ballast must be in suitable shapes to be secured in position against movement but in sizes easily removable for maintenance.
- 8.6. Lifting hooks or eyes of non-corrosive material and of adequate strength must be provided in the removable ballast pieces.
- 8.7. Concrete ballast must be reinforced so as to prevent cracking or breaking, and must be coated with an approved corrosion protection system for concrete.

9. STAIRS, LADDERS, PLATFORMS AND WALKWAYS

- 9.1. Platforms, stairways, walkways, hatches and ladders, shall be provided where necessary to give easy access to all parts of the equipment for inspection, maintenance and lubrication purposes (including the insides of all box sections if inspection covers are provided).
- 9.2. All access shall comply with the requirements of BS EN ISO 14122 (Safety of Machinery – Permanent means of access to machinery)
- 9.3. The hand rails and ladders shall be complete with stanchions, knee rails, back hoops, mounting brackets etc. and shall be manufactured in sections which are hot-dipped galvanized and painted and bolted onto the structure.
 - 9.3.1. The handrail shall have a minimum diameter of 25mm and shall not be less 1100 mm above the platform level. Toe boards shall not be less than 150mm high.

- 9.4. Stairs shall be inclined no more than 45° to the horizontal and shall be broken at suitable intervals by platforms.
- 9.5. Stairs and walkways shall not be less than 700 mm wide and working areas around drives etc. shall be of sufficient size to allow for ease of maintenance.
- 9.6. Vertical ladders must be provided with back hoops.
- 9.7. Trap doors and hatches must be of light, but robust, construction, suitably hinged with stainless steel hinges and provided with a catch to keep them in the open position, if necessary. Trap door openings are to be protected by means of toe boards and removable handrails.
- 9.8. All external platforms, stair treads and walkways shall be hot dipped galvanised open grating construction, similar to Andrew Mentis "Rectagrid" type RS40 to allow for free drainage and avoid the accumulation of water and dust. Bearer bar thickness shall not be less than 4, 5 mm. The top surface shall provide for adequate grip to avoid underfoot slipping.
- 9.9. TPT's prior approval is required for all external platforms and walkways where open grating cannot be used. This will only be permitted where the primary purpose of the walkway/platform is for maintenance purposes. All such surfaces are to be provided with a non slip surface coating.
- 9.10. No obstructions or sudden changes in levels will be permitted on walkways.

10. **MACHINERY AND ELECTRICAL HOUSES AND OPERATOR'S CABINS**

- 10.1. Where required, separate, self contained fully weather proof machinery and electrical houses as well as operators cabins shall be provided. The houses shall be of the steel framed metal clad type, and shall allow ample space and strength for all equipment and control panels housed therein, permitting unrestricted access to all equipment for routine service and maintenance. Headroom shall not be less than 2, 13 metres. A minimum of 700mm working space must be provided around all machinery and in front of all panels.
- 10.2. The major items of machinery, electrical equipment and panels shall be so arranged that it can be removed for repairs or replacement without disturbing the walls, roof, floor or structural framework and furthermore shall be so arranged that full access to all holding down bolts is provided from inside the house.
- 10.3. For electrical houses both the inner and outer cladding must be stainless steel, unless otherwise approved. Side cladding plates are to be joined with butting joints with butt cover straps where required (no lap joints), and the plates must be in as large sizes as practicable to reduce the number of vertical joints, and to eliminate horizontal joints. Alternatively cladding may be welded to the frame and all joints completely seal welded. All angles around windows are to be suitably

joggled to obtain a waterproof and flat surface butting on the side sheets. The whole of the framing shall be well stayed and fixed on its base. Air-conditioned electrical houses shall be provided with thermal insulation material of an approved type between the cladding.

- 10.4. Machinery houses must be cladded with prepainted Aluminium sheeting, minimum thickness 0.8 mm, colour coated with the appropriate colour. The profile and fastenings must be suitable for the spans and wind uplift forces corresponding to the windspeeds stated in the main specification. Flashing, corner trim, closure pieces ridge cappings etc. shall consist of prepainted Aluminium of minimum thickness 1.2mm

10.4.1. Sheetting fasteners shall be 6.3 mm grade 304 stainless steel self-tapping screws with hexagonal washer heads.

10.4.2. Galvanic isolation rubber strips shall be used between the metal frame and Aluminium cladding, and between the fixing screws and the cladding.

- 10.5. Both machinery and electrical houses shall be provided with two access doors, sealed to suit pressurisation and/or air-conditioning, one on each side of the house, arranged for external locking, but allowing exit from the inside without a key. Rain guards must be provided above external doors.


- 10.6. Operator's cabins shall be fully constructed from 3CR12 or similar type stainless steel. Cladding shall be welded to the frame and shall be smoothed over to provide an aesthetic appearance. The cabin shall be insulated from the heat of the sun with an approved material. A stainless steel or similar material door with a robust industrial type door lock shall be provided. The door must be lockable from the outside, but must allow exit without a key from the inside.

- 10.7 All windows shall be of solar heat reducing toughened safety glass.

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END OF SPECIFICATION HE9/2/6 [Version 9]

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1. SCOPE

- 1.1. This specification covers Transnet Port Terminals requirements for protective coating of iron and steel structures, electrical motors, gear boxes etc. against corrosion and must be read in conjunction with the main specification as well as the following (latest editions):-

BS EN ISO 8502 "Preparation of steel surfaces for coating"

BS EN ISO 1461 "Hot-dip (galvanized) zinc coatings"

BS 5252 "National colour standards for paint"

BS 5493 "Code of practice for protective coating of iron and steel structures against corrosion"

2. TYPES OF CORROSION PROTECTION TO BE USED

- 2.1. The coatings specified in this specification are chosen according to BS 5493 Table 3, part 9, to ensure that the condition of the surface will be at least RE2 on the European scale of degree of rust, after 10 years in a environment of frequent salt spray, chemicals and polluted coastal atmosphere. During the 10 years, the normal maintenance painting will be done.
- 2.2. The paint manufacturer shall guarantee the paint for at least 10 years.
- 2.3. Should a tenderer wish to offer coating systems other than those specified, as an alternative, he shall submit full technical details and a list comparing all appropriate details of the alternatives proposed, with the original specified.
- 2.4. Tenderers must ensure that the different coats they offer in their tenders are compatible with each other.
- 2.5. The coating of proprietary items must be done according to Clause 3.
- 2.6. All galvanized components including bolts and nuts but excluding walkway gratings, must be painted with the specified system, unless otherwise approved.

The following coating systems must be used unless otherwise specified in the main specification:-

Substrate	Coat No	Generic Description	Approved Brand Products	Dry Film Thickness (µm)
3CR12 steel (EN 10088)	1	Surface tolerant epoxy primer	DULUX /SIGMA Sigmacover primer 7413 INTERNATIONAL (PLASCON) Intergard 269 STONCOR (CHEMRITE COATINGS) Carboline 193 Primer	65-75
	2	Two component recoatable, polyurethane finish (Gloss)	DULUX / SIGMA Sigmadur gloss 520 INTERNATIONAL (PLASCON) Interthane 990 STONCOR (CHEMRITE COATINGS) Carboline 134	65-75
Galvanized Steel	1	Surface tolerant epoxy primer	DULUX /SIGMA- Sigmacover primer 7413 INTERNATIONAL (PLASCON) Intergard 269 STONCOR (CHEMRITE COATINGS) Carboline 193 Primer	65-75
	2	Two component recoatable, polyurethane finish (Gloss)	DULUX /SIGMA- Sigmadur gloss 520 INTERNATIONAL (PLASCON) Interthane 990 STONCOR (CHEMRITE COATINGS) Carboline 134	65-75
Substrate	Coat No	Generic Description	Approved Brand Products	Dry Film Thickness (µm)
Mild steel	1	Two component self curing inorganic zinc ethyl silicate OR two component zinc rich polyamide cured	DULUX /SIGMA- Sigma Sigma zinc 160 OR Sigma-cover primer	65-75

	epoxy primer	INTERNATIONAL (PLASCON) Interzinc 52	
		STONCOR (CHEMRITE COATINGS) Carbo Zinc 11 OR Carbo- Zinc 658 Primer	
2	Flexible recoatable high build polyamide cured MIO epoxy	DULUX/SIGMA – Sigmacover CM 456	125-150
		INTERNATIONAL (PLASCON) Interseal 670	
		STONCOR (CHEMRITE COATINGS) Carboline 193	
3	Two component recoatable, polyurethane finish (Gloss)	DULUX/SIGMA Sigmadur gloss	65-75
		INTERNATIONAL (PLASCON) Interthane 990	
		STONCOR (CHEMRITE COATINGS) Carboline 134	

- 2.7. The paint manufacturer's recommendations for the application of the different coating systems, curing time before handling or application of subsequent coats, health and safety recommendations etc. must be carefully adhered to.
- 2.8. Paint contractors must have a quality management system which must be submitted to the Engineer for approval before commencement of the work.
- 2.9. Galvanizing shall be done to BS EN ISO 1461 heavy duty hot dip galvanizing to a thickness of at least 85µm. Electroplated components in zinc or cadmium are not acceptable.
- 2.10. All mounting bolts, nuts, washers and brackets as well as all fixing bolts, studs nuts and washers, less than 12mm, shall be of stainless steel. Fixing rivets shall be of either stainless steel or brass.
- 2.11. High tensile bolts for friction grip joints must not be galvanised and must be primed and painted after installation. High tensile bolts must be certified.
- 2.12. The full paint system shall be applied to all surfaces except for wear pads, linings etc., which are to be covered with appropriate protection.
- 2.13. For steelwork which will be transported over long distances and erected on site the two pack epoxy primers is preferred.

3. **PROPRIETARY ITEMS**

- 3.1. Proprietary items such as gearboxes, motors, brakes etc. must either be painted according to this specification or where the coating system is equal to or exceeds this specification sufficient proof of the coating system applied must be provided. Items which are nearly equal to this specification shall be given a finishing coat according to this specification's thicknesses and final colours and to the following procedure:-
 - 3.1.1. A cross cut test must be done to BS EN ISO 2409 to determine if the original coating adheres correctly to the substrate;
 - 3.1.2. The original coating shall be rubbed down to remove any smooth finishing to form a suitable key for the finish coat and any damaged areas prepared and patch primed with a suitable primer;
 - 3.1.3. The item must then be detergent washed to remove any foreign matter, taking care that no dust, solvent etc. contaminates any working part of the item;
 - 3.1.4. A test shall be done on the existing coat to ensure that the finish coat will not react with and cause undue dissolving and lifting of the existing coat. This can be done by applying a small quantity of the finishing coat thinners.
 - 3.1.4.1. Should any undue dissolving or lifting occur, a suitable intermediate or barrier coat must be applied before the finishing coat is applied.
 - 3.1.5. Proprietary items which failed the cross cut test and which generally have inadequate protection shall be dismantled and the full corrosion protection specification applied.

4. SURFACE PREPARATION

- 4.1. All steel surfaces shall be detergent washed and fresh water rinsed to remove all oil, grease and surface contaminants before shot blasting.
- 4.2. Sharp edges shall be radiused and major roughness of welds shall be removed by grinding. Welding spatter and flux shall be removed.
- 4.3. Components manufactured from hot rolled steel sections and steel plate shall be blast cleaned to base metal in accordance with Swedish Standard SSPC SP10 grade SA2½ - very thorough blast cleaning, to remove all mill scale, rust, weld spatter etc.
 - 4.3.1. "Sharp" chilled iron shot, chilled iron grit, or granular abrasive slag is to be used to produce a proper degree of surface roughness.
 - 4.3.2. Blast profile shall be determined by micrometer profile gauge, Keane-Tator surface profile comparator or Testex press-o-film.
 - 4.3.3. The profile height shall be between 40 and 50µm at any point.
- 4.4. Good quality blast cleaning and spray painting equipment shall be used. Air used for spraying and blast cleaning shall be free from all traces of oil, water and salinity. Water and oil traps must be fitted to all equipment.
- 4.5. Wheel abrading equipment shall not be used unless an angular profile the same as clause 4.3.3 is achieved.
- 4.6. When wet blasting is done the primer shall be applied before oxidization starts or surface contamination occurs.
- 4.7. Components manufactured from 3CR12 steel shall be lightly abraded. The components shall then be passivated by using a mixture of 10 - 15% nitric acid in water which is rinsed off after 10 - 15 minutes. The surface shall be neutralized to pH 7 before it is coated.
- 4.8. Hot-dip galvanized components, galvanized bolts and nuts etc. shall be lightly abraded with a galvanizing pre-cleaner. The components shall then be washed with detergent and water and washed down with clean water until a water break free surface is achieved. Allow to dry thoroughly.

5. JOINTS AND MATING SURFACES OF MEMBERS

- 5.1. Mating (faying) surfaces of members which have to be joined by high tensile steel bolts in friction grip shall be cleaned according to Clause 4 and painted with primer only.
 - 5.1.1. After being assembled joints so formed shall be seal welded and painted or after the intermediate coat was applied the edges shall be sealed with an approved brand of paintable flexible sealant or mastic (e.g. Butyl rubber, polyurethane sealer or two component epoxy), by means of a suitable caulking gun.
- 5.2. All rivets, bolts, welds, sharp edges etc. must be covered with a "stripe coat" of the primer or intermediate coat specified to ensure the correct dry film thickness on sharp edges, as well as sealing of bolt threads to head etc.
- 5.3. All other mating surfaces must be sealed with an approved brand of flexible Butyl rubber, paintable Silicone, polyurethane sealer or two component epoxy sealer, and joined while still wet. All excess compounds must be completely removed.

6. PAINTING PROCEDURES

- 6.1. Directly before the application of paint, the area to be painted shall be degreased with a suitable degreaser and left to dry.

- 6.2. Paint shall only be applied under the following conditions:-
 - 6.2.1. There is adequate light.
 - 6.2.2. The steel temperature is between 5 and 50°C and at least 3°C above the dew point of the air.
 - 6.2.3. The relative humidity of the air is between the limits specified by the paint supplier.
 - 6.2.4. Wind does not interfere with the method used and sand and dust cannot be blown onto wet paint.
- 6.3. Steelwork shall be supported on trestles, at least 900 mm off the ground for painting purposes.
- 6.4. An adequate number of test readings shall be taken per square meter in order to determine the dry film thickness.
 - 6.4.1. The paintwork shall be acceptable if the average of the test readings taken falls within or exceeds the ranges given.
 - 6.4.2. Paintwork shall not be acceptable if any single test reading is less than the specified minimum thickness.
- 6.5. An ultrasonic or electronic magnetic flux thickness measurement gauge shall be used, but in case of dispute, destructive testing shall be applied. The painted steelwork shall present a clean, neat appearance of uniform colour and gloss as applicable to the paint used. Each coat of paint shall be applied as a continuous, even film of uniform thickness. More than one application of paint may be required to achieve the dry film thicknesses specified or to obliterate the colour of the previous coating.
- 6.6. The use of thinners or solvents at any stage of the work is prohibited, unless specified by the paint manufacturer.
- 6.7. Precautions shall be taken to prevent coatings from being applied to equipment nameplates, instrument glasses, signs etc.

7. COLOUR CODES

Machinery and equipment shall be painted in the following final colours:-

	Area	Colour	Code No. [091 BS 5252 and International No's]
7.1.1	Mobile equipment (cranes, loaders etc.)		
	a) Structure, machinery and electrical houses, operator's cabins, chutes, hoppers etc.	Transnet Red	RAL 3020
	b) Undercarriage, travel bogies, rubber tyred rims	Transnet Red	RAL 3020
7.1.2	Industrial buildings, conveyor structures		
	a) Roofs and canopies	Pantone cool grey 10	RAL 7037 (Staubgrau)
	b) Painted walls	Pantone cool grey 3	RAL 7035 (Lightgray)
	c) Steel columns, rafters, trusses	Pantone cool grey 5	RAL 7004 (Signalgray)
7.1.3	General		
	a) Guards	Golden yellow	RAL 1003
	b) Sheaves	Orange	RAL 2008
	c) Cable reels (Stainless steel)	Orange	RAL 2008
	Machine buffers and parts of machine which could constitute a serious hazard	Golden Yellow (High Gloss) with Luminous green stripes in chevron pattern	SABS B49 and Luminous green

Area	Colour	Code No. [BS5252 and International No's]
e) Any exposed rotating part of machinery, electrical Switch-gear (other than starting and stopping devices and emergency stop control), electrical services e.g. conduit and allied fittings	Light Orange (High Gloss)	SABS 1091 B26 BS 381C-557 RAL 2007
f) Low voltage switchgear panels where orange is not aesthetically acceptable	Light grey	RAL 7035
g) Medium voltage cable trays, switchgear and motors (3,3 kV and up)	Saphire Blue	RAL5003
h) Starting devices, low voltage cable trays and switchgear	Moss Green	RAL6005
i) Transnet Logo	Transnet Red (Traffic Red)	RAL 3020 on White (RAL 9010) Background
j) Parts of stationary machinery (Electrical, motors, gearboxes, brakes, transformers, etc.)	Light Grey	RAL 7035
k) Hand levers, hand wheels, oiling points, handrails on walkways, ladders	Golden Yellow (High Gloss)	RAL 1004
l) Stopping devices, grease points, motor fan covers and danger signs (not symbolic safety signs for which see SABS 1186)	Signal red (High Gloss)	RAL3001
m) Walkways (non slip surfaces) (galvanized gratings not to be painted)	Shop floor green or black	
n) Informatory signs and notices (not symbolic safety signs for which see SABS 1186)	White on Emerald Green (High Gloss)	White on RAL 6001

Area	Colour	Code No. [SABS 1091 and International No's]
7.1.4 Pipe lines		
a) Reclaim water piping	Aluminium	
b) Slurry pipe lines	Iron Grey	RAL 7011
c) Fire protection piping	Signal red	RAL 3001
d) Washwater drain pipes	Light grey	RAL 7035
e) Instrument air	White with Strong blue band	White RAL 5005
f) Plant air	White with Flag blue band	White RAL 5015
g) Potable water	Grass green	RAL 6010

7.1.5 Colour bands for pipes shall be 75 mm wide for pipe sizes up to 150 mm diameter and 100 mm wide for 150 mm and above. The colour bands shall be applied to the pipe flanges, valves, junctions, walls or structures etc. in such a manner that the pipe may be easily identifiable. On straight sections the maximum spacing shall be 100 x the pipe diameter.

8. FIELD TOUCH-UP PAINTING

8.1. Damaged and unpainted areas, fasteners, welds, etc. shall be cleaned by wire brushing with hand tool or power tool in a manner which will minimize damage to sound paint. Grinding will not be allowed. Rust spots shall be cleaned to bright metal. Thick edges of old paint abutting on bare metal surfaces shall be feathered by scraping and sanding.

8.1.1. Where welding is required on areas already coated with the coating system, the coat should be stepped back for ± 30 mm around the weld area.

8.2. The paint shall be applied to match the original coats in accordance with the manufacturer's recommendations for the specific paint system.

Note: Inorganic zinc primers shall not be re-covered with an inorganic primer, but only with an organic zinc primer.

8.3. Areas of damaged galvanizing shall be repaired with an approved cold galvanizing product or metal sprayed by the wire spraying process with Zinc, and then touched up with the specific paint system.

9. GENERAL

9.1. All walkways, floors, maintenance platforms etc. must be painted with a durable, non skid coating of the appropriate colour.

9.2. Exposed machined surfaces must be coated with a strippable corrosion inhibitor (e.g. Tectyl).

9.3. Where different materials will be in contact with each other and galvanic corrosion can occur the contact areas of the materials must be isolated from each other or the joints made water proof to prevent ingress of moisture.

9.4. All components must be designed with corrosion prevention in mind and specifically the following:-

- 9.4.1. No entrapment of dirt, product, moisture etc.
- 9.4.2. No areas must be inaccessible for maintenance such as too narrow gaps etc.
- 9.4.3. Large flat areas rather than complicated shapes and profiles.
- 9.4.4. No sharp corners and discontinuous welds.

9.5. Parts of equipment which are exposed to high temperatures must be coated with the following system:-

Coat No	Generic Description	Approved Brand Products	Dry Film Thickness (µm)
1	Two component self curing inorganic zinc ethyl silicate	DULUX /SIGMA-Sigma Xinc 160 INTERNATIONAL (PLASCON) Interzinc 52 STONCOR (CHEMRITE COATINGS) Carbo Zinc 11	65-75
2	Single component high temperature moisture curing silicone with aluminuim flakes	DULUX/SIGMA – Sigmatherm Silicate INTERNATIONAL (PLASCON) Intertherm 50 STONCOR (CHEMRITE COATINGS) Thermaline	40

10. MAINTENANCE PAINTING OF STRUCTURES

10.1. Areas which are only lightly corroded must be cleaned by means of high pressure water blasting or wire brushing by power tool and the following system applied:-

Coat No	Generic Description	Approved Brand Products	Dry Film Thickness (µm)
1	Surface tolerant two pack epoxy primer with aluminuim pigments	Dulux/SIGMA Aluprimer STONCOR (CHEMRITE COATINGS) Carbomastic 15 INTERNATIONAL (PLASCON) Intergard 242	125-150
2	Same as first coat OR micaceous iron oxide (MIO) epoxy	DULUX/SIGMA – Sigmacover 456 INTERNATIONAL	125-150

		(PLASCON) Interseal 1052	
		STONCOR (CHEMRITE COATINGS) Carboline 193	
3	Two component recoatable, polyurethane finish (Gloss)	DULUX/SIGMA Sigmadur gloss INTERNATIONAL (PLASCON) Interthane 990 STONCOR (CHEMRITE COATINGS) Carboline 134	65-75

10.1.1. Alternatively, the Noxyde paint system can be used, consisting of two to three coats of water based Noxyde paint to achieve a DFT of 350 to 400 microns. Where the Noxyde system is used on areas other than slightly corroded structural areas, the following additional requirements must be observed:

10.1.1.1. Very smooth surfaces (e.g. 3CR12, stainless steel or hot-dip galvanized components, bolts, nuts and fittings, and HT bolts): Parts must be thoroughly degreased using OptiDegreaser, washed down with potable water, and immediately when dry, a single coat of OptiPrimeAqua applied.

10.1.1.2. Paintable flexible sealant/mastic: Only sealant approved by the paint manufacturer may be used, and an initial coat of OptiPrimeAqua applied over it before the further coats of Noxyde are applied.

10.1.1.3. Bolted/rivited connections: After blasting or and/or cleaning as required, apply a coat of OptiPrimeAqua and an additional stripe coat of Noxyde, in contrasting colour, to all bolt/nut and plate edges and crevices.

10.2. The adhesion of old coatings must be verified by doing a cross cut adhesion test on selected areas.

10.3. The compatibility of the new paint system on the old coating must be tested and guaranteed in writing by the paint supplier.

10.4. The work and coating system must be guaranteed for a minimum of 12 months.

10.5. All heavily corroded areas must be shot blasted to minimum SA2 and the three coat system indicated in clause 2.6 applied.

10.6. Areas where the old coating is still sound need only be high pressure cleaned with a suitable solvent and coated with one of the primers suggested in clause 10.2 (as tie coat) and then with one of the top coats suggested in clause 2.6 to get the appropriate colour and finish. The minimum dry film thickness of this tie coat must be 75 microns and top coat must be 50 microns, but the previous coating colour shall be completely obliterated to present a uniform colour.

Note: Inorganic zinc primers shall not be re-covered with an inorganic primer, but only with an organic zinc primer.

- 10.7. Repairs to the insides of all the enclosed sections of the booms as well as the insides of the crane legs, sill beams, cross beams, pylon cross bracing members etc. shall be done as above but the top coat need not be applied.

***** END OF SPECIFICATION HE 9/2/8 [Version 17] *****

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DETAILS CONTENTS

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1. Introduction

This Specification outlines the minimum requirements to ensure that products and services supplied to Transnet Port Terminals 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

Term, Abbreviation	Meaning
Data	All drawings/documents/data/information and DP's required to be supplied under the Contract
Data Pack (DP)	A compilation of manufacturing data, certification, inspection and testing records prepared by the Supplier/Contractor to verify compliance with the Contractual requirements.
Employer	For the purposes of this document, the term Employer has the same meaning as applied to the term Client.
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.
TPT	Transnet Port Terminals is the Employer's Nominated Agent in terms of the Conditions of Contract.
Inspection Release Report (IRR)	A document issued to the Supplier/Contractor by TPT advising release of the Materials for shipment. This does not relieve the Supplier/Contractor of its obligations in accordance with the Terms and Conditions of the Contract.
Inspection Waiver Report (IWR)	<p>A document issued to the Supplier/Contractor by TPT advising that TPT has waived final inspection for the materials listed in this document. The issue of this Report does not preclude further inspection by TPT, is issued without prejudice and does not relieve the Supplier/ Contractor from the guarantees and obligations included in the Contract/ Contract.</p> <p>A document prepared by the Supplier/Contractor providing relevant information applicable to the installation and maintenance of the specific equipment, including consumables (eg. oils etc)</p>
Project Quality Plan (PQP)	A document that outlines the Supplier/Contractor's strategy, methodology, resources allocation, Quality Assurance and Quality Control coordination activities to ensure that Goods and Services supplied meet or exceed the requirements defined in the Contract, drawings, codes and standards.
Quality Control Plan (QCP)*	<p>A document outlining specific manufacturing / construction inspection and testing requirements, including responsibilities, test acceptance criteria, nomination of witness and hold points.</p> <p>For the purposes of this document, the term Supplier/Contractor has the same meaning as applied to the term Sub-Supplier/Sub-Contractor</p>
Supplier/Contractor	This refers to the documentation required to be submitted by the relevant Supplier / Contractor in terms of the Contract.
Supplier/Contractor Data Requirements	These requirements are generally tailored to suit the particular Scope of Work, although it also addresses the manner in which the documentation is required to be submitted, eg Hard copy, Electronic copy etc
Technical Query Note (TQN)	This refers to a document used by the Supplier/Contractor to formally clarify a Technical Query related to the scope of supply. This should not be used where a non-conformance has already been initiated.

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	International Standard Series Quality Systems

WCS have been supplied with 3 documents EEAM-Q-013 Commissioning and Handover, Standard and Technical Data Sheets. There is some renumbering needed

4. Quality System

4.1 General

The Supplier/Contractor shall be 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 Work in accordance with the requirements of this Specification, and the Supplier/Contractor's PQP and QCP's once reviewed and approved by TPT.

The Supplier/Contractor shall ensure that all Sub-Suppliers/Sub-Contractors also conform to the requirements of this Specification.

4.2 Supplier/Contractor Quality System Requirements

The Supplier/Contractor shall have, maintain and demonstrate its use to TPT, its documented Quality Management System. The Supplier/Contractors Quality Management System should be in accordance with the International Standard ISO 9001.

The Supplier/Contractor shall submit its Quality System documentation to TPT at the time of tender and at Contract Phases as detailed below:

- Project Quality Plan
- Quality Policy
- Index of Procedures to be used
- Programme of internal and external audits

4.3 Supplier/Contractor Documentation Requirements

The Supplier/Contractor shall develop and maintain a comprehensive register of documents that will be generated throughout the project, and shall include all quality related documents. The register shall be submitted to TPT for review.

TPT shall indicate those documents required to be submitted for information/review and/or acceptance and this shall be indicated in the Supplier/Contractors' Document Register. The register shall indicate the dates of issue of the documents taking into account sufficient time to allow TPT review/acceptance cycle prior to the document being required for use.

5. Quality Assurance

5.1 Project Quality Plan

Where specified, the Supplier/Contractor shall submit a PQP to TPT within 28 days after the Contract start date. The PQP shall detail how the Supplier/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 Supplier/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 (eg. 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 Supplier/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 / coordination of QA / QC activities
- Include a listing of all Quality Control Plans (QCP's), and associated Field Inspection Checklists (FIC's), as applicable
- Identify in the Project Quality Plan any Sub-Supplier/Sub-Contractor work. Sub-Supplier/Sub-Contractor plans shall be approved by the Supplier/Contractor, and a copy forwarded to the TPT
- Include the proposed Authorised Inspection Authority (where applicable – for example pressurized 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 Supplier/Contractor is required to provide a PQP, no work shall commence until the PQP is approved by TPT.

5.2 Procedures

The Supplier/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 Supplier/Contractor shall submit copies of Quality Procedures for review. In addition, the Supplier/Contractor shall ensure that copies of all Procedures relevant to the Scope of Work are available for reference by TPT at each work location.

These will include, as applicable, the following:

5.2.1 Document Control

The Supplier/Contractor's Project Quality Plan shall provide a description of how TPT provided, Supplier/Contractor and Sub-Supplier/Sub-Contractor documents 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.

5.2.2 Design Control

Where the Supplier/Contractor is responsible for any aspect of design related to their Scope of Work, the Quality Plan shall describe the Supplier/Contractor's methods and procedures for the control of these design activities.

5.2.3 Procurement

Where the Supplier/Contractor is responsible for any aspect of procurement related to their Scope of Work, the Quality Plan shall describe the Supplier/Contractor's methods and procedures for the control of these activities.

5.3 Supplier/Contractor Audits

The Supplier/Contractor shall:

- Carry out audits in accordance with its Quality System at its own and Sub-Supplier/Sub-Contractor's facilities to ensure project quality requirements are being achieved
- Include a QA Audit Schedule in the Supplier/Contractor PQP submitted to TPT prior to commencement of the Scope of Work. The Audit Schedule shall include all audits to be implemented by the Supplier/Contractor and Sub-Supplier/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 shall be submitted to TPT at the completion of each Audit. Where unsatisfactory performance is evident, additional audits shall be performed by the Supplier/Contractor as directed by TPT.

5.4 Transnet Port Terminals Audit

TPT reserves the right to perform quality audits or participate as an observer in Supplier/Contractor audits to verify compliance with the Contractual requirements. The Supplier/Contractor shall within a time frame as agreed upon, correct any adverse audit finding advised by TPT.

6. Inspection and Testing

6.1 General

TPT may, at its discretion perform surveillance inspection at the Supplier/Contractor's premises, SubSupplier/Sub-Contractor's premises or at the location of the Scope of Work.

Dependent on the nature of the Scope of Work and the frequency of inspections TPT may elect to have inspection personnel resident at the place of manufacture, fabrication, or assembly.

The Supplier/Contractor shall ensure free entry and access is given to TPT, certifying authorities and statutory authorities to inspect the Scope of Work and review procedures and quality records at all parts of the Supplier/Contractor's and Sub-Supplier/Sub-Contractor's premises, or at the location of the Scope of Work while any work or test is in progress.

The Supplier/Contractor shall provide TPT with all necessary tools, calibrated measuring equipment, safety equipment and workspace to verify or witness tests in progress.

While TPT is at the Supplier/Contractor's premises, the Supplier/Contractor shall provide, free of charge, reasonable facilities including office facilities and reasonable access to a telephone, facsimile machine and computer connection point with internet access.

The Supplier/Contractor shall provide notice in writing in within a time frame time as agreed upon, to allow the attendance of TPT and other representatives at nominated witness and hold points.

6.2 Quality Control Plans

The Supplier/Contractor shall prepare and submit QCP's to TPT for review in accordance with the requirements of the Contract and PQP.

QCP's shall 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 Supplier/Contractor shall not commence fabrication or manufacture prior to review and approval of the applicable QCP by the TPT.

QCP's shall include reference to all tests specified in the Contract Document.

A typical format for a QCP is shown in Appendix A. The Supplier/Contractor may use its own format providing all information shown in Appendix A is included.

6.3 Inspection Points

The QCP shall identify points in the fabrication, manufacturing and/or installation process that are selected for inspection and shall be denoted by the following inspection codes:

- Hold Point (H) Inspection point in the manufacturing cycle, beyond which work shall not proceed without the specified activity, work or function being witnessed. Holding points require written notification to TPT.
- Witness Point (W) An inspection point in the manufacturing cycle that will be witnessed or verified. If TPT confirms it is unable to attend after being provided with the written notification then manufacture may proceed. Witness points require written notification to TPT.
- Review Point (R) A point at which products and quality records are verified and endorsed. Review points are not notifiable points.
- Surveillance (S) An inspection point in the manufacturing cycle during which any activity, work or function is observed. No formal notification is required.

The Supplier/Contractor shall maintain the status of testing and inspection by progressively having the QCP's signed off.

6.4 Revision to Quality Control Plans

Revision of the QCP shall be subject to the same submission, review and acceptance routines as described for the original QCP issue

6.5 Kick off Meeting

After the Contract start date, and prior to manufacture, TPT will require a Kick off Meeting with the Supplier/Contractor to discuss fully the implications of meeting TPT 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-Supplier/Contractors of key equipment are engaged.

After mobilization of the Contractor, and prior to the commencement of any construction activities, TPT will arrange for a Quality kick-off meeting to discuss fully the implications of meeting the projects' quality requirements. This meeting may be held as part of the formal kick-off meeting for each contractor, or may be a separate meeting subject to the critical or complex nature of the work.

6.6 Schedule of Inspection

The Supplier/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 TPT to show the current inspection and test status.

6.7 Field Inspection Checklists

For site installation and construction activities, the Supplier/Contractor shall prepare Field Inspection Checklists (FIC's) to permit inspection and testing of installed equipment and constructed facilities in accordance with the respective QCP's.

FIC's shall be provided to TPT for initial review, and shall be used to record the results of inspection and testing (where applicable), and on completion be submitted to TPT to confirm satisfactory completion of the tests and inspections at nominated QCP witness and hold points.

6.8 Inspection Notification

The Supplier/Contractor shall notify TPT 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 shall be confirmed at least two working days before the event. For inspection and tests outside of the country, arrangements shall be confirmed at least seven working days before the event.

Inspection notifications shall 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 Supplier/Contractor's Representative.

6.9 Inspection and Testing

The Supplier/Contractor is responsible for the conduct of all Supplier/Contractor inspections and tests, and includes:

- Documenting inspection and tests result in the QCP's and relevant FIC's
- Progressively inspecting the quality of the Scope of Work performed, including that of all Sub-Supplier/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 QCP's and FIC's shall be submitted to TPT in the DP

6.10 Inspection Release

At completion of the Scope of Work, either in total or in phases, TPT may issue an Inspection Release Report (IRR) or a waiver of inspection.

The issue of either an inspection release or waiver of inspection does not relieve the Supplier/Contractor of its obligations under the Contract. The Supplier/Contractor shall ensure 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 TPT without a copy of these documents may not be accepted.

A copy of the inspection release or waiver of inspection shall be included in the DP.

6.11 Special Processes

It is the Supplier/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 Supplier/Contractor's responsibility and do not require submission to TPT before work begins. When such procedures are requested, no work shall commence until procedures are approved by TPT.

It is the Supplier/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 Supplier/Contractor and made available to TPT when requested.

Records of qualification of procedures and processes shall be maintained by the Supplier/Contractor in accordance with the applicable procedure or code.

6.12 Welding Procedures

Where the Supplier/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 Supplier/Contractor's Scope of Work. The procedure shall only be submitted to TPT when requested in the Contract.

WPS shall include all welding essential and non-essential variables for each process used, including appropriate test results and shall comply with the standard or code pertaining to welding required in the execution of the Supplier/Contractor's Scope of Work.

When requested in the Contract a suitably marked "weld map" shall be completed by the Supplier/Contractor for all items to be fabricated. A summary of WPS shall be prepared and when used, shall be identified on the weld map.

Where TPT approval is required, fabrication shall not commence until written approval of WPS and Welding Procedure Qualification Records (WPQR) is received by the Supplier/Contractor. No welding fabrication will be accepted that is not covered by a TPT approved WPS/WPQR.

Welding Procedure Qualification (WPQ) tests may be witnessed by TPT and/or an independent inspection authority. Testing of the specimens prepared during the WPQ Tests shall be carried out by an independent approved testing laboratory independent of the Supplier/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 shall be taken from the procedure qualification tests. Data listed in the catalogues of the manufacturer of welding consumables is not acceptable.

Welders/welding operators shall be qualified in accordance with the relevant welding code prior to commencing production fabrication. Specific Welder Qualifications (WQ's) records will be reviewed by TPT in the Supplier/Contractor's works and should NOT be submitted for review.

A register of welders qualified to work shall be maintained by the Supplier/Contractor.

6.13 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.

6.14 Material Certification

Where specified in the Contract the following certificates shall be provided to TPT and included in the DP.

Type A:	A Supplier/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 Supplier/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. (EN 10204 certificate 3.1 B).
Type C:	The same as Type B, the tests are to be witnessed by a third party (EN 10204 certificate 3.1C).

6.15 Non Destructive Testing

The Supplier shall provide all Non Destructive Testing (NDT) procedures for TPT review and approval where specified. The submissions shall detail the procedures for each technique employed and the acceptance criteria.

The Supplier shall maintain records of NDT procedures and Personnel training records and certification and make these available to TPT or their nominated inspector.

The Supplier shall provide repair methods where NDT inspections are failed for TPT to review and retain.

7. Non Conforming Products

7.1 General

The Supplier/Contractor shall establish and maintain procedures to control material or products that do not meet the specified requirements.

All Supplier/Contractor product and/or materials identified as not conforming to requirements shall be dealt with promptly as follows:

- If the Supplier/Contractor discovers material or product which is not in accordance with the requirements of the Contract, i.e. a non conformance (NCR), the Supplier/Contractor shall promptly initiate the non-conformance procedure in terms of the Supplier/Contractor's Quality Management System, advise TPT promptly, and provide a copy of the NCR to TPT
- If TPT or its agent identifies a non-conformance and TPT NCR may be raised.
- Originals of all closed out NCR's shall be included in the DP.

7.2 Corrective and Preventative Action

If the Supplier/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 TPT 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 Supplier/Contractor following discussion and agreement with TPT.

8. Concession Requests and Technical Queries

8.1 Concession Requests

Where a Supplier/Contractor requests a Concession to deviate from the requirements of the Contract or specified requirements, the Supplier/Contractor shall raise the request with TPT using the format as shown in Annexure B.

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.

8.2 Technical Queries

For clarification of technical issues (only), Supplier/Contractor may submit a Technical Query Note (TQN) to TPT in accordance with the Contract.

The TQN shall clearly identify all elements of the query, and all supporting documentation and/or drawings shall be attached where appropriate.

Completed original TQN's shall be included in the DP.

9. Inspection, Measuring and Test Equipment

9.1 Calibration

The Supplier/Contractor, including its Sub-Supplier/Sub-Contractors shall ensure the calibration of test and measuring equipment is performed and maintained in accordance with the relevant Supplier/Contractor procedures and/or the equipment manufacturer's specifications.

Where calibration is required by an external laboratory, the Supplier/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 Supplier/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).

9.2 Use of Inspection, Measuring and Test Equipment

The Supplier/Contractor shall ensure that authorised equipment users:

- Use the equipment in accordance with manufacturers 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.

The supplier shall ensure that personnel using equipment are adequately competent, and where necessary, completed the required training.

9.3 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 Supplier/Contractor's Quality System procedures. The Supplier/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
- document the results of the re-testing on the respective inspection and test documentation.

10. Quality Records

Supplier/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 Supplier/Contractor during the project, and be provided to TPT at the times, and in the quantities specified in the Contract.

The Supplier/Contractor shall collate all quality records in the DP and submit the DP to TPT 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 Supplier/Contractor's DP including the quality records from Sub-Supplier/Sub-Contractors have been reviewed and accepted by TPT.

The DP shall be compiled progressively during the execution of the Scope of Work and shall be made available for review by TPT as required.

Annexure A - Sample Quality Control Plan

Quality Control Plan No.:	Rev:	Date Issued:
Contract No.:	Description:	Item No.:
Supplier / Contractor:	Location:	

Activity No.		Activity Description	Procedure Ref./Code Specification		Specification Acceptance Criteria	Verifying Doc/Report Certification
Rev.	Date	Reason for Revision	Drawn	Checked		

Verification / Witness					
Supplier / Contractor		TPT		Employer	
Action	Sign	Action	Sign	Action	Sign

Action:

H - Hold, Mandatory Hold Point R - Review (Verify) Only

W - Witness S - Surveillance

NOTE: H&W points require formal notification to TPT.

Request for Concession No:			
B. SITE ADMINISTERED CONTRACT?	Yes		Nn
Go to "D"			
Possible QC implications:			
<div style="border: 1px solid black; padding: 5px;"> <input type="checkbox"/> Recommendations <input type="checkbox"/> Recommended with the following Conditions: </div>		<div style="border: 1px solid black; padding: 5px;"> <input type="checkbox"/> Rejected </div>	
Site Construction Manager: _____ Signature: _____ Date: _____			
Site Engineer: _____ Signature: _____ Date: _____			
C. RECOMMENDATION BY CONTRACT ADMINISTRATOR: Name: _____			
Signature		Date:	
D. RECOMMENDATION BY ENGINEERING:			
<input type="checkbox"/>	Recommended	<input type="checkbox"/>	Rejected
<input type="checkbox"/>	Conditional, with the following		
recommendations:			
Package Engineer: _____ Signature: _____ Date: _____			
Lead Discipline Engineer: _____ Signature: _____ Date: _____			
Engineering Manager: _____ Signature: _____ Date: _____			
Comments:			
E. PROJECT MANAGER DISPOSITION: Accepted <input type="checkbox"/> Rejected <input type="checkbox"/>			
Name: _____		Signature _____ Date: _____	
F. EMPLOYER DISPOSITION: Accepted <input type="checkbox"/> Rejected <input type="checkbox"/>			

TRANSNET GROUP CAPITAL – ENGINEERING & DESIGN SERVICES CENTRE OF EXCELLENCE

CAD STANDARDS

Document number	ENG-STD-0001
Version number	1.0
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SUMMARY VERSION CONTROL

[illegible]

Note: Only latest amendments and/or additions are reflected in italics in the body of the document.



DOCUMENTATION SIGN-OFF SHEET

ROLE	CAPACITY/ FUNCTION	SIGNATURE	DATE
Prepared by: Kamashan Reddy	Senior Manager: Engineering and Design Services – Centre of Excellence (Civil, Perway and Structures)	<i>[Signature]</i>	2019/03/28

I, the undersigned hereby approve this procedure.

ROLE	CAPACITY/ FUNCTION	SIGNATURE	DATE
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Accountable: Nkgatho Tiale	Technical Director Engineering and Design Services – Centre of Excellence	<i>[Signature]</i>	2019/03/28
Reviewed and Accepts document for adequacy and practicability. Comments:			
Approved by: Bessie Mabunda	General Manager Engineering and Design Services	<i>[Signature]</i>	14/4/19
Approves document for use. Comments:			



DOCUMENT REVIEW AND ACCEPTANCE:

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1 PURPOSE

- 1.1 The purpose of this standard is to ensure that all CAD files and drawings are created in a logical and consistent format, and in a manner reflecting consistent design practice during the execution of the projects within Transnet Group Capital.

2 APPLICABILITY

- 2.1 This standard applies to all personnel within the Engineering and Design Services department of Transnet Group Capital, as well as external contractors and consultants appointed by Transnet Group Capital (TGC), whom are responsible for developing, creating and issuing drawings.

3 SCOPE

- 3.1 All engineering staff, contractors and consultants that are involved in the production of drawings for TGC, will be issued with this standard and must ensure compliance. It is noted that where fabrication shop details are required, it is not necessary for the contractor to comply with these standards and their own CAD packages may be used.
- 3.2 General drawing practice shall comply with current discipline-specific South African Standards.
- 3.3 In certain cases clients may prescribe standards different from this document.

4 REFERENCE DOCUMENTS

Item	Document Number	Description
[1]	ISO 9001	Quality management systems-Requirements
[2]	SANS 10144	Detailing of steel reinforcement for concrete
[3]	SANS 10143	Building Drawing Practice
[4]	SANS 1044-2	Welding Part II: Symbols

[5]	SANS 10111	Engineering Drawing Part 1,2 and 3
[6]	SANS 282	Bending dimensions of bars for concrete reinforcement
[7]	SYS-P-0001	Transnet Programme Numbering/Codification Procedure
[8]	BS 3939	Graphical symbols for electrical power, telecommunications and electronic diagrams
[9]	BBB0041	Preparation of Drawings for Transnet Freight Rail
[10]	BBB4354	Preparation of Signal Drawings
[11]	BBD 5371	CAD Standard for technical Documentation
[12]	CSE Z 148	Symbols for Signalling
[13]	ENG-P-0105	Engineering Drawings
[14]	ENG-GL-0103	Revision of Technical Documents
[15]	SANS NRS 1002	Graphical symbols for Electrical Diagrams
[16]	South African Institute of Steel Construction (SAISC) Standard	South African Institute of Steel Construction (SAISC) Standard
[17]	Transnet Bridge Code 1983	Transnet Bridge Code 1983

5 DEFINITIONS

Asset: Refers to physical assets such as structures, production and service plant, power, water and waste treatment facilities, distribution networks, transport systems, buildings and other physical assets that a company owns in order to generate revenue.

Infrastructure: Refers to assets that are developed for public sector, utilities, property and transport systems.

Client: Any Transnet body requesting project services from TGC. Any Operating Division of Transnet including TGC RME Department. Any external commercial interest that interfaces with Transnet.

Engineering Manager: The Engineering resource responsible for management and coordination of engineering and design activities on a project.

Discipline Engineering Lead: The Engineer appointed to ensure the quality and compliance to regulations and performance within a discipline for any given project.

Project: Is a temporary endeavor undertaken to create a unique product, service or result (Project Management Institute).

Project Lifecycle Process: The Project Lifecycle Process (PLP) is a project development framework and methodology based on a stage-gate approach of delivering projects, which is used worldwide to mitigate risks of project overruns and failures.

Owner Requirement Specification: Verifiable requirements that define what the asset / infra-structure will do but not how the asset will do it. These requirement are viewed from the owner's perspective (in cases where the user is different from the owner).

User Requirements Specification: Verifiable requirements that define what the asset / infra-structure will do but not how the asset will do it. These requirement are viewed from the user's perspective (in cases where the user is different from the owner).

Deliverable: Is a product or service that a project produces for its customer, client, or project sponsor. It can be tangible or intangible.

Deliverable Status Matrix: This is a matrix that assigns different status on a deliverable based on its status on the workflow. Each status is also assigned certain percentage that represent the completeness of the deliverable from the beginning of the workflow.

Milestone: It is any threshold, or defined state during which a project transitions to another phase.

Technical Design Review: An event is a forum in which questions pertaining to the infra-structure or project to be designed can be answered, assumptions clarified and advice sought.

Verification: The evaluation of whether or not a product, service, or system complies with a high-level requirement, specification, or imposed condition, or regulation. It is often an internal process.

Gate Reviews: Are a critical element of the PLP Methodology in that they provide assurance at specific review points that the project under consideration is being

developed or implemented in accordance with the requirements of the methodology and its viability supports approval to proceed to the ensuing phase.

Validation: The assurance that a product, service, or system meets the needs of the customer and other identified stakeholders. It often involves acceptance testing with external customers.

6 ABBREVIATIONS

TGC:	Transnet Group Capital
SI units:	System International units
CAD:	Computer Aided Design
Eng. CoE:	Engineering Centre of Excellence
E&DS:	Engineering and Design Services
2D:	Two Dimensional
3D:	Three Dimensional
DGN:	MicroStation format graphics files and suffix
DWG:	AutoCAD format graphics files and suffix
NTS:	Not to scale

7 ACCOUNTABILITY, RESPONSIBILITY AND AUTHORITY

- 7.1 Administrators of the Drawing Standards are responsible for monitoring the implementation of the Standards and ensuring adherence to the Standards.
- 7.2 Any proposed changes to the Drawing Standards must be reviewed by the Engineering and Design Services Centre of Excellence Committee, as constituted from time to time by the General Manager, Engineering and Design Services.
- 7.3 Final approval vests with the General Manager E&DS.

8 PROCEDURE

- 8.1 This standard should be read together with Engineering Procedure ENG-P-0105: Engineering drawings.
- 8.2 Drawing Standard
- 8.2.1 Software - only the most current versions of AutoCad and Microstation are to be used.
- 8.2.2 Units - all drawings will conform to SI units (Systems International).
- 8.2.3 Language - all notes, comments and text shall be in the English language (UK Standard). All instructions on a drawing shall be in the imperative tense i.e.: "Pipe to be cut", "connection to be welded".
- 8.3 Templates
- 8.3.1 A template with all title blocks, text attributes, layer or level controls must be used when starting a new drawing. Templates are set up for each specific discipline i.e. Civil must use their specific templates, Architects their specific template etc. These discipline specific templates contain the discipline specific layer or level control.
- 8.3.2 Drawings/models must be done in model space. Viewports must then be created in the paper space at the required scale.
- 8.3.3 Notes must be done in paper space i.e. on the actual drawing sheet.
- 8.4 Drawing sizes
- 8.4.1 Long drawings, where necessary for wiring/circuit diagrams, cable run diagrams, track layouts etc. shall be prepared with widths equal to the widths of "A" series sheets, as required.

Table 1 reflects the different drawings sizes per "A" description.

Table 1: Drawing Sizes

Designation	Trimmed Sizes (mm)
A0	841 x 1189
A1	594 x 841
A2	420 x 594
A3	297 x 420
A4	210 x 297

8.5 Scales

The requirements of scale settings are as follows:

8.5.1 When using model space, the design must always be full size, i.e. active scale = 1:1.

8.5.2 The title block shall not be scaled.

8.5.3 The viewport will be created on the drawing sheet (in paper space) and scaled to the required scale, rather than trying to scale the drawing sheet to a scale.

8.5.4 In the case of non-dimensional drawings such as diagrammatic drawings, the viewport must be scaled to suit the drawing sheet.

8.5.5 Different vertical and horizontal scales may be chosen in order to exaggerate a profile or to clarify thin layers of a section.

Table 2 reflects the preferred scales.

Table 2: Preferred Scales

1:1	1:2	1:5
1:10	1:25	1:50
1:100	1:20	1:500
1:1000	1:200	1:5000
1:10000	1:2000	1:50000
1:100000	1:20000	

8.6 Text Attributes

8.6.1 All text shall be in Arial font, with a width factor of 0.7mm. Table 3 reflects the different text attributes per layer.

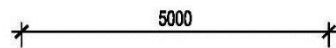
Table 3: Text Attributes

Layer	Colour	Line type	Line weight	Plot style	Use/description
T2	WHITE	CONT	0.25	MONO	General text 2.5mm
T3	YELLOW	CONT	0.35	MONO	General text 3.5mm
T5	RED	CONT	0.50	MONO	General text 5.0mm
T7	GREEN	CONT	0.70	MONO	General text 7.0mm

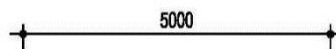
8.7 Dimensioning

- 8.7.1 All detailed dimensions shall be in millimetres.
- 8.7.2 All elevations shall be in metres up to 3 decimal places, and clearly indicated, i.e.:
EL 23.000 m.
- 8.7.3 Co-ordinates shall be stated in metres to 3 decimal places.
- 8.7.4 Dimensioning must be done whilst in paper space, in an active viewport.
- 8.7.5 This is done so that the dimension size will always be consistent in scale i.e. it will be relative in scale to the scale that the viewport is set at.
- 8.7.6 Dimensions are not to be exploded.

Examples:



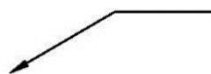
Dimension with oblique line



Dimension with dot



Dimension with arrow



Leader

8.8 Hatching

8.8.1 All hatching to be done in accordance with SANS 10143.

8.9 Layer Control

8.9.1 Standard layers with their own identities will be used in all drawings. The following categories apply:

- | | |
|---------------------------------------|-----------------------------|
| 1. Common layers | (without discipline prefix) |
| 2. Architectural layers | (A_) |
| 3. Civil layers | (C_) |
| 4. Structural layers | (S_) |
| 5. Electrical, light and power layers | (E_) |
| 6. Mechanical layers | (M_) |
| 7. Overhead Track Equipment layers | (O_) |
| 8. Signal layers | (N_) |
| 9. Telecommunications layers | (V_) |
| 10. Bridge layers | (B_) |
| 11. Water layers | (W_) |
| 12. Perway layers | (P_) |
| 13. G.I.S. / Land surveying layers | |

8.9.2 There are no specific layers set out in this document, save to say that text and all different objects and features must be named in its own layer.

8.9.3 Should further Layers or Levels be required the discipline specific prefix should be used.

Table 4: Common Layer Category

COMMON LAYERS						
LAYER NAME	DESCRIPTION	COLOUR	LINE TYPE	LINE WEIGHT	PLOT STYLE	PLOT
0	STANDARD LAYER	WHITE	CONT	0.25	MONO	YES
DIMS	DIMENSIONS (PER SCALE)	WHITE	CONT	0.25	MONO	YES
HATCH	GENERAL HATCHING	11	CONT	0.18	MONO	YES
HATCH-252	HATCHING IN COLOUR 252	252	CONT	DEFAULT	COLOUR	YES
HATCH-254	HATCHING IN COLOUR 254	254	CONT	DEFAULT	COLOUR	YES
T2	GENERAL TEXT 2.5mm	WHITE	CONT	0.25	MONO	YES
T3	GENERAL TEXT 3.5mm	YELLOW	CONT	0.35	MONO	YES
T5	GENERAL TEXT 5.0mm	RED	CONT	0.50	MONO	YES
T7	GENERAL TEXT 7.0mm	GREEN	CONT	0.70	MONO	YES
VPORT	VIEWPORTS IN LAYOUTS	254	CONT	DEFAULT	NORMAL	NO
FRAME	TITLE BLOCK FRAME	WHITE	CONT	0.25	MONO	YES
LOGOS	LOGO LAYER	WHITE	CONT	0.25	MONO	YES

Table 5: Architectural Layer Category

ARCHITECTURE						
LAYER NAME	DESCRIPTION	COLOUR	LINE TYPE	LINE WEIGHT	PLOT STYLE	PLOT
A_BR-N	NEW BRICKWALLS	RED	CONT	0.5	MONO	YES
A_BR-X	EXTG BRICKWALLS	YELLOW	CONT	0.35	MONO	YES
A_CONC-N	NEW CONCRETE	GREEN	CONT	0.7	MONO	YES
A_CONC-X	EXTG CONCRETE	YELLOW	CONT	0.35	MONO	YES
A_DOOR	DOORS	MAGENTA	CONT	0.18	MONO	YES
A_FIT	FITTINGS	CYAN	CONT	0.18	MONO	YES
A_FLFIN	FLOOR FINISH	8	CONT	0.13	MONO	YES
A_GRID	GRIDLINES	9	CENTRE	0.18	MONO	YES
A_HIDE	HIDDEN LINES	CYAN	HIDDEN	0.18	MONO	YES
A_PART-N	NEW PARTITIONS	BLUE	CONT	0.7	MONO	YES
A_PART-X	EXTG PARTITIONS	YELLOW	CONT	0.35	MONO	YES
A_REM	DEMOLISH/REMOVE	9	DASHED	0.18	MONO	YES
A_WIN	WINDOWS	MAGENTA	CONT	0.18	MONO	YES
G1	GENERAL 0.18	11	CONT	0.18	MONO	YES
G2	GENERAL 0.25	WHITE	CONT	0.25	MONO	YES
G3	GENERAL 0.35	YELLOW	CONT	0.35	MONO	YES
G5	GENERAL 0.5	RED	CONT	0.5	MONO	YES
G7	GENERAL 0.7	BLUE	CONT	0.7	MONO	YES
H	HATCH	11	CONT	0.18	MONO	YES

ARCHITECTURE						
LAYER NAME	DESCRIPTION	COLOUR	LINE TYPE	LINE WEIGHT	PLOT STYLE	PLOT
H-252	SOLID HATCH/INFILL	252	CONT	0.25	COLOUR	YES
H-254	SOLID HATCH/INFILL	254	CONT	0.25	COLOUR	YES
A_SITE	SITE AND LOCALITY PLANS	RED	CONT	0.18	MONO	YES
A_DIM	DIMENSIONS	RED	CONT	0.18	MONO	YES
A_BR-N2	CAVITIES	RED	CONT	0.18	MONO	YES
A_SEW	DRAINAGE PLAN	GREEN	CONT	0.40	MONO	YES
A_SW	STORMWATER PLAN &	RED	CONT	0.18	MONO	YES
A_BL	BUILDING LINE	8	HIDDEN	0.13	MONO	YES

Table 6: Civil Layer Category

CIVIL						
NAME	DESCRIPTION	COLOUR	LINE TYPE	LINE WEIGHT	PLOT STYLE	PLOT
C_BENCH	BENCH MARKS	WHITE	CONT	0.25	MONO	YES
C_BLD-N	PROPOSED BUILDINGS	GREEN	CONT	0.35	MONO	YES
C_BLD-X	EXISTING BUILDINGS	RED	CONT	0.18	MONO	YES
C_BRG-N	PROPOSED BRIDGES	GREEN	CONT	0.35	MONO	YES
C_BRG-X	EXISTING BRIDGES	RED	CONT	0.18	MONO	YES
C_CHAIN	CHAINAGE	MAGENTA	CONT	0.15	MONO	YES
C_CONC	CONCRETE SURFACING	GREEN	CONT	0.35	MONO	YES
C_CONC-B	CONCRETE BELOW GROUND	YELLOW	DASH	0.25	MONO	YES
C_CRANE	CRANE RAILS & EQUIPMENT	YELLOW	CONT	0.25	MONO	YES
C_CULV-N	PROPOSED CULVERTS	GREEN	CONT	0.35	MONO	YES
C_CULV-X	EXISTING CULVERTS	MAGENTA	CONT	0.15	MONO	YES
C_FNC-PA-X	EXISTING FENCING- PALISADE	MAGENTA	FENCE2	0.15	MONO	YES
C_FNC-PC-X	EXISTING FENCING- PRECAST	MAGENTA	DIVIDE	0.15	MONO	YES
C_FNC-ST-X	EXISTING FENCING-	CYAN	FENCE3	0.25	MONO	YES
C_FNC-PA-N	FENCING-PALISADE	YELLOW	FENCE2	0.25	MONO	YES
C_FNC-PC-N	FENCING-PRECAST CONCRETE	YELLOW	DIVIDE	0.25	MONO	YES
C_FNC-ST-N	FENCING-STEEL/WIRE	YELLOW	FENCE3	0.25	MONO	YES
C_FORM-N	PROPOSED FORMATION	4	CONT	0.70	MONO	YES
C_FORM-X	EXISTING FORMATION	41	CONT	0.25	MONO	YES
C_GRID	GRID LINES	251	CONT	0.01	MONO	YES
C_GR-LN	GROUND LINE	MAGENTA	DASH	0.15	MONO	YES
C_KERB-N	PROPOSED KERBING	GREEN	CONT	0.35	MONO	YES
C_KERB-X	EXISTING KERBING	MAGENTA	CONT	0.15	MONO	YES
C_PAV	PAVING	WHITE	CONT	0.25	MONO	YES
C_PREM	PREMIX SURFACING	YELLOW	CONT	0.25	MONO	YES
C_RD-M	PROPOSED ROAD MARKINGS	WHITE	CONT	0.25	MONO	YES

CIVIL						
NAME	DESCRIPTION	COLOUR	LINE TYPE	LINE WEIGHT	PLOT STYLE	PLOT
C_RD-N	EXISTING ROAD MARKINGS	251	CONT	0.01	MONO	YES
C_REM	REMOVED/DEMOLISHED CIVIL	251	HIDDEN	0.01	MONO	YES
C_RES	RESERVOIRS	YELLOW	CONT	0.25	MONO	YES
C_RET	RETAINING STRUCTURES	GREEN	CONT	0.35	MONO	YES
C_SERV	SERVITUDES	93	DASHED2	0.25	MONO	YES
C_SEW-N	PROPOSED SEWER	40	DASH/DOT	0.50	MONO	YES
C_SEW-X	EXISTING SEWER	41	DASH/DOT	0.25	MONO	YES
C_SHORE	SHORE LINE, QUAY WALLS	CYAN	CONT	0.25	MONO	YES
C_SIGN-N	PROPOSED SIGNAGE	WHITE	CONT	0.25	MONO	YES
C_SIGN-X	EXISTING SIGNAGE	251	CONT	0.01	MONO	YES
C_SW-N	PROPOSED STORMWATER	150	DIVIDE	0.50	MONO	YES
C_SW-TXT-	PROPOSED STORMWATER	2	CONT	0.25	MONO	YES
C_SW-X	EXISTING STORMWATER	151	DIVIDE	0.25	MONO	YES
C_SW-TXT-	EXISTING STORMWATER TEXT	MAGENTA	CONT	0.15	MONO	YES
C_STEEL	STEEL STRUCTURES	YELLOW	CONT	0.25	MONO	YES
C_SLEV	SLEEVE PIPES	WHITE	DASH	0.25	MONO	YES
C_TR-CUR	CURVE DATA	WHITE	CONT	0.25	MONO	YES
C_TR-N	PROPOSED RAIL TRACKS	CYAN	CONT	0.50	MONO	YES
C_TR-X	EXISTING RAIL TRACKS	251	CONT	0.01	MONO	YES
C_TR-T	TEMPORARY RAIL TRACKS	YELLOW	CONT	0.25	MONO	YES
C_TUN-N	PROPOSED TUNNELS	102	DASH	0.70	MONO	YES
C_TUN-X	EXISTING TUNNELS	101	DASH	0.25	MONO	YES
C_WR-N	PROPOSED WATER	80	BORDER	0.50	MONO	YES
C_WR-X	EXISTING WATER	81	BORDER	0.25	MONO	YES
C_BB	BANK BOTTOM EXISTING	35	HIDDEN	0.25	MONO	YES
C_BT	BANK TOP EXISTING	35	DASHED	0.25	MONO	YES
C_BA	BANK BATTER EXISTING	35	CONT	0.25	MONO	YES
C_BB-N	BANK BOTTOM NEW	41	HIDDEN	0.25	MONO	YES
C_BT-N	BANK TOP NEW	41	DASHED	0.25	MONO	YES
C_BA-N	BANK BATTER NEW	41	CONT	0.25	MONO	YES
C_SHORE	SHORE LINE	CYAN	CONT	0.25	MONO	YES
C_QUAY	QUAY WALL	GREEN	CONT	0.25	MONO	YES
C_FIRE-E	FIRE EQUIPMENT	RED	CONT	0.25	MONO	YES
C_FIRE-P	FIRE SUPPLY PIPING	RED	DASHDOT	0.25	MONO	YES

Table 7: Structures Layer Category

STRUCTURES						
NAME	DESCRIPTION	COLOUR	LINE TYPE	LINE WEIGHT	PLOT STYLE	PLOT
S_STEEL1	DETAIL1:5/1:10	GREEN	CONT	0.7	MONO	YES
S_STEEL2	PLAN/SECT/ELEV	WHITE	CONT	0.5	MONO	YES
S_STEEL3	DET/PLAN/SECT	YELLOW	DASHED	0.25	MONO	YES
S_STEEL4	DETAIL1:2	CYAN	CONT	1.2	MONO	YES
S_STEEL5	PLAN/SECT/ELEV	RED	CONT	0.18	MONO	YES
S_STEEL6	PLAN/SECT/ELEV	RED	DASHED	0.18	MONO	YES
S_STEEL7	PLAN/SECT/ELEV	RED	CENTRE	0.18	MONO	YES
S_STEEL8	DETAILS	YELLOW	DASHED	0.25	MONO	YES
S_STEEL9	EXISTING	RED	DASH/DOT	0.18	MONO	YES
S_STEEL10	EXISTING	YELLOW	DASH/DOT	0.25	MONO	YES
S_STEEL11	PLAN/SECT/ELEV	YELLOW	CONT	0.25	MONO	YES
S_STEEL12	PLAN/SECT/ELEV	YELLOW	CENTRE	0.18	MONO	YES
S_STEEL13	DETAILS	WHITE	DASHED	0.05	MONO	YES
S_CONC1	FOUND/PLAN	GREEN	CONT	0.7	MONO	YES
S_CONC2	REBAR DETAIL	GREEN	CONT	0.7	MONO	YES
S_CONC3	REBAR FOUND	YELLOW	CONT	0.25	MONO	YES
S_CONC4	REBAR FOUND	YELLOW	DASHED	0.25	MONO	YES
S_CONC5	REBAR FOUND	WHITE	CONT	0.5	MONO	YES
S_CONC6	REBAR FOUND	WHITE	DASHED	0.5	MONO	YES
S_CONC7	REBAR FOUND	RED	CENTRE	0.18	MONO	YES
S_CONC8	REBAR FOUND	BLUE	CONT	1.0	MONO	YES
S_WALLS	WALLS	RED	CONT	0.18	MONO	YES
S_HATCH	PROPOSED HATCH	8	CONT	0.01	MONO	YES
S_HATCH EX	EXISTING HATCH	15	Cont	0.065	MONO	YES
S_SLABLINE	SLAB LINE	MAGENTA	Cont	0.18	MOMO	YES
S_REBAR	REBAR	CYAN	CONT	0.50	MONO	YES
S_COLUMN	COLUMN PLAN	GREEN	CONT	0.35	MONO	YES
S_CONC	CONCRETE SECTION	CYAN	CONT	0.5	MONO	YES
S_CONC	CONCRETE SECTION HATCH	8	CONT	0.01	MONO	YES
S_REBAR	REBAR SECTION	RED	CONT	0.18	MONO	YES
S_DIMENSIO	DIMENSION	RED	CONT	0.18	MONO	YES
S_BEAM_DS	BEAM DS	BLUE	CONT	0.7	MONO	YES
S_BEAM_US	BEAM US	BLUE	CONT	0.7	MONO	YES

Table 8: Electrical, Lighting and Power Layer Category

ELECTRICAL, LIGHTING AND POWER						
NAME	DESCRIPTION	COLOUR	LINE TYPE	LINE WEIGHT	PLOT STYLE	PLOT
E_CABLE	ELECTRICAL CABLES BELOW SURFACE	222	ELEC-1	0.35	MONO	YES
E_CDUCT	DOWN CONDUCTORS	BLUE	CONT	0.70	MONO	YES
E_COND	CONDUITS	WHITE	DASH	0.25	MONO	YES
E_DBOARD	DISTRIBUTION BOARDS	YELLOW	CONT	0.35	MONO	YES
E_EARTH	EARTH SPIKE	RED	CONT	0.50	MONO	YES
E_EX	EXISTING ELECTRICAL	9	CONT	0.18	SCREEN60	YES
E_LUM	LUMINAIRES	RED	CONT	0.50	MONO	YES
E_PSKIRT	POWER SKIRTING	245	DASH	2.00	MONO	YES
E_REM	REMOVED/OBSOLETE ELEC ITEMS	CYAN	DASH	0.25	MONO	YES
E_SW-SOC	LIGHT SWITCHES, SOCKET OUTLETS	WHITE	CONT	0.25	MONO	YES
E_WIRE	ELECTRICAL WIRING	YELLOW	CONT	0.35	MONO	YES
E_ELP	ELECTRICAL LIGHT POLE	RED	CONT	0.25	MONO	YES
E_HLM	HIGH LIGHT MAST	RED	CONT	0.25	MONO	YES

Table 9: Mechanical Layer Category

MECHANICAL						
NAME	DESCRIPTION	COLOUR	LINE TYPE	LINE WEIGHT	PLOT STYLE	PLOT
M_AIRCON	AIRCONDITIONERS	MAGENTA	CONT	0.25	MONO	YES
M_DUCT	AIRCON DUCTING	WHITE	CONT	0.25	MONO	YES
M_FANS	EXTRACTOR & CEILING FANS	CYAN	CONT	0.25	MONO	YES

Table 10: Overhead Track Equipment Layer Category

OVERHEAD TRACK EQUIPMENT						
NAME	DESCRIPTION	COLOUR	LINE TYPE	LINE WEIGHT	PLOT STYLE	PLOT
O_STRC-X	EXISTING STRUCTURES	WHITE	CONT	0.25	MONO	YES
O_STRC-N	PROP. STRUCTURES	RED	CONT	0.50	MONO	YES
O_MOFF-X	EXISTING MAKE OFF WIRES	WHITE	CONT	0.70	MONO	YES
O_MOFF-N	PROP MAKE OFF WIRES	RED	CONT	0.50	MONO	YES
O-EARTH-X	EXISTING EARTH WIRE	WHITE	CONT	0.18	MONO	YES
O-EARTH-N	PROP EARTH WIRE	BLUE	DASH	0.30	MONO	YES
O-TLINE-X	EXISTING TRANS -MISSION LINE	WHITE	CONT	0.50	MONO	YES
O-TLINE-N	PROP TRANS -MISSION LINE	GREEN	CONT	0.35	MONO	YES
O_NEG RET-	EXISTING NEG. RETURN	WHITE	C-DOT	0.35	MONO	YES
O_NEG RET-	PROP NEG. RETURN	BLUE	C-DOT	0.50	MONO	YES

Table 11: Signals Layer Category

SIGNALS (Refer to Specification for Preparation of Signal Drawings – BBB4354)
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Table 12: Telecommunications Layer Category

TELECOMMUNICATIONS						
NAME	DESCRIPTION	COLOUR	LINE TYPE	LINE WEIGHT	PLOT STYLE	PLOT
V_CBL-N	PROPOSED COMMS CABLES	202	PHANTOM	0.70	MONO	YES
V_CBL-X	EXISTING COMMS CABLES	201	PHANTOM	0.25	MONO	YES
V_NAV	NAVIGATION EQUIPMENT	214	CONT	0.25	MONO	YES
V_OPTIC-N	PROPOSED FIBER OPTIC CABLE	192	PHANT2	0.70	MONO	YES
V_OPTIC-X	EXISTING FIBRE OPTIC CABLE	191	PHANT2	0.25	MONO	YES
V_PNT-N	PROPOSED VOICE/DATA POINT	YELLOW	CONT	0.35	MONO	YES
V_PNT-X	EXISTING VOICE/DATA POINT	9	CONT	0.18	MONO	YES
V_REM	REMOVED/OBSOLETE COMMS ITEMS	CYAN	DASH	0.25	MONO	YES

Table 13: Bridge and Marine Layer Category

BRIDGE/MARINE						
NAME	DESCRIPTION	COLOUR	LINE TYPE	LINE WEIGHT	PLOT STYLE	PLOT
B_ABUT	ABUTMENT	GREEN	CONT	0.5	MONO	YES
B_BOL	BOLLARD	GREEN	CONT	0.5	MONO	YES
B_BORE	BOREHOLES	YELLOW	CONT	0.25	MONO	YES
B_CENT	CENTRE LINE	RED	CENTRE	0.18	MONO	YES
B_CONC	CONCRETE	GREEN	CONT	0.5	MONO	YES
B_CONTH	CONCRETE THIN	RED	CONT	0.18	MONO	YES
B_CONTHK	CONCRETE THIC	GREEN	CONT	0.5	MONO	YES
B_CONMED	CONCRETE MED	YELLOW	CONT	0.25	MONO	YES
B_CONHIDTH	CONC HIDE THIN	RED	DASHED	0.18	MONO	YES
B_CONHIDTH	CONC HIDE THIC	YELLOW	DASHED	0.25	MONO	YES
B_CONCHIDM	CONC HIDE MED	WHITE	DASHED	0.35	MONO	YES
B_CONCHAT	CONC HATCH	RED	CONT	0.18	MONO	YES
B_CONCSHAD	CONC SHADE	11	GREYSCAL		GREY	YES
B_CONCSHAD	CONC SHADE	12	GREYSCAL		GREY	YES
B_CONCSHAD	CONC SHADE	13	GREYSCAL		GREY	YES
B_CONCPIPE	CONC PIPES	WHITE	CONT	0.35	MONO	YES
B_CONTT	CONTOUR INTER	RED	CONT	0.18	MONO	YES
B_CONTMN	CONTOUR MAIN	YELLOW	CONT	0.25	MONO	YES
B_CADAS	CADASTRALS	RED	CONT	0.18	MONO	YES

BRIDGE/MARINE						
NAME	DESCRIPTION	COLOUR	LINE TYPE	LINE WEIGHT	PLOT STYLE	PLOT
B_CAISS	CAISSONS	WHITE	CONT	0.35	MONO	YES
B_COORD	COORDINATES	YELLOW	CONT	0.25	MONO	YES
B_DECK	DECK SLAB	WHITE	CONT	0.35	MONO	YES
B_EXIST	EXISTING	RED	CONT	0.18	MONO	YES
B-FEND	FENDERS	WHITE	CONT	0.35	MONO	YES
B_FIREHYD	FIRE HYDRANT	WHITE	CONT	0.35	MONO	YES
B_GRID	GRID LINES	RED	CENTRE	0.18	MONO	YES
B_HAND	HANDRAILING	WHITE	CONT	0.35	MONO	YES
B_KEYPL	KEY PLAN	YELLOW	CONT	0.25	MONO	YES
B_LOGRID	LO GRIDLINES	RED	CONT	0.18	MONO	YES
B_MANH	MANHOLES	WHITE	CONT	0.35	MONO	YES
B_MASCAP	MASS CAPPING	WHITE	CONT	0.35	MONO	YES
B_PAVE	PAVING	WHITE	CONT	0.35	MONO	YES
B_PARA	PARAPETS	WHITE	CONT	0.35	MONO	YES
B_PCBEAM	PC BEAMS	WHITE	CONT	0.35	MONO	YES
B_PIER	PIERS	WHITE	CONT	0.35	MONO	YES
B_REINFTHN	REBAR THIN	RED	CONT	0.18	MONO	YES
B_REINFTHC	REBAR THICK	GREEN	CONT	0.5	MONO	YES
B_REINFMED	REBAR MEDIUM	WHITE	CONT	0.35	MONO	YES
B_REINFHIDT	REBAR HIDE THN	RED	DASHED	0.18	MONO	YES
B_REINFHIDM	REBAR HIDE MED	YELLOW	DASHED	0.25	MONO	YES
B_REINFDIM	REBAR DIMENS	RED	CONT	0.18	MONO	YES
B_STEEL	STEEL WORKS	WHITE	CONT	0.35	MONO	YES
B_SLTDRAIN	SLOT DRAIN	WHITE	CONT	0.35	MONO	YES
B_WGS	WGS84 GRID	RED	CONT	0.18	MONO	YES
B_WWALL	WING WALLS	WHITE	CONT	0.35	MONO	YES
B_RETWALL	RETAIN WALL	WHITE	CONT	0.35	MONO	YES
B_GEN1	GENERAL 0.18	RED	CONT	0.18	MONO	YES
B_GEN2	GENERAL 0.25	YELLOW	CONT	0.25	MONO	YES
B_GEN3	GENERAL 0.35	WHITE	CONT	0.35	MONO	YES
B_GEN4	GENERAL 0.5	GREEN	CONT	0.5	MONO	YES
B_GEN5	GENERAL 0.7	CYAN	CONT	0.7	MONO	YES

Table 14: Water Layer Category

WATER (CIVIL)						
NAME	DESCRIPTION	COLOUR	LINE TYPE	LINE WEIGHT	PLOT STYLE	PLOT
W_PROP1	OIL SEP/BLDGS	GREEN	CONT	0.5	MONO	YES
W_PROP2	STRUCTURES	GREEN	DASHED	0.5	MONO	YES
W_PROP3	PIPES	WHITE	CENTRE	0.5	MONO	YES
W_REBAR1	LAYOUT	WHITE	CONT	0.7	MONO	YES
W_REBAR2	REINFORCING	BLUE	CONT	0.7	MONO	YES
W_REBAR3	REINFORCING	BLUE	DASHED	0.7	MONO	YES
W_REBAR4	LAYOUT	WHITE	DASHED	0.7	MONO	YES

Table 15: Perway Layer Category

PERWAY LAYERS						
NAME	DESCRIPTION	COLOUR	LINE TYPE	LINE WEIGHT	PLOT STYLE	PLOT
P_CAT-G	CATTLE GRID	GREEN	CONT	0.25	MONO	YES
P_GEOT	GEOTECHNICAL DATA	WHITE	CONT	0.25	MONO	YES
P_GR-LAY	LAYERWORKS	35	CONT	0.25	MONO	YES
P_TACHY-T	TACHY TEXT	WHITE	CONT	0.25	MONO	YES
P_TACHY-L	TACHY LEVEL	WHITE	CONT	0.25	MONO	YES
P_TACHY-L	TACHY POINTS	WHITE	CONT	0.25	MONO	YES
P_RD-G	ROAD GRAVEL	41	DASHED	0.25	MONO	YES
P_RD-M	ROAD MAIN	WHITE	CONT	0.25	MONO	YES
P_RD-S	ROAD SIGNS	WHITE	CONT	0.25	MONO	YES
P_TR-DES	TRACK DESIGN	RED	CONT	0.25	MONO	YES
P_TR-CO	TRACK CO-ORDS	WHITE	CONT	0.25	MONO	YES
P_TR-F	TRACK FUTURE	ORANGE	CONT	0.25	MONO	YES
P_TR-C	TRACK CENTRE LINE	WHITE	CENTER	0.25	MONO	YES
P_TR-TO	TRACK TURNOUTS	WHITE	CONT	0.25	MONO	YES
P_TR-UP	TRACK UPLIFT	252	HIDDEN	0.25	MONO	YES
P_TR-S	TRACK SLEEPERS	WHITE	CONT	0.25	MONO	YES
P_TR-R	TRACK RAILS	WHITE	CONT	0.25	MONO	YES
P_TR-EQ	TRACK EQUIPMENT	WHITE	CONT	0.25	MONO	YES
P_TR-SUR	TRACK SURVEYED	WHITE	CONT	0.25	MONO	YES
P_TEL-T	CABLE ROUTE TELCOM	201	PHANTOM	0.25	MONO	YES
P_TEL-N	CABLE ROUTE NEOTEL	201	DIVIDE	0.25	MONO	YES
P_TEL-TR	CABLE ROUTE TRANSNET	201	DASHDOT	0.25	MONO	YES
P_SUBS-D	SUBSOIL DRAIN, GEOFABRIC,	111	CONT	0.25	MONO	YES

8.10 Section Lines

8.10.1 Section lines are to be as below. They are to be inserted as a block from the symbols library.



8.11 North Point

8.11.1 The North Point below is to be used. It is to be inserted as a block from the symbols library.



8.14 Revised Drawings

8.14.1 All amendments to drawings must be clearly referenced and indicated on the original drawing together with the draughtperson's name and date.

8.14.2 The amendment block has provision for a checker's signature, an approval signature and a date.

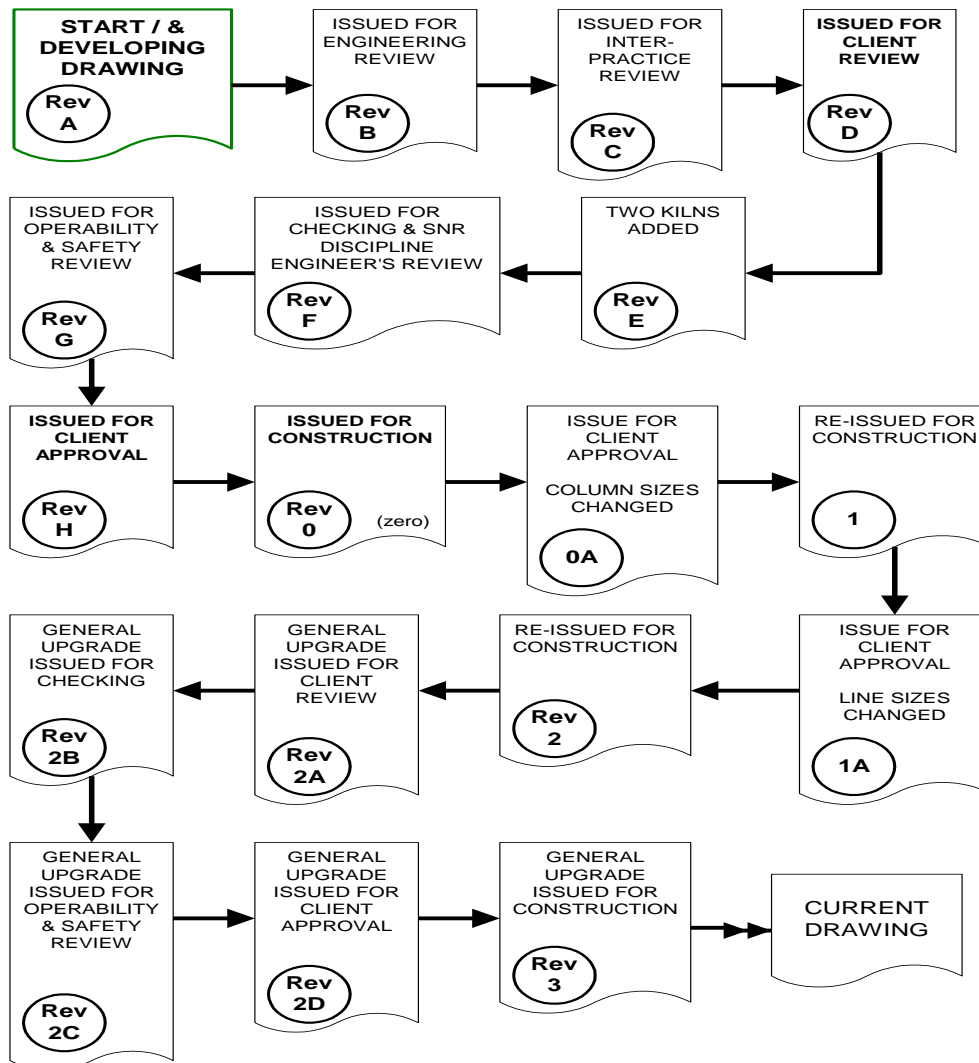


Fig 3: Drawing Numbering Sequence

Drawings and amendments to drawings shall be indexed as follows and as reflected in Fig. 3 above:

8.17 Key Plan usage

8.17.1 Key plans for different areas in the project are provided and should be referenced in. This approach allows any changes to the key plan to appear immediately on all drawings plotted from that point on.

Note: The drawing subject area is to be hatched on the current drawing.

8.18 Symbols and abbreviations

8.18.1 For Standard symbols Refer to:

- SANS 10143: Building drawing practice
- BBB0041: Preparation of drawings for Transnet Freight Rail
- SANS 1044: Welding Part II: Symbols
- BS 3939: Graphical symbols for electrical power, telecommunications and electronic diagrams
- Z148: Symbols for Signalling

8.18.2 If it is necessary to use symbols which are not standard national symbols, or located on the Transnet template, a new symbol may be created with its description tabled on the applicable drawing.

8.19 Identification of Views

All views shall be identified in the following format:

8.19.1 The two main forms of projection shall be used namely third and first angle projection.

8.19.2 Indicate scale only if scale varies from title block scale.

8.19.3 Reference to a drawing where a section or a detail was taken is required if the view is shown on another drawing.

8.19.4 Letters shall be used for details. Numbers shall be used for elevations and sections. Do not use letters "I" and "O"

Table 16: Identification of Views

Type	Format	Example
Details	Alpha	DETAIL A
Section	Numeric	SECTION 1
View	Alpha	VIEW X
Items	Alpha	ITEM A – TROLLEY FRAME

9 RECORDS

- 9.1 All documents generated under this procedure, shall be retained in terms of the Document Management Procedure for Records Retention Archiving of Hard Copy Documents – DOC-P-0013.

10 REVIEW CYCLE

This document to be reviewed within:

6 months

1 year

2 years

3 years

X

11 ANNEXURES

Not Applicable.

General Spec High Security Fencing

Scope of work

The *works* for the fencing shall include the following:

- a) Design, supply, fabrication, and installation of High Security Fencing (hereafter referred to as HSF) with unobstructed views (SUGGESTED MANUFACTURER: COCHRANE STEEL)
- b) Design, supply, fabrication, and installation of security gates (SUGGESTED MANUFACTURER: COCHRANE STEEL)

In addition, any other work arising out of or incidental to the above or required by the Contractor for the proper completion of the works in accordance with the true meaning and intent of the contract documents.

Supporting Specifications

This part shall be read in conjunction with the following SANS and Transnet standard specifications.

SANS	
SANS 1200 HC	Corrosion protection to structural steelwork
SANS 1200 H	Structural steel work
SANS 1200 GA	Concrete (small works)
SANS 1200 AH	General (Structural)
ISO 1461:1999	Hot dipped galvanizing
SABS 0100-2: 1992	The Structural use of concrete – Part 2: Materials and execution of work.

The designs of the fence, gates and foundations needs to comply with all applicable SANS codes and standards.

References Codes and Standards

- A. CSIR, SABS, North Atlantic Treaty Organization (NATO) and International Aviation Authority Organization (ICAO).

CSIR Test	050036, 050056, T09998
SABS Test	2536/YM139
Nato Stock	5660-99-458-7414
ICAO	ICAO Security Manual

NB. All codes to be adhere by manufacturer.

Method Statement

A detailed method statement is required; setting out what quality control procedures will be implemented with respect to:

- Procedures, methods, and equipment for the manufacturing, galvanizing and Marine Fusion bond coating of the HSF and gates.
- Procedures, methods, and equipment to be used for the construction of the concrete bases, plinths, etc.
- Procedures, methods, and equipment to be used for the installation of the HSF and gates.

High Security Fencing

The fence must conform to the following specifications.

- The minimum life span installed shall be a minimum of 10 years prior to any maintenance being required.
- The fence must be HSF with unobstructed views (Clearvu SUGGESTED MANUFACTURER: COCHRANE STEEL)
- All steel materials shall be of good commercial quality, galvanized steel – POLY 6000 BLACK
- All pipes shall be galvanized, one piece without joints. Furnish moisture proof caps for all posts.
- Zinc coating shall be smooth and essentially free from lumps, globs, or points.
- Miscellaneous material shall be galvanized.
- All HSF posts shall be set in 400 x 400 x 600mm deep footing with a minimum 25 MPa (28-day compressive strength) concrete, 19 mm aggregate.

Requirements:

- Certificate of compliance for materials and coatings
- Shop drawing for HSF panels and gates.
- Quality control program shall be submitted to the Project Manager for review prior to commencement of any work.
- Product Performance Guarantee Certificate (min 10 years)

Description of Fence System

a) General:

- All steel materials shall be of good commercial quality, galvanized steel.
- All pipes shall be galvanized, one piece without joints. Furnish moisture proof caps for all posts.
- Zinc coating shall be smooth and essentially free from lumps, globs, or points.
- Miscellaneous material shall be galvanized.

b) Post:

- Post shall be 3.8 m long Taper Locking Post.
- Post width shall be 85 mm - tapering to 45 mm with a depth of 85 mm.
- Post shall include 'Locking Recess Mechanism' to secure panel edge.
- Post shall be sealed with a UV stabilized polymer cap and fitted with a 12mm base pin.
- Post finish shall be Hot Dipped Galvanized then Anti corrosion Marine fusion Bond Coated. PATENTS AND DESIGN REGISTRATIONS APPLY.

c) Panel:

- Panel shall be of 3.39 m width and 2.4 m in height.
- 3mm Ø wire with aperture size (centres) shall be 76.2 mm x 12.7 mm.
- The panel shall be reinforced with 4 x 50 mm deep 'v' formation horizontal recessed bands (rigidity).
- Panel shall have 2 x 75mm 70° flanges along the sides.
- Internal fixtures- all fixtures shall be on the inside of fence line.
- Panel shall have 1 x 30° flange along top and 1 x 30° flange along toe (integrated rigid angle, anti-scale locating devices).
- Panel post shall have a flush panel post finish with no climbing aid.
- Panel shall be affixed to post over 48-line wires using 8 x double bolt comb clamps and 8 x Single bolt comb clamps using 24 x Anti vandal bolts.
- Panel and fixtures shall be galvanized then Marine fusion Bond Coated.
- The panel shall be reinforced with high tensile toughened steel bar cage to be positioned at 152.4mm intervals. To prevent cutting using common hand tools (minimum test block penetration). PATENTS AND DESIGN REGISTRATIONS APPLY

d) Clamps:

- Clamps shall be 8 x single bolt clamps and 8 x double bolt clamps.

- Clamps shall be galvanized then Marine fusion Bond Coated.

e) Spikes:

- A 100 mm high toughened steel Shark Tooth spike shall be affixed to panel edge, internally at 150 mm intervals using Anti-vandal bolts.
- Spike finish shall be Hot Dipped Galvanized then Marine fusion Bond Coated.

f) Additions:

- Electric Smart Coil added to the top of fence (to Cochrane specification) composed of high ripper blade smart concertina coil (galvanized to suit marine condition)
- Bitumen coated mesh under dig of 300mm shall be attached to the toe of the panel and inserted in the concrete plinth of 200mm x 400mm.
- Fence Corner Configuration. The fence configuration should not have any sharp corners and all angles at changes of direction should be a minimum of 130 degrees.

g) Gates

- This Contract calls for the design, supply, fabrication and installation clear opening, double leaf swing HSF gates.
- The gates must be manufactured of steel and match the HSF panel specification as listed above. They must be to the full fence height.
- Double hinges must be supplied. Allowance to be made for a lock plate and anchor rods for securing in the closed position.
- The gates must be galvanized and corrosion protected using the same method as for the fence.
- All gates dimensions to be verified on site prior to any manufacturing taking place.
- All connections and joints shall be welded to form rigid frames or assembled with corner fittings.
- Hinges shall not twist or turn under the action of the gate, shall be so arranged that a closed gate cannot be lifted off the hinges to obtain entry.

Execution

General

Install all fencing and gates in accordance with the drawings, specifications, instructions, and as specified lines and grades indicated. Line posts shall be spaced at intervals of 3.390 m. Terminal posts shall be set at abrupt changes in vertical and horizontal alignment.

Posts

Post holes shall be cleared of loose material. Waste material shall be spread where directed by Engineer. The ground surface irregularities along the fence line shall be eliminated to the extent necessary

Posts shall be set plumb and follow the indicated alignment. All posts shall be set to the depth indicated on the design documents. Concrete shall be thoroughly consolidated around each post, free of voids, and finished with a domed shaped surface, with the base of dome at grade elevation. Concrete shall be allowed to cure prior to installing any additional components to the posts.

Concrete footings shall be carried down to at least the depth indicated on the design documents and shall not be smaller than the dimensions shown. Where a rock layer is encountered within the required depth to which the post is to be erected, a hole of a diameter slightly larger than the largest dimension of the post may be drilled into the rock and the post grouted in. Then the regular concrete footing shall be placed between the top of the rock and the top of the footing elevation as shown on the design documents. Posts shall be approximately centred in their footings. All concrete shall be placed promptly and consolidated by tamping or other approved methods.

Where the ground is firm enough to permit excavation of the post hole to neat lines, the concrete may be placed without forms by completely filling the hole. Curing may be achieved by covering the concrete with not less than 100mm of loose moist material immediately after placing concrete, or by using a curing compound. All excess material from footings, including loose material used for curing, shall be disposed of as directed by the Engineer.

Where the ground cannot be satisfactorily excavated to neat lines, forms shall be used to place concrete for footings. Under these conditions the earth and forms coming in contact with the concrete shall be moistened and all ponded water shall be removed from the hole prior to placing concrete. When forms are removed, the footing shall be backfilled with moistened material, and thoroughly tamped. The top of the concrete shall then be covered with not less than 100 mm (4 in) of loose moistened material or use curing compound if the 7-days cure is not completed. All excess material from footings, including loose material used for curing, shall be disposed of as directed.

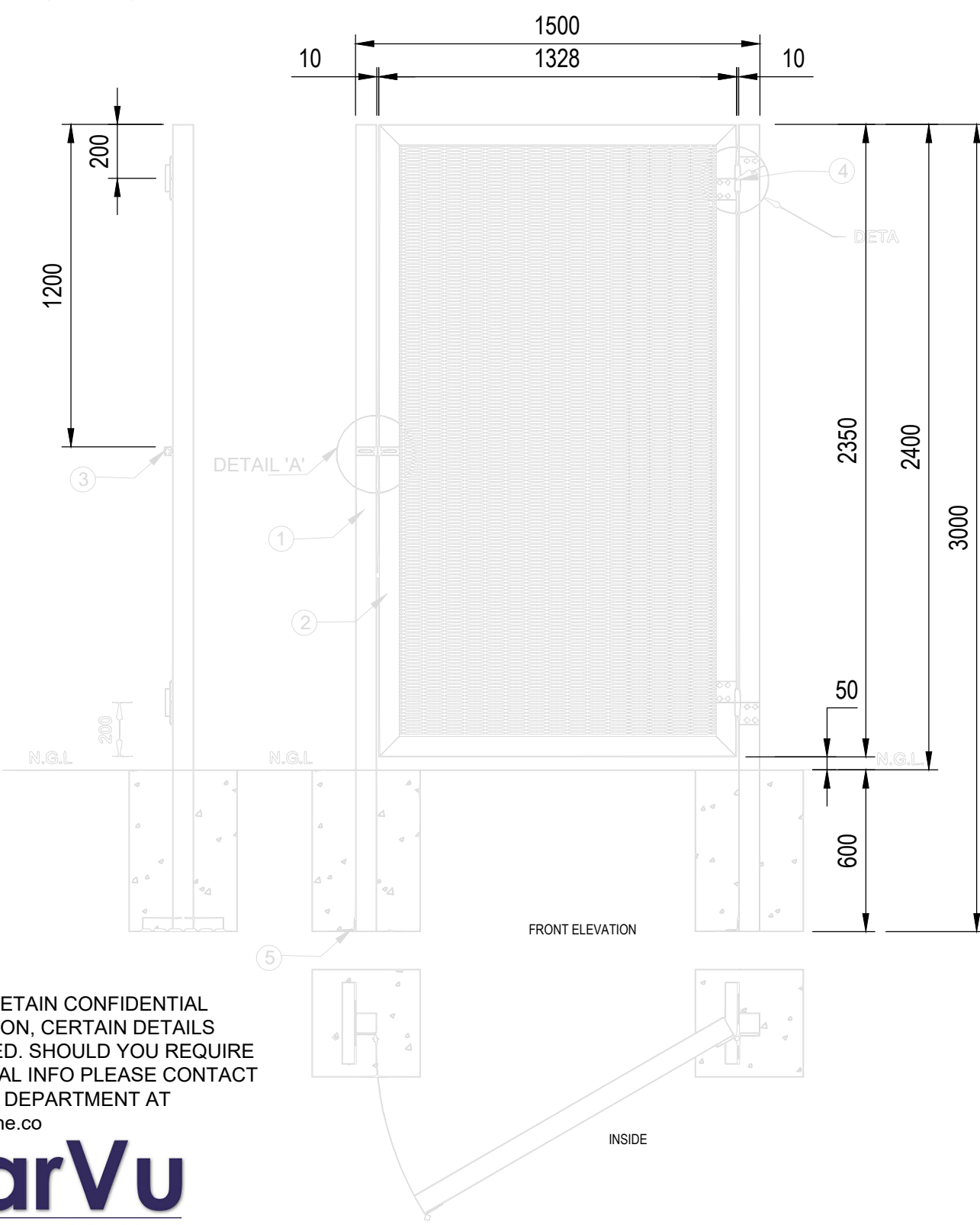
List of drawings

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.

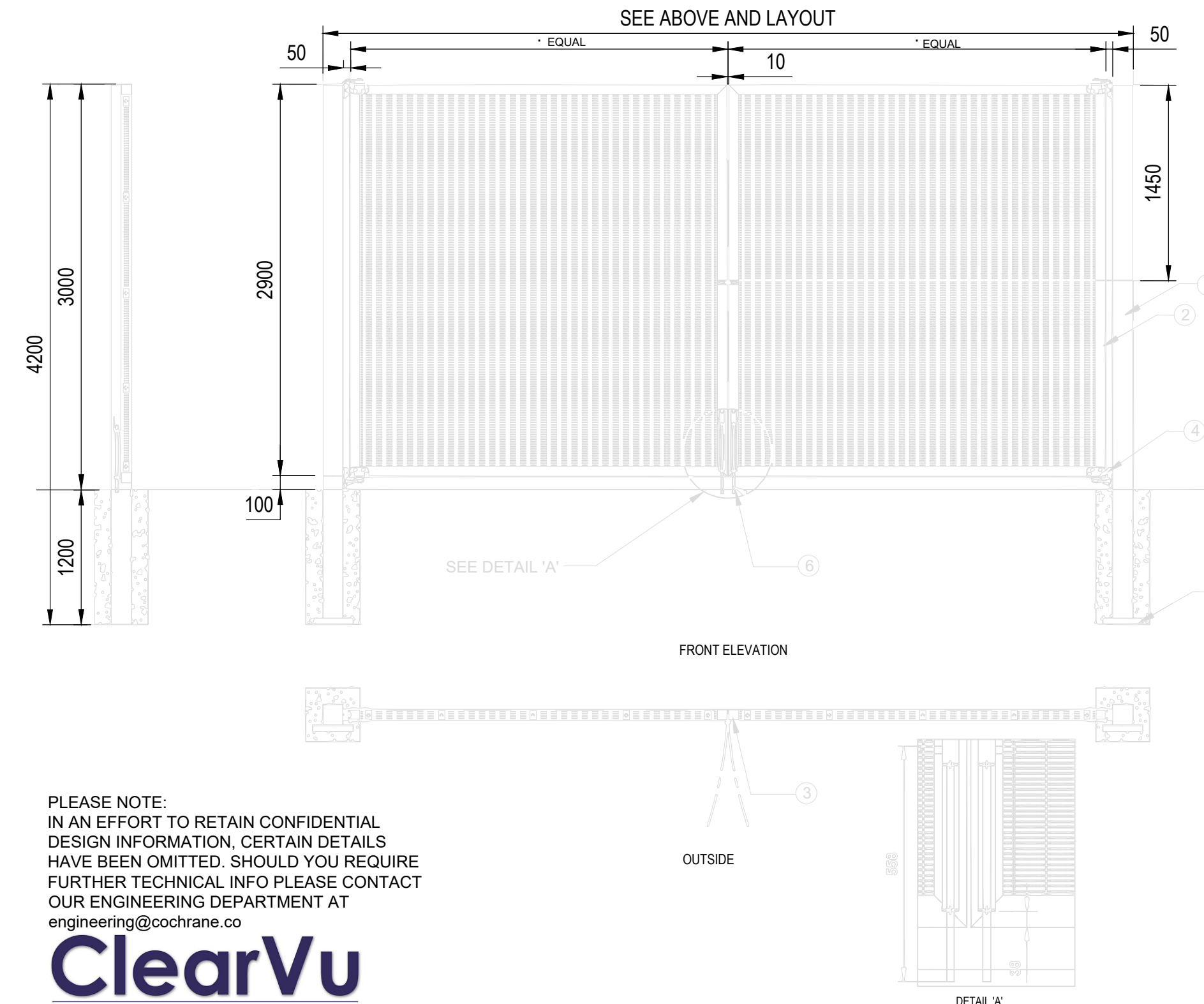
Note: Some drawings may contain both Works Information and Site Information.

DRAWING NUMBER	REVISION	TITLE



DETAIL DRAWING OF PEDESTRIAN GATE	
1	POST
2	GATE FRAME
3	LOCKING DEVICE
4	HINGE
5	BASE PIN

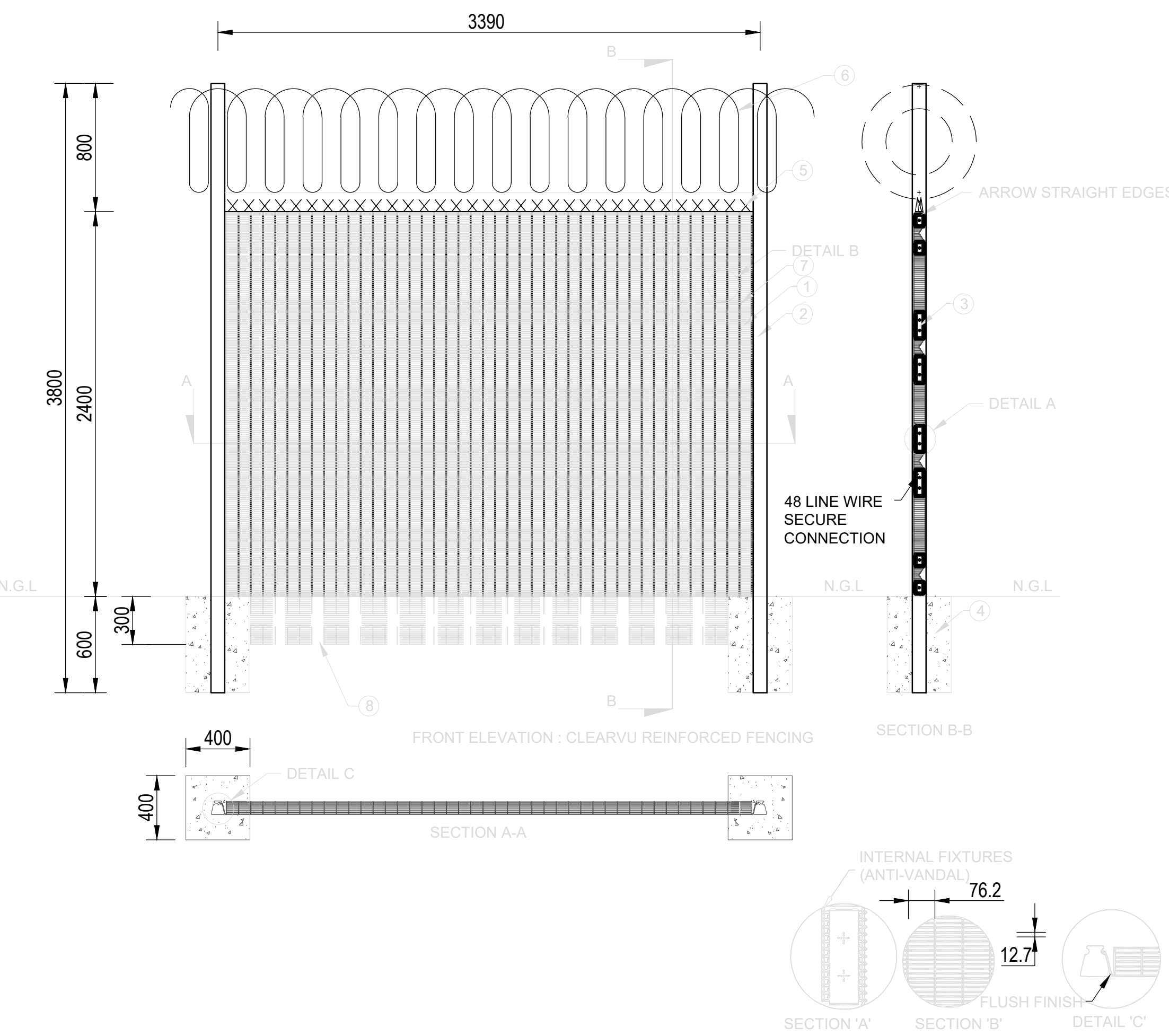
TYPICAL SECTION : PEDESTRIAN GATE
SCALE 1:5



DETAIL DRAWING OF DOUBLE LEAF GATE	
1	POST
2	GATE FRAME
3	LOCKING DEVICE
4	HINGE
5	BASE PIN
6	DROP PIN

TYPICAL SECTION : SWING GATES GATE
SCALE 1:5

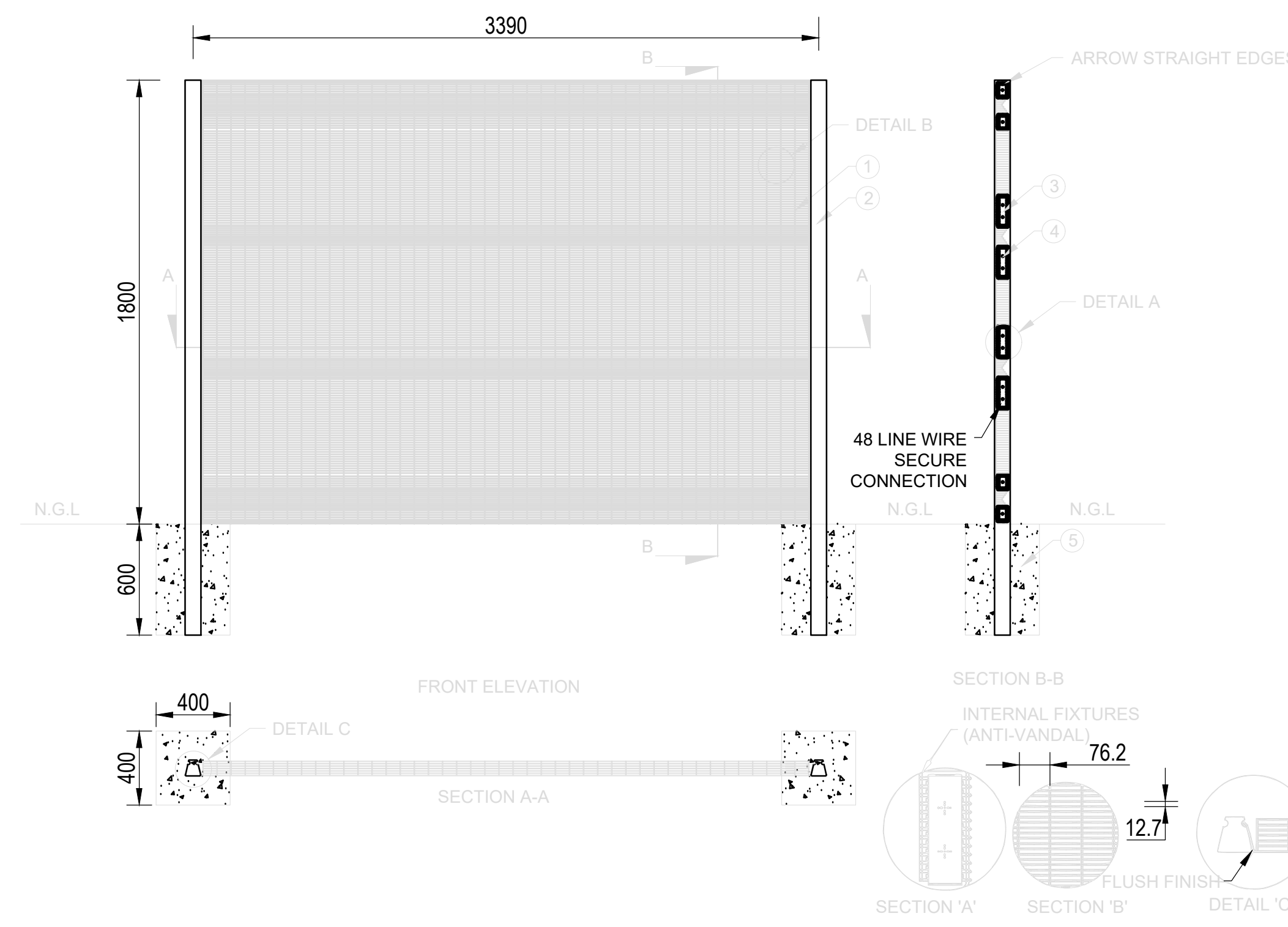
DETAIL DRAWING OF CLEARVU : REINFORCED



NO#	ITEM	DESCRIPTION
1	PANEL	CLEAR VU MESH PANELS 3390mm WIDE x 2400mm HIGH GALVANIZED Ø3mm WIRE WITH APERTURE SIZE(CENTERS) @ 76.2mm x12.7mm PANEL FORMATION: PANEL REINFORCED WITH 4x50mm DEEP 'Y' FORMATION HORIZONTAL RECESSED BANDS (RIGIDITY). 2x75mm 70° FLANGES ALONG SIDES (INTERNAL FIXTURES - ANTI VANDAL, ALLOWING FOR FLUSH POST AND PANEL FINISH, 48 LINE WIRE SECURE CONNECTION, LOCKING RECESS MECHANISM) AND 1x30° FLANGES ALONG TOP AND 1x30° FLANGES ALONG TOE. (ARROW - STRAIGHT EDGES, INTEGRATED ANGLE). COATING: MESH GALVANIZED, THEN MARINE FUSION BOND COATED - COLOUR - MFB BLACK (PATENTS AND DESIGN REGISTRATIONS APPLY)
2	POST	COCHRANE LOCKING TAPER POST 85mm x 45mm x 85mm, THEN SEALED WITH UV STABILIZED POLYMER CAP AND FITTED WITH BASE PIN. COATING: HOT DIPPED GALVANIZED, THEN MARINE FUSION BOND COATED: COLOUR - MFB BLACK.
3	CLAMPS	8 X SINGLE BOLT COMB CLAMPS. COATING: GALVANIZED, THEN MARINE FUSION BOND COATED.
4	FOUNDATION	400x400x600mm 25Mpa CONCRETE FOUNDATION
5	TOPPING Ø1	A 100 MM HIGH TOUGHENED STEEL COCHRANE SHARK TOOTH SPIKE SHALL BE AFFIXED TO PANEL EDGE, INTERNALLY AT 150 MM INTERVALS USING ANTI-VANDAL BOLTS, HOT DIP GALVANIZED- THEN MARINE FUSION BOND COATED.
6	ELECTRIC SMART COIL	ELECTRIC SMART COIL ADDED TO THE TOP OF FENCE (TO COCHRANE SPECIFICATION) COMPOSED OF HIGH RIPPER BLADE SMART CONCERTINA COIL (GALVANIZED TO SUIT MARINE CONDITION)
7	STEEL BARS	PANEL TO BE REINFORCED WITH HIGH TENSILE TOUGHENED STEEL BAR CAGE TO BE POSITIONED AT 152.4mm INTREVALS
8	UNDER DIG	300mm CLEAR VU ANTI - BURROW COATING: BITUMEN DIPPED INSERTED IN THE A CONCRETE PLINTH OF 200mm X 400mm.

TYPICAL SECTION : HIGH SECURITY FENCE
SCALE 1:5

DETAIL DRAWING OF CLEARVU : 1.8m HIGH INTERNAL FENCING



NO#	ITEM	DESCRIPTION
1	PANEL	CLEAR VU MESH PANELS 3390mm WIDE x 1800mm HIGH GALVANIZED Ø3mm WIRE WITH APERTURE SIZE(CENTERS) @ 76.2mm x12.7mm PANEL FORMATION: PANEL REINFORCED WITH 4x50mm DEEP 'Y' FORMATION HORIZONTAL RECESSED BANDS (RIGIDITY). 2x75mm 70° FLANGES ALONG SIDES (INTERNAL FIXTURES - ANTI VANDAL, ALLOWING FOR FLUSH POST AND PANEL FINISH, 48 LINE WIRE SECURE CONNECTION, LOCKING RECESS MECHANISM) AND 1x30° FLANGES ALONG TOP AND 1x30° FLANGES ALONG TOE. (ARROW - STRAIGHT EDGES, INTEGRATED ANGLE). COATING: MESH GALVANIZED, THEN MARINE FUSION BOND COATED - COLOUR - MFB BLACK (PATENTS AND DESIGN REGISTRATIONS APPLY)
2	POST	COCHRANE LOCKING TAPER POST 85mm x 45mm x 85mm, THEN SEALED WITH UV STABILIZED POLYMER CAP AND FITTED WITH BASE PIN. COATING: HOT DIPPED GALVANIZED, THEN MARINE FUSION BOND COATED.
3	CLAMPS	8 X SINGLE BOLT COMB CLAMPS. 8 X DOUBLE BOLT COMB CLAMPS. COATING: GALVANIZED, THEN MARINE FUSION BOND COATED.
4	FOUNDATION	400x400x600mm 25Mpa CONCRETE FOUNDATION
5	TOPPING Ø1	A 100 MM HIGH TOUGHENED STEEL COCHRANE SHARK TOOTH SPIKE SHALL BE AFFIXED TO PANEL EDGE, INTERNALLY AT 150 MM INTERVALS USING ANTI-VANDAL BOLTS, HOT DIP GALVANIZED- THEN MARINE FUSION BOND COATED.
6	ELECTRIC SMART COIL	ELECTRIC SMART COIL ADDED TO THE TOP OF FENCE (TO COCHRANE SPECIFICATION) COMPOSED OF HIGH RIPPER BLADE SMART CONCERTINA COIL (GALVANIZED TO SUIT MARINE CONDITION)

TYPICAL SECTION : INTERNAL SECURITY FENCE(1.8m HIGH)
SCALE 1:5

- NOTES**
- DO NOT SCALE DRAWING - ONLY DIMENSIONS SHOWN TO BE USED.
 - THE CONTRACTOR SHALL VERIFY ALL CONDITIONS, DIMENSIONS AND LEVELS ON THE SITE AND NOTIFY THE NEC SUPERVISOR OF ANY VARIATIONS BEFORE CONSTRUCTION.
 - ALL LEVELS ARE IN METERS TO MEAN SEA LEVEL

NO#	ITEM	DESCRIPTION
1	PANEL	CLEAR VU MESH PANELS 3390mm WIDE x 1800mm HIGH GALVANIZED Ø3mm WIRE WITH APERTURE SIZE(CENTERS) @ 76.2mm x12.7mm PANEL FORMATION: PANEL REINFORCED WITH 4x50mm DEEP 'Y' FORMATION HORIZONTAL RECESSED BANDS (RIGIDITY). 2x75mm 70° FLANGES ALONG SIDES (INTERNAL FIXTURES - ANTI VANDAL, ALLOWING FOR FLUSH POST AND PANEL FINISH, 48 LINE WIRE SECURE CONNECTION, LOCKING RECESS MECHANISM) AND 1x30° FLANGES ALONG TOP AND 1x30° FLANGES ALONG TOE. (ARROW - STRAIGHT EDGES, INTEGRATED ANGLE). COATING: MESH GALVANIZED, THEN MARINE FUSION BOND COATED - COLOUR - MFB BLACK (PATENTS AND DESIGN REGISTRATIONS APPLY)
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4	FOUNDATION	400x400x600mm 25Mpa CONCRETE FOUNDATION
5	TOPPING Ø1	A 100 MM HIGH TOUGHENED STEEL COCHRANE SHARK TOOTH SPIKE SHALL BE AFFIXED TO PANEL EDGE, INTERNALLY AT 150 MM INTERVALS USING ANTI-VANDAL BOLTS, HOT DIP GALVANIZED- THEN MARINE FUSION BOND COATED.
6	ELECTRIC SMART COIL	ELECTRIC SMART COIL ADDED TO THE TOP OF FENCE (TO COCHRANE SPECIFICATION) COMPOSED OF HIGH RIPPER BLADE SMART CONCERTINA COIL (GALVANIZED TO SUIT MARINE CONDITION)

Transnet Port Terminals

Design, supply, delivery, installation, and commissioning of Perimeter Fencing at the Port of Durban Point Car Terminal (MPT), Agri-Port Terminal and Maydon Wharf Terminal Health and Safety Specifications

Health and Safety Specifications

Design, supply, delivery, installation, and commissioning of Perimeter Fencing at the Port of Durban Point Car Terminal (MPT), Agri-Port Terminal and Maydon Wharf

Transnet Port Terminals

Project Number: ICLM HQ XXX/TPT

SIGNATORIES:

Prepared by:



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30/11/2023

Date

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30/11/2023

Date

Approved by:



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Project Manager

30-11-2023

Date

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Rev No.	Date	Revision Details

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1. Purpose

This Project health and safety specifications identifies and outlines the working behaviours and safe work practices that are expected of the contractors, consultant, visitors and suppliers, that will be undertaking activities associated with the Design, supply, delivery, installation, and commissioning of Perimeter Fencing the Port of Durban Point Car Terminal (MPT), Agri-Port Terminal and Maydon Wharf Terminal

The specification has been developed in accordance with the requirements of the Occupational Health and Safety Act and its Regulations, mainly Construction Regulation 5(1)(b) as well as any other applicable legislation.

The Contractor must comply with this Client's health and safety specifications and related legislation and address it in their site specific health and safety plan. It is the principal contractor's responsibility to ensure that all sub-contractors comply fully with all legal requirements as well as the requirements of this specification.

This Project Health and Safety Specifications will be reviewed and updated periodically and/or as and when necessary) to address and / or include:

- Changes in legislation;
- Client requirements;
- Leading practices; and
- Lessons learnt from incidents.

2. Background

Port of Durban Bulk, Break Bulk and Car Terminal (BBC Terminal) is made up of Point Terminal, Agri-Port Terminal, and Maydon Wharf Terminal. They are used for import and export purposes, as a storage area for bulk cargo, breakbulk cargo, and cars. The Terminals are physically enclosed with a fence along the perimeters for security purposes, safeguarding of commodities, life, properties, TPT assets, and provision of a physical barrier to prevent stowaway instances.

The requirements specified in this Project Health and Safety Specifications are applicable to the Contractor as well as any contractors, suppliers, Consultant, Vendors and Visitors that may be appointed by or on behalf of Transnet as an Employer at Point Car Terminal (MPT), Agri-Port and Maydon Wharf Terminal. It is the Principal contractor's responsibility to ensure that all contractors and suppliers comply fully with all legal requirements as well as the requirements of this health and safety 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 client 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.

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.

Principal 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 act cr2014.

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.

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).

Incident (Occurrence)

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, Principal 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).

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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 Hit

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.

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.

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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, 2014

CWP – Construction Work Permit

EPC - Engineering Procurement and Construction

EPCM - Engineering Procurement and Construction Management

HIRA - Hazard Identification and Risk Assessment

IMS - Integrated Management System

MS - Management System

OHS Act - Occupational Health and Safety Act No. 85 of 1993

PC – Principal Contractor

SOC - Safety Observation and Conversation

TPT – Transnet Port Terminals

VFL - Visible Felt Leadership

OHS - Occupational Health and Safety

DOEL - Department of Employment and Labour

SACPCMP - The South African Council for Project and Construction Management Professions.

MSDS – Material Safety Data Sheet

5. Project Scope of work

Port of Durban Bulk, Break Bulk and Car Terminal (BBC Terminal) is made up of Point Terminal, Agri-Port Terminal, and Maydon Wharf Terminal. They are used for import and export purposes, as a storage area for bulk cargo, breakbulk cargo, and cars. The Terminals are physically enclosed with a fence along the perimeters for security purposes, safeguarding of commodities, life, properties, TPT assets, and provision of a physical barrier to prevent stowaway instances.

BBC Perimeter Fence Project covers:

- 1) The design, supply, and installation of hot dip galvanised steel palisade fencing.
- 2) The design supply, and installation of high security fence.
- 3) The design, supply, and installation of steel palisade gates (swing and sliding) with shackles and padlocks
- 4) The design supply and installation of turnstile gates.
- 5) The supply and install hot dip galvanised concertina security razor wire

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- 6) Detection of existing underground services
- 7) Excavation and provision for concrete footing/ base.
- 8) Relocation and or diversion of existing services (electrical, communications, sewer, and water) when it is required.
- 9) Careful removal of the existing fence (wire mesh, concrete slabs, and brickwork) and gates where required. Removal of the existing fence and installation of new fence must be done in parallel to seal off the area from impending threats and always provide physical security on the exposed should we not request for temporary protection on the exposed sections during construction.
- 10) **Note:** All steel material (fencing, gates, etc.) removed are to be stockpiled in an area identified in each terminal, for TPT's reverse logistics team to dispose of.
- 11) where required. Removal of the existing fence and installation of new fence must be done in parallel to seal off the area from impending threats and always provide physical security on the exposed should we not request for temporary protection on the exposed sections during construction.

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The objective of this project is:

- 1) To ensure compliance to security requirements as per National Ports Act No. 12 of 2005.
- 2) To ensure compliance to International Ship and Port Security (ISPS) Code requirements.
- 3) To ensure compliance to Department of Transport's approved terminal security plans.
- 4) To ensure proper security measures and control of access into TPT property and assets.
- 5) To ensure concrete waste is disposed as per municipality by-laws for concrete/ rubble waste disposal.

6. Location

The proposed construction work will take place at the following terminals:

- Point Car Terminal (MPT).
- Maydon Wharf Terminal.
- Agri-Port Terminal.

7. Contractor Health and Safety Management Plan

The Contractor must comply to Construction Regulation, 7(1)(a).

The contractor must prepare, implement and maintain a project specific health and safety management plan. The plan must be based on the requirements set out in this specification as well as all applicable legislation. It must cover all activities that will be carried out on the project site(s), from mobilisation and set-up through to rehabilitation and decommissioning.

The plan must demonstrate the Principal 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;

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- 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;
- **Contractor Alignment** procedures – a process must be in place for the assessment of 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 Contractor Project Specific Health and Safety Management Plan must be forwarded electronically, and as a hard copy, to the Client's Health and Safety personnel for review and approval. The plan will be audited for completeness and, if found to be adequate, will be accepted and approved. Work may not commence until the plan has been accepted and approved.
- 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 Project Specific Health and Safety Management Plan, the plan will not be approved by Transnet health and safety personnel.

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8. Transnet TIMS Policy Commitment Statement

The Transnet Integrated Management System (TIMS) Policy Commitment Statement, appended under Annexure 1, commits all operating divisions to a set of principles to be adhered to in serving its customers and conducting its business, including the following health and safety principles:

- All applicable legislation, regulations, codes, standards, protocols and best practices are to be adhered to in achieving Transnet's business objectives.
- Transnet are committed to providing a safe and secure environment for its employees and stakeholders.
- Transnet will conduct its business in a manner that prevents injuries and ill health to employees and stakeholders.
- Transnet are committed to promoting safe operational practices.

The HSE commitments outlined in the TIMS policy statement are backed up by the Leadership Procedure (Doc No TRN-IMS-GRP-PROC-001). This procedure defines the roles, responsibilities, authorities and accountabilities of the Transnet leadership and establishment of the organisational culture, provision of resources and management reviews to ensure alignment with the strategic direction of the company.

Top Management takes overall responsibility and accountability for the prevention of work-related injury and ill health, as well as the provision of safe and healthy workplaces and activities, including supporting the establishment and functioning of Safety, Health and Environment (SHE) Committees.

9. Contractor Health and Safety 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. These values and objectives must be endorsed by the contractor's management representatives (OHS Act 16.2 Appointee) 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;
- 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-contractor 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 .

A copy of the policy must be displayed in each meeting room and on each notice board.

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10. Hazard Identification and Risk Assessment (OHS Act, Constr. Regulations 9)

The Contractor must comply to Construction Regulations, clause 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.

The client will provide a baseline risk assessment informing Contractor on the hazards and risks on site. 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.

10.1 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 Health and Safety Agent and Project Construction Manager prior to the commencement of any work. The risk assessment process must be facilitated by a competent person (Risk Assessor) who has been appointed in writing. 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 (CHSO) 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) and Safe Working Procedure;
 - 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.

11. Legal and Other Requirements

The Contractor must comply with the requirements of all applicable health and safety legislation as well as Transnet Port Terminals, 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 contractors that may be appointed by the Principal contractor) through training, Toolbox Talks, and Daily Safe Task Instructions.

12. 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 Principal contractor's objectives must be aligned with the objectives set for the project as a whole as required by the Construction Regulations 7.

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.).

13. Resources, Accountabilities and Responsibilities

The Contractor must adequately allocate resources, responsibility and accountability to ensure the effective implementation, maintenance and continual improvement of the Principal contractor's health and safety management system on the project.

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 legal appointments must be clearly identified.

The provision of dedicated health and safety professionals registered on the project must be appropriate for the nature and scale of the work to be carried out.

The Contractors 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.

Health and safety is the responsibility of each and every individual on the project, but in particular, it is the responsibility of the Principal contractor's management team who must set the tone.

Visible commitment is essential to providing and maintaining a safe workplace. The Contractor 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;

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- 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;

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.

13.1 Construction Manager

The Contractor must comply with Construction Regulations, clause 8(1).

The Principal Contractor must appoint a competent full time Construction Manager who is registered with the professional body with the duty of managing construction work on a single site, including ensuring health and safety compliance.

Competency/ Training

- Registered with SACPCMP as a Professional Construction Manager as PrCM and qualification
- IRCON
- Legal Liability
- Hazard Identification and Risk Assessment(HIRA)

The Construction Manager shall be responsible for:

- Ensuring that all applicable legal and project health and safety requirements are identified and complied with at all times;
- Participating in (and approving) all Task-Based Risk Assessments conducted for the work to be carried out by the contractor;
- Ensuring that the necessary resources are made available for the effective implementation of the principal 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;

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- 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;
- Providing the necessary resources for regular health and safety audits and inspections, and ensuring that corrective actions (arising from incident investigations, audits, inspections, etc.) Are implemented, and
- Participating in an annual review of the contractor's Health and Safety Management System.

13.2 Contractor Health and Safety officer(s)

The Contractor must comply with Construction Regulations, clause 8(5).

The contractor must appoint a full-time Construction Health and Safety Officer (s) (CHSO) for the duration of the contract who is registered with the SACPCMP.

The CHSO must be on site when work commences at the start of the day and must remain on site until all activities for that day. A CHSO 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 an additional CHSO.

The CHSO 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 / Construction 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;

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- 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-contractor), 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 CHSO is adequately equipped to enable him to perform his duties effectively. Each CHSO 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 CHSO must be computer literate, fluent in English, and must have the following minimum qualifications, training and experience:
 - At least 5 years' experience as a CHSO 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

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- A valid Driving Licence (light motor vehicle).

Before placing a CHSO on the project site(s), the contractor must forward a copy of the person's CV to the Clients Construction Health and Safety Agent for review and acceptance. A proposed candidate may be rejected should he not meet competence level required (i.e. the experience and / or qualification requirements), or due to poor work performance on previous projects.

13.2 Construction Supervisors

The Contractor must comply with Construction Regulations, clause 8(7).

The contractor must ensure that all 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.

No work may be carried out without an appointed construction supervisor being physically present in the work area and daily safety task instruction (DSTI) has been conducted and signed.

Each Construction Supervisor shall be responsible for:

- Ensuring that all work carried out under his supervision is done so in accordance with the requirements of all applicable legislation, rules, standards, specifications, plans and procedures;
- Participating in 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 (eight per month);
- 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;

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- 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;
- Ensuring that all Safe Work Procedures applicable to the work carried out under his supervision are adhered to and are fully implemented;
- Carrying out Planned Task Observations (four per week);
- Ensuring that emergency response procedures are understood by all employees under his supervision and that these procedures are followed in the event of an emergency;
- Reporting all incidents immediately, participating in incident investigations, communicating the lessons learnt to all employees under his supervision, and implementing corrective actions where required; and
- Carrying out workplace health and safety inspections.

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

Each construction supervisor must be equipped with a mobile telephone to ensure that effective communication can be maintained for the duration of the contract.

13.3 Other obligatory legal appointments to ensure compliance if applicable

OHS Act Section/Regulation	Subject	Responsibilities
Section 16(2)	Assigned duties (Managers)	Responsibility of complying with the OHS Act assigned to other person/s by the CEO
Section 19(3)	Health and Safety Committee member/s	Responsibilities as outlined in Section 20 of the OHS Act.
GAR 9(2)	Incident Investigator	Responsibilities of investigating incidents as outlined in GAR 8 & 9, and section 24.
GSR 9(1)	Welding, flame cutting operator	To ensure compliance with requirements of GAR 9.
GSR 13A(1)	Ladder Inspector	To ensure compliance with requirements of GSR 13A
Construction Reg 12(1)	Temporary works designer	To design, inspect and approve temporary works prior use.
Construction Reg 12(2)	Temporary works supervisor	To ensure temporary works operations are carried out under supervision.
Construction Reg 23(1)(d)(i)	Construction vehicle and mobile plant operator	Operate vehicles and mobile plant.

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Construction Reg 28(a)	Stacking and storage supervisor	Supervise stacking and storage on site.
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14. Competence, Training and Awareness

Each employee (including contractor employees) must be suitably trained, 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 client representative, current documentation verifying that the Principal contractor's employees, as well as the employees of any appointed sub-Principal 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 contractor must ensure that the following training takes place:

- a) health and safety induction training pertaining to the hazards prevalent on the site at the time of entry
- b) training for all persons required to erect, move or dismantle temporary works structures and instruction to perform those operations safely
- c) training of employees working from a fall risk position
- d) training to work or to be suspended on a platform which includes at least:
- e) how to access and egress the suspended platform safely;
- f) how to correctly operate the controls and safety devices of the equipment;
- g) information on the dangers related to the misuse of safety devices; and
- h) information on the procedures to be followed in the case of-
 - an emergency;
 - the malfunctioning of equipment; and
 - the discovery of a suspected defect in the equipment;
 - an instructions on the proper use of body harnesses.
- i) 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 contractor;.

Please Note: Only certified copies of certificates, licences, etc. Will be accepted.

14.1 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 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.

14.2 Specific Training and Competency Requirements

The following specific training and competency requirements must be complied with.

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 14-2: Specific Training and Competency Requirements

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Training	Applicable To
Health and Safety Induction	All employees, Managers and visitors
Safety Observations and Coaching (Safety Interactions)	All employees
Risk Assessment	All managers, supervisors and Safety personnel
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 2 and 3	All nominated First Aiders
Fire Fighting (Fire Extinguisher Use)*	All employees
Flag personnel	All appointed flag personnel
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)
Defensive Driving	All drivers of light motor vehicles (for work purposes)
Gravel Road Driving	All drivers of light motor vehicles driven on gravel roads (for work purposes)
Off Road Driving	All drivers of four-wheel drive vehicles driven off road (for work purposes)
Mobile Equipment Site Licence	All mobile equipment operators

Training must be arranged through accredited external training institutions by the Principal contractor.

15. Communication, Participation and Consultation

The Contractor must develop 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

15.1 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-Principal 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 Principal contractor's health and safety file.

15.2 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 and updated 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 Principal contractor's health and safety file.

The Principal contractor's Construction Health and Safety officer must evaluate the content of the DSTI's daily to ensure that they are task-specific. Furthermore, the Construction Health and Safety officer must attend at least one DSTI per day prior to the start of work. The Construction Health and Safety officer may not lead the DSTI discussions, as this is the responsibility of the appointed supervisor.

15.3 Health and Safety Meetings

The contractor must schedule and consistently hold monthly health and safety meetings. These meetings must be chaired by the contractor's Construction / Project Manager and all project team must be in attendance.

The contractor must compile minutes of each meeting and attendance records must be kept. These records must be maintained in the contractor's health and safety file.

Note: Where there are other Contractors working in the same construction site, an interface meeting must be held every morning by all contractor's Construction Managers, CHSOs, Construction Supervisors and Health and Safety Representatives.

16. 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.

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All documents related to the Principal contractor's health and safety management system must be effectively controlled.

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.

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.

16.1 Contractor Health and Safety File Requirements

The contractor must compile and maintain a file containing all necessary health and safety related documentation. The client should provide construction work permit to be displayed and kept on site at all times. The contents of the file will be audited by Client's Health and Safety Agent / Representative on a monthly basis. Required documentation includes, but is not limited to, the following:

- a) Letter of Good Standing from the Workman's Compensation Commissioner (where applicable) must have DoL stamp;
- b) Proof of Public Liability Insurance;
- c) Scope of Work under the contract;
- d) List of Contacts and their Telephone Numbers;
- e) Health and Safety Policy;
- f) Approved Contractor Health and Safety Management Plan;
- g) Organisational Chart for the project;
- h) Appointment Letters (appointment of the contracting company, and appointments for all persons with health and safety related responsibilities);
- i) Notifications to the relevant authorities that construction work is in progress e.g. Notification of construction work or CWP if applicable;
- j) Baseline and Task-Based Risk Assessments;
- k) Health and Safety Objectives, and associated Improvement Action Plans;
- l) Safe Work Procedures, Work Instructions and Work Method Statements;
- m) Planned Task Observations;
- n) A dossier (Equipment Profile) for each fuel-driven vehicle or machine;
- o) 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.);
- p) PPE Issue Registers;
- q) Material Safety Data Sheets;
- r) Emergency Response Procedures;
- s) Incident Records;
- t) 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;

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

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17. Notification of Construction work

- 1) The Contractor who intends to carry out any construction work other than work contemplated in 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 of Annexure 2 if the intended construction work will –
 - Include excavation work,
 - Include working at a height where there is a risk of falling
 - Include the demolition of a structure, or
 - Include the use of explosives to perform construction work.
- 2) A contractor who intends to carry out construction work that involves construction of a single storey dwelling for a client who is going to reside in such a dwelling upon completion, must at least 7 days before that work is carried out notify the provincial director in writing in a form of Annexure 2.

18. Operational Control

For project operations and activities, the Contractor shall implement and maintain:

- Operational controls, as applicable to the organization and its activities;
- The organization shall integrate those operational controls into its overall OH&S Management System;
- Controls related to purchased goods, equipment and services;
- Controls related to Principal 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.

18.1 Safe Work Procedures

The Contractor must develop, document and implement Safe Work Procedures for all activities involving significant health or safety risk. These procedures must detail the control measures required to effectively manage the health and safety risks associated with the work activities.

Each Safe Work Procedure must be consistent with the Task-Based Risk Assessment completed for the activity.

Every person engaged in an activity for which a Safe Work Procedure has been developed must receive suitable training on the procedure.

18.2 Management Participation and involvement CR 8

18.2.1 Visible Felt Leadership (VFL) and Safety Observations and Coaching (SOC's)

The Principal 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

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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.

18.2.2 Planned Task Observations

All Principal 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 one PTO per week involving one or more employees in his work team.

18.3 General Rules of Conduct

All persons are required to conform to the following rules of conduct while on the site.

The following acts are prohibited:

- a) Engaging in practical jokes, horseplay, scuffling, wrestling, fighting, or gambling;
- b) Assault, intimidation, or abuse of any person;
- c) Insubordination towards any supervisor or manager;
- d) Refusing to carry out a reasonable and lawful instruction concerning health and safety;
- e) Entry into any restricted area (including barricaded areas), unless authorised to do so by the responsible person;
- f) Unauthorised use / operation of any equipment or machinery;
- g) Negligently, carelessly or wilfully causing damage to any property;
- h) Destroying or tampering with safety devices, signs, or signals;
- i) The use of water from fire hydrants or hose reels for any purpose other than extinguishing a fire;
- j) The wilful and unnecessary discharging of fire extinguishers;
- k) Refusing to give evidence or deliberately making false statements during incident investigations;
- l) Bringing alcohol, drugs, or any other intoxicating substance onto site;
- m) Bringing a firearm, ammunition, or any other offensive weapon onto site;
- n) Bringing animals onto site;
- o) Running, except in an emergency;
- p) The use of an ipod (or similar) whilst working on site;
- q) Sleeping on the job;
- r) Building fires on site, unless in a suitably constructed barbequing facility; and
- s) 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 client representative shall be final and binding in respect of any dispute that may arise from the interpretation of these requirements.

18.3.1 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.

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A drugs and alcohol testing program will be implemented. Persons entering the site will be 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 client representative to take disciplinary action and remove such a person's form the project site.

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.

18.4 Site Establishment and Rehabilitation

The contractor shall ensure that all Risk Assessment including method statements should be submitted to the TPT Health and Safety Representation before work can commence and aligned themselves with Environmental requirements.

18.5 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.

18.6 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.

The Contractor must supply, at his cost, all items of plant and equipment necessary to perform the work and must maintain all items in good working order.

Should any plant or equipment become inoperable for a period that is having or will have a significant impact on the work schedule, the Contractor must, on instruction from the client representative, remove the out of service plant or equipment and replace it with similar fully operational plant or equipment at no additional cost.

No item of plant or equipment delivered to site for use on the contract may be removed from the site prior to the completion of the contract without approval in writing from the client representative.

18.7 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:

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- 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 height;
- Hot work outside of designated workshops;
- Excavation; or
- A service (e.g. water supply, fire suppression systems, etc.).

18.8 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.

Each person potentially exposed to electrical hazards must receive electrical hazard training at the commencement of his employment on site and thereafter on an annual basis. The training must address the equipment and conditions specific to the area where the individual will be working. The training material must be documented and training records must be kept.

Note: Works on, over, under or adjacent to Railway Lines and near High Voltage Equipment must comply with Transnet E7/1 Specification.

18.8.1 Portable Electrical Equipment

The contractor shall comply with Electrical Machinery Regulation 10.

18.9 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.

18.10 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 30 kPa, and then only with effective chip guarding and personal protective equipment in place. The 30 kPa 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 client 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.

18.11 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 Principal contractor's Equipment Register and the register must be submitted to the client representative prior to the relevant work commencing.

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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 client representative.

18.12 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.

18.13 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 client 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.

Purpose built tools and equipment may not be used unless a risk assessment has been conducted and authorised by the client representative.

18.14 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.

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18.15 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.

18.16 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.

Position the feet correctly. The feet should be placed hip-width apart to provide a large base. One foot should be put forward and to the side of the object, which gives better balance.

Bend or 'unlock' the knees and crouch to the load. The weight will then be safely taken down the spine and the strong leg muscles will do the work.

Get a firm grip. The roots of the fingers and the palm of the hand should grip the load. This keeps the load under control and permits it to be distributed more evenly.

18.17 Personal Protective Equipment

The contractor shall comply with General Safety Regulation 2.

18.18 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).

18.19 Fuel / Flammable Liquid Storage and Refuelling

The Contractor must comply to the General Safety regulations 4.

18.20 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 comply with Construction Regulations 29 and in addition must comply with environmental regulation for workplaces 1987 .

Over and above the following should be complied to:

All fire extinguishers (and any other firefighting equipment) placed on site must be:

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- 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 year.

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.

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.

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.

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.

18.21 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.

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.

18.22 Housekeeping

The Contractor must comply to Construction Regulations 27 and in addition must comply with Environmental Regulation for Workplaces 1987.

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 client representative on request.

Where the Contractor fails to maintain housekeeping standards, the client representative may instruct the Contractor to appoint a dedicated housekeeping team for the duration of the project at the Principal contractor's expense.

18.23 Stacking and Storage

The Contractor must comply to Construction Regulations 28 and in addition must comply with the provisions for the Stacking of Articles in the General Safety Regulations, 2003.

No equipment, tools, files or documents may be stored or stacked on top of cupboards which are higher than 1.5 metres in height.

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18.24 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.

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.

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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.

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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.

18.25 Facilities

The Contractor must comply to Construction Regulations 30 and in addition must comply with the provisions in the Facilities Regulations, 2004

18.26 Hazardous Chemical Substances

The Contractor must comply to Hazardous Chemical Substances Regulations

18.27 Fitness for Work

The Contractor must comply to General Safety Regulation 2A.(Intoxication)

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 contractors) must be subject to this programme.

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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.

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:

- a) The effect on worker fatigue;
- b) The effects of activities carried out during scheduled and overtime hours;
- c) The impact on sleep cycles of activities such as commuting to and from site; and
- d) The monitoring and control of working hours.

All employees engaged in safety critical jobs must 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 by a registered occupational medical practitioner:

- a) 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);
- b) 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 if the employee worked on the project site for more than three months).

Note: The medical examinations described above may only be carried out by an occupational medical practitioner (i.e. a medical doctor who holds a qualification in occupational medicine).

18.28 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 and community members, 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.

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19. Occupational Hygiene

TPT Occupational health must provide the Contractor with the health risk assessment in respect of existing Occupational Health Risk on Sites. Additionally an Occupational Health Program for monitoring the existing Occupational health Risk will be given to the Contractor

The Contractor must conduct an Occupational Health Risk Assessment in respect of their trade.

19.1.1 Thermal Stress

The Contractor must comply to Environmental Regulations for workplaces 2 and in addition to the following:

When a risk of thermal stress is identified, the following exposure controls must be implemented:

- An acclimatization 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.

19.1.2 Measuring and Monitoring

The Contractor must comply to Hazardous Biological Agents Regulations 7 and Hazardous Chemical Substance Regulations 5

A plan for measuring and monitoring occupational exposure must be developed and it must include:

- 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:

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- 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 program.

All monitoring results obtained must be analyzed 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.

20. Structure

A Contractor must ensure that, all reasonably practicable steps are taken to prevent the uncontrolled collapse of any new or existing structure or any part thereof, which may become unstable or is in a temporary state of weakness or instability due to the carrying out of construction work;

No structure or part of a structure is loaded in a manner which would render it unsafe; and all drawings pertaining to the design of the relevant structure are kept on site and are available on request to an inspector, other Principal contractors, the client and the client's agent or employee.

An owner of a structure must ensure that;

- Inspections of that structure are carried out periodically by competent persons in order to render the structure safe for continued use;
- That the inspections contemplated in paragraph (a) are carried out at least once every six months for the first two years and thereafter yearly;
- The structure is maintained in such a manner that it remains safe for continued use;
- The records of inspections and maintenance are kept and made available on request to an inspector.

21. 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 Principal contractor's team and work activities. The plan must be risk-based and must detail the procedures that must be followed when responding

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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.

The Principal contractor's Emergency Response Plan must be aligned with the Emergency Response Plan developed for the project.

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 neighbours, 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 client representative for approval prior to site establishment. The Emergency Response Plan must be formally reviewed (and amended if necessary) at least on an annual basis, to ensure that it remains appropriate and effective on emergency situations.

The Contractor must ensure that:

- A suitable evacuation alarm (siren) must be provided. If work is to be carried out in proximity to an existing operational plant, the alarm provided by the Contractor must be distinctly different (in terms of the sound that it generates) to any alarm installed in the operational plant. 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.

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- 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 six-monthly 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.

21.1.1 First Aid Kits

The contractor shall comply with General Safety Regulations 3.

22. Management Review

A review of the Principal contractor's Health and Safety Management System must be completed annually 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 Principal contractor's scope, schedule, designs, etc.;
- Changes to the Principal 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

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- 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.

For occupational hygiene: Approved Inspection Authority (AIA) for Occupational Hygiene

23. 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;
- 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.
- The involvement of the workforce potentially affected by the proposed change; and

24. 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-Principal contractor's (or supplier's) ability to provide materials, equipment, services and labour that meet defined specifications must be in place. A prospective sub-Principal 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.

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Each appointed contractor must develop and implement a detailed Health and Safety Management Plan based on the requirements of the Principal 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 contractor personnel must receive comprehensive orientation and induction training (refer to clause 14).

All work carried out by a contractor must be managed (activity supervised) throughout the contract period and performance must be reviewed (audited) on a regular basis.

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25. 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 contractor employee that suffers an occupational injury or illness. These arrangements must be described in the Principal contractor's Health and Safety Management Plan.

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, therefore must be reported.

An incident must be reported on the same work day or shift on which it occurs and preliminary details must be recorded and a TPT Incident Flash Report must be completed within 24 hours.

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 authorization 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. (i.e. 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.

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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 must be used.

Each incident (including Near Hits) 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 Project Health and Safety Advisors 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 client representative within five working days of the incident occurring.

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 Principal contractor's Project Manager to assure completeness, accuracy and relevance before it is shared with (communicated to) all project personnel.

Refer to the Transnet Port Terminals health and Safety Management Occurrence Reporting and Investigation HAS-P-0002.

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26. Non-conformance and Action Management

The Contractor must establish a process for identifying and recording corrective actions arising from:

- 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.

27. 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.

27.1 Reporting on Performance

Reports summarising the Principal 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 information:

- Number of Contractor and contractor employees on site;
- Total hours worked on site by Contractor and contractor employees (by company);
- Number of incidents by category (i.e. Near Hit, 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;

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- 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 hits, 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.

27.2 Audits and Inspections

On a monthly basis, the health and safety management system and workplace activities of the Contractor will be audited by a Project Health and Safety Advisor 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.

The Contractor Audit conformance will be assessed as a percentage and where conformance is better than 90% it will be considered satisfactory and the Principal contractors must develop and implement an Action Plan within 4 weeks, to be reviewed at the next scheduled Audit. Where the level of conformance is between 80-90%, a corrective action plan will be required to be developed and implemented within 2 weeks, and a follow-up Audit will be carried out. Where the conformance is less than 80%, the Contractor must stop work until an investigation of the cause/s has been completed and corrective action have been developed and implemented by the Principal contractor. Actions required from the audit result are risk based, e.g. An audit result with a critical element scored low may still result in an NCR being issued, or even a work stoppage.

Should it be determined that the Principal contractor's level of compliance is unsatisfactory, all work being performed by the Contractor on the project site may be stopped (at the Principal 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.

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In addition to the audit carried out by the Project Health and Safety Advisor, 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 Principal contractor's Health and Safety Management Plan). Furthermore, the Contractor must ensure that each appointed contractor is audited and measured to the same standard. Copies of these audit reports must be submitted to the Project Health and Safety Advisor 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.

28. COVID-19

The contractor must comply to the COVID – 19 Code of practice: Managing exposure to SARS-COV-2 in the workplace.

29. Reference Documents

Table 28-1: Reference Documents

Document Title
Contractor Health and Safety Specification Guideline TRN-IMS-GRP-GDL-014.3
TIMS Contractor Management Procedure TRN-IMS-GRP-PROC-014
Occurrence And Non-Conformance Management Procedure TRN-IMS-GRP-PROC-013
Occupational Health and Safety Act, 85 of 1993 and Regulations
Compensation for Occupational Injuries and Diseases Act, 1993
Disaster Management Act, 2002 (Act No 57 of 2002) and its Regulations.

STANDARD OPERATING PROCEDURE

CONSTRUCTION ENVIRONMENTAL MANAGEMENT

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[illegible]

DOCUMENTATION SIGN-OFF SHEET

I, the undersigned hereby approve this procedure.



ROLE	CAPACITY/ FUNCTION	SIGNATURE	DATE
Process Owner:	Senior Specialist: Environmental Compliance and Permitting		01/10/2023
Accepts document for adequacy and practicability. Comments:			
Sponsor:	General Manager: Corporate Sustainability		01/10/2023
Approves document for use. Comments:			

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1. PURPOSE

- 1.1** The purpose of this Standard Operating Procedure (SOP) is to define how environmental management will be practiced on any construction project under the management of Transnet to ensure that the environment is considered, negative impacts avoided or minimized, and positive impacts are optimized and/or enhanced throughout the lifecycle of the asset.
- 1.2** It further defines environmental management responsibilities for key stakeholders involved in the construction management process.
- 1.3** It must be read in conjunction with the Contractor Environmental and Sustainability Specification Guidelines (CESSG) and the Project Environmental Specification (PES) relevant to the project.
- 1.4** In this document, unless the context clearly indicates otherwise:
- Words importing any one gender shall include the other gender.
 - The singular shall include the plural and vice versa; and
 - Any reference in this document to legislation or subordinate legislation is to such legislation or subordinate legislation at the date of promulgation thereof and as amended and/or re-enacted from time to time.

2. APPLICABILITY

- 2.1** The SOP applies to any construction project under the management of Transnet SOC Ltd or its Construction Agent.

3. REFERENCE DOCUMENTS

Name	Applicable Section
Constitution of South Africa, Act 108 of 1996	Section 24 (a) right to an environment that is not harmful to health or wellbeing Section 24(b) (i) right to have environment protected for current and future generations through legislation and measures that prevents pollution and ecological degradation.
Capital Governance and Assurance Policy	Entire document
Capital Governance and Assurance Framework	Entire document
Capital governance and Assurance Manual	Entire document.
PLP Manual – Execution	Entire document
National Environmental Management Act, 107 of 1998	Section 2 National Environmental Management Principles (4) (viii), (e), (h), (j) and (p).
National Water Act, 36 of 1998	Section 164, Permissible Water Use Section 19
National Environmental Management: Waste Act, 58 of 2008	Part 1 15 (1) (i) and (2) Part 6 26 (10) (a) and (b) Scheduled 3, Defined Wastes Category B: Hazardous Wastes Part 8: Contaminated Land
Environment Conservation Act, 73 of 1989	Section 20
Occupational Health and Safety Act, 85 of 1993	Asbestos Regulations, 2001 Government Notice R155 in Government Gazette 23108 of February 2002

Name	Applicable Section
	General Safety Regulations-Reg. 2 (2) PPE
GNR 326, 7 April 2017 as amended, EIA Regulations	Chapter 15
Integrated Management System – Policy Statement Procedure (TRN-IMS-GRP-PROC-002)	Whole document
Integrated Management System – Competency, Awareness and Training Procedure	Whole document
Integrated Management System¹ – Document, Data and Record Management Procedure (TRN-IMS-GRP-PROC-010)	Whole document
Integrated Management System – Occurrence and Non-Conformance Management Procedure (TRN-IMS-GRP-PROC-013)	Whole document
Transnet Environmental Risk Management Strategy and Framework	2015:42
Environmental Management Systems ISO 14001: 2015	Clause 5, 6, 7, 8, 9 and 10

¹ Management of certain documents, data and records will be in accordance with NEC3 – Engineering and Construction Contract prescripts

009-TCC-CLO-SUS-11386

Standard Operating Procedure -

Construction Environmental Management

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4. DEFINITIONS AND ABBREVIATIONS

4.1 DEFINITIONS

Compliance	The action or fact of complying with legislation or regulations.
Conformance	The action or fact of conforming to this standard and other internal Transnet policies, procedures, guidelines and best practice.
Contractor	The Principal Contractor as engaged by Transnet for infrastructure construction operations, including all sub-contractors appointed by the main contractor of his own volition for the execution of parts of the construction operations; and any other contractor from time to time engaged by Transnet directly in connection with any part of the construction operations which is not a nominated sub-contractor to the Principal Contractor.
Contractor Environmental and Sustainability Specification Guidelines (CESSG)	A set of minimum environmental standards for all Transnet SOC Ltd-managed construction sites.
Corrective Action	It is generally a reactive process used to address problems after they have occurred. Corrective action may be triggered by a variety of events, e.g. Non-conformance to documented procedures and work instructions, non-conformances raised through internal audits, unacceptable monitoring and measurement results, internal & external SHEQ complaints, etc.
Emergency	Sudden unforeseen event needing immediate or prompt action.

Environment	Surroundings in which the Contractor operates, including air, water, land, natural resources, flora, fauna, humans and their interrelations.
Environmental Aspect	Element of an organization's activities or products or services that interacts or can interact with the environment
Environmental Authorisation (EA)	Environmental Authorisation is the authorisation granted by a competent authority of a listed activity or specified activity in terms of National Environmental Management Act 107 of 1998 (as amended).
Environmental Impact	Change to the environment whether adverse or beneficial, wholly or partially resulting from an organization's environmental aspects
Environmental Management Plan (EMP)	A plan generated by the Contractor describing the relevant roles and responsibilities and how potential environmental risks will be assessed and managed including the monitoring and recording thereof.
Environmental Management Programme (EMPr)	A programme that has been approved by the Competent Authority in terms of NEMA, 107 of 1998 stipulating information on any proposed management, mitigation, protection or remedial measures that will be undertaken to address the environmental impacts that have been identified
Environmental Risk	The product of the likelihood and severity of an unforeseen occurrence/incident/aspect and the impact it would have, if realised, on the environment

Incident/Occurrence	An undesired event occurring at work that results in physical harm to a person or death, or damage to the environment, plant and/or equipment, and/or loss of production.
Non-conformance	An action or situation that does not conform to Transnet's SHEQ standards, procedures or legislative requirement(s) and that can be, or lead to, an unacceptable SHEQ incident.
Non-compliance	Contravention to environmental legislative requirements.
Project Environmental Specification (PES)	Describes standards specific to a particular project. Variations and additions to the CESSG are set out in this PES. These would include the EA issued to the project or elements generally drawn from the EA or permits for that project or from specific requirements set by the Transnet Operating Divisions. The PES may also require a more stringent standard to that described in the CESSG if required by the EA or a particular industry code to which Transnet subscribes including any environmental constraints at a construction site.
Sub -Contractor	<p>A person or organisation who has a contract with the contractor to</p> <ul style="list-style-type: none"> - Construct or install part of the contractors work. - Provide a service necessary to provide the works; or - Supply plant and materials which the person or organisation has wholly or partly designed specifically for the works.

4.2 ABBREVIATIONS

Acronym	Meaning in Full
CESSG	Contractor Environmental and Sustainability Specification Guidelines
CM	Construction Manager
CV	Curriculum Vitae
CEM	Construction Environmental Management
DFFE	Department of Forestry, Fisheries and the Environment
DWS	Department of Water and Sanitation
EA	Environmental Authorisation
ECO	Environmental Control Officer
EO	Environmental Officer
EMI	Environmental Management Inspectorate
NCR	Non-conformance Report
NEMA	National Environmental Management Act 107 of 1998 (as amended)
PER	Project Environmental Resource
PES	Project Environmental Specification
PLP	Project Life-cycle Process
PM	Project Manager

Acronym	Meaning in Full
SAHRA	South African Heritage Resources Agency
SOP	Standard Operating Procedure
SHEQ	Safety, Health, Environment and Quality
Transnet	Transnet SOC Ltd

5. ACCOUNTABILITY, RESPONSIBILITY AND AUTHORITY

5.1 Transnet Procurement Department

5.1.1 Ensures that this SOP (and relevant associated environmental specifications) is included in any construction-related request whether open market, quotation or confinement process.

5.1.2 The Procurement Department shall further ensure that the relevant environmental personnel are consulted during tender review, tender evaluation and contract award.

5. Transnet Project Manager (PM)

5.2.1 Takes overall accountability for the project including ensuring that this SOP is implemented by all relevant stakeholders.

5.2.2 The specific tasks during construction will include:

- Appointment of the Transnet Environmental Resource/s;
- Certifying site access to the Contractor;
- Giving instructions to the Contractor on recommendation from the Transnet Environmental Resource/s (e.g. defects, non-conformances etc.); and
- Certifying site closure to the Contractor.

5.3 Transnet Project Environmental Resource

5.3.1 The Transnet Project Environmental Resource (PER) will be responsible for ensuring that this SOP and associated specifications or requirements are complied with. The Transnet PER will report functionally to the relevant PM.

5.3.2 The specific tasks will include:

- Preparation of the PES;
- Tender evaluation, development of environmental criteria and adjudication thereof;
- Liaison with the relevant environmental Competent Authorities;

- Review and approve site layout plan including any subsequent revisions thereof;
- Environmental Induction of Contractor's staff;
- Generate an inspection checklist prior to construction commencement;
- Review and Sign off Method Statements prepared by Contractor;
- Prepare environmental monitoring protocols/checklists to be used during construction;
- Prepare monthly conformance audit reports, including sign-off on Monthly Inspection Reports;
- Conduct monthly observation & inspections of all work places based on the approved inspection checklist;
- Audit conformance to Method Statements;
- Monitor the Contractor's compliance with this SOP and any other environmental requirements relevant to the site;
- Develop an Audit Finding and Close out Register that documents all audit findings, close out actions and the time frame allowed for in order to close the finding/s;
- Ensure that all environmental monitoring programmes (sampling, measuring, recording etc. when specified) are carried out according to protocols and schedules;
- Measurement of completed work (e.g. areas top soiled, re-vegetated, stabilised etc.);
- Attendance at scheduled SHE meetings, as and when required, and project coordination meetings;
- Ensure that site documentation (permits, licenses, EA, EMP, SOP-CEM, method statements, audit reports, waste disposal slips etc.) related to environmental management is maintained on the relevant Document Control System;
- Inspect and report on environmental incidents and check corrective action;
- Keep a photographic record of all environmental incidents;

- Environmental incident management as required by Transnet policies and procedures;
- Implementation of environmental-related actions arising out of the minutes from scheduled meetings;
- Management of complaints register;
- Conduct any environmental incident investigations;
- Coordinate and/or facilitate any environmental monitoring programmes e.g. EMI Inspections, ECO Audits, Transnet Environmental Assurance Audits etc.
- Collate information received, including monitoring results into a monthly report that is supported with photographic records to the Transnet CM and Transnet PM showing progress against targets; and
- Report environmental performance of the project on a monthly basis through relevant governance channels.

5.3.3 The tasks stipulated above may be conducted by one or more Project Environmental Resource, depending on the scale, complexity and sensitivity of the environment. Discretion to be taken by the Environment Lead within the area of control of the project site.

5.4 Transnet Construction Manager (CM)

5.4.1 The Transnet Construction Manager (CM) has overall responsibility for environmental management on site and reports to the Transnet PM. The Transnet CM is supported by the Transnet PER.

5.4.2 The specific tasks during the construction stage will include:

- Reviewing the monthly reports compiled by the Transnet PER;
- Approving method statements prepared by the Contractor;
- Communicating directly with the Contractor on environmental issues observed on-site; and
- Escalating any relevant environmental matters to the Transnet PM.

5.6 Environmental Control Officer

5.6.1 The Environmental Control Officer is an independent person legally appointed to monitor compliance of construction related activities with the conditions of the Environmental Authorisation. The ECO fulfils an autonomous role and submits reports to the Competent Authority at timeframes specified in the Environmental Authorisation.

5.6.2 The Environmental Control Officer will conduct the following tasks:

- Monitors compliance to the conditions of the EA, Environmental Management Programme (EMPr) and can include permits and licences applicable to a project;
- Attends project meetings as and when required;
- Conducts audits at a frequency stipulated on the EA/EMPr; and
- Compiles audit reports and submits them to relevant authorities.

5.7 Contractor's Environmental Officer

5.7.1 The Contractor's Environmental Officer (EO) must ensure implementation of the requirements of this SOP on site.

5.7.2 The Contractor's EO will liaise with the Transnet PER on site. It will be the responsibility of the Contractor's EO to ensure that all work is conducted according to the approved Method Statements and that the Contractor team's roles and responsibilities as set out in this document are fulfilled.

5.7.3 The Contractor EO's tasks will include:

- Developing an appropriate environmental file for approval by the Transnet PER prior to site access, including but not necessarily limited to (the environmental file must always be available and up to date on the construction site):
 - All environmental documents provided by Transnet in the tender e.g. policies, SOPs, standards, environmental approvals;

- Contractors commitments to comply with this SOP and associated documents as signed during tender;
- The Contractor's EMP;
- His/her CV;
- An organogram indicating reporting lines of all Contractor's staff (with names included);
- Contact Information for: the overall responsible person acting on behalf of the Contractor to execute the construction works; Contractor's CM; Contractor's EO; all relevant emergency personnel;
- A list of the Contractor's plant and equipment indicating a description of the plant/equipment, its fuel capacity, any hazardous components (oils, greases etc.), individual service/maintenance cycles and noise levels;
- A list of hazardous substances to be used during construction indicating: official substance name from Material Safety Data Sheet (MSDS); quantity on site; storage method; transport method to site; period to be used on site (all substances listed must have an MSDS on site in the environmental file);
- Site Layout Plan indicating but not necessarily limited to, access roads, site offices, material laydown areas, stockpile areas and parking areas, waste and effluent storage and handling facilities, entire construction footprint, no-go-areas, sewage and sanitary facilities. The plan must be appropriately drawn on a computer and must be clearly visible and properly scaled;
- A site establishment method statement (for more details on what method statements should entail the Contractor must refer to the Minimum Requirements for Construction Environmental Management)
- Conducting an activity-based environmental risk assessment based on the Contractor's scope of work;
- Agreeing on an appropriate inspection schedule with the Transnet PER (either daily or weekly);

- Ensuring that all required Contractor staff attends the environmental induction to be given by the Transnet PER (any Contractor's staff, sub-contractors or visitors to site must subsequently be inducted by the Contractor's EO);
- Inspection of the work area(s) as per schedule or authorised through written instruction by Transnet PER;
- Preparing activity-based Method Statements that indicate how environmental risks will be managed on site OR ensuring that the necessary environmental information is included in the Contractor's method statements (all method statements must be maintained in the Contractor's Environmental File);
- Identify local, provincial and national environmental legislation that applies to the Contractor's activities;
- Conduct ongoing Environmental Awareness Training of the Contractor's site personnel;
- Reporting, investigating and recording of any environmental incidents caused by the Contractor or due to the Contractor's activities, including their sub-contractors and visitors;
- Close out of environmental incidents;
- Attendance at all SHE meetings and induction programmes, and toolbox talks where required
- Monitor Waste Management;
- Monitor Water Management;
- Monitor Energy Management;
- Ensure that environmental signage and barriers are correctly placed;
- Taking required corrective action within specified time frame and close out of non-conformances; and
- Maintain site documentation related to environmental management on site.

5.7.4 The Contractor's EO will be expected to submit reports to the Transnet PER on a daily/weekly basis.

5.8 The Contractor

- 5.8.1 The Contractor shall comply with the requirements of this SOP and abide by the Transnet PM's instructions regarding the implementation of this SOP.
- 5.8.2 The Contractor must confirm that he will conform to the requirements of this SOP and any other documents provided to him by Transnet during tender.
- 5.8.3 The Contractor must recommend a suitably qualified, competent person to fulfill the role of the Contractor's EO at tender and if accepted by Transnet this person must be appointed when the Contract is awarded for the duration of construction. Should this person be replaced for whatever reason, the Contractor shall ensure that a person of similar qualification and competency is appointed in his/her place before the previous incumbent vacates his/her position.
- 5.8.4 The Contractor must obtain any relevant environmental approvals required by his activities that have not been obtained by Transnet e.g. permits for the destruction of protected plant species; grave relocation permits etc.
- 5.8.5 The Contractor shall have overall accountability for environmental compliance on site and will be held liable for any non-compliance with environmental statutes or non-conformances with this SOP due to his negligence.

5.9 Reporting Lines

- 5.9.1 The organisational structure identifies and defines the responsibilities and authority of the various entities involved in the project. All instructions and official communications regarding environmental matters will follow the organisational structure shown in Figure 1.
- 5.9.2 All instructions that relate to the SOP will still be given to the Contractor via the Transnet PM. In an emergency situation, however, the Transnet PER may give an instruction directly to the Contractor. Environmental Management of the site will be an item on the agenda of the monthly site meetings, and the Transnet PER will attend these meetings on request by the contractor. If at any time the Transnet

PM is uncertain in any way with respect to an environmentally related issue or specification in the SOP, he will consult with the Transnet PER .

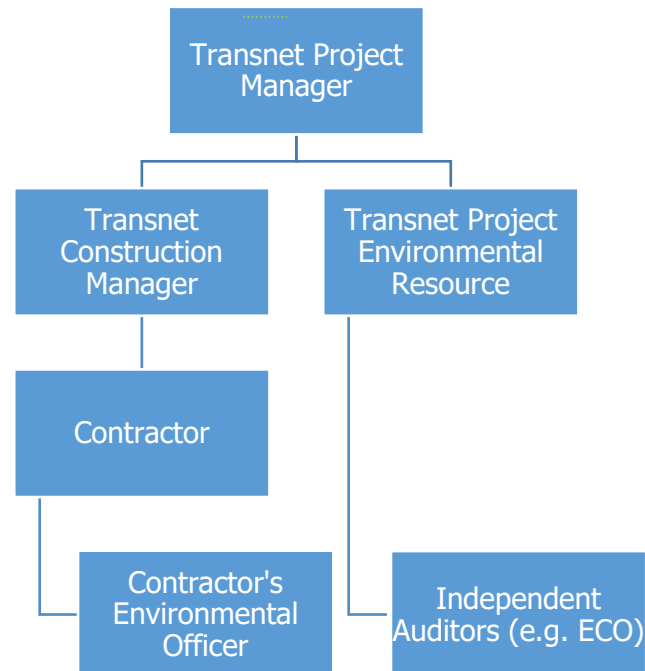


Figure 1: Typical Transnet Organogram for Construction Environmental Management²

6. STANDARD OPERATING PROCEDURE

6.1 Tender Stage (prior to Contract Award)

- The Transnet PM appoints or assign a Project Environmental Resource/s³.
- The Transnet PER requests the draft tender from the Transnet Procurement Department
- Transnet Procurement routes the draft tender to the Transnet PER

² Structure dependent on OD own structure and organizational operating model

³ Project complexity will determine the final environmental management structure on the project.

- The Transnet PER ensures the tender includes all relevant environmental documents and signs the routing slip.
- The Transnet Procurement Department issues the tender to prospective Contractor(s).
- The Contractor submits his bid which MUST include: a commitment to conform to this SOP signed by the duly delegated person; recommendation of a suitably qualified, competent person to fulfill the role of the Contractor's EO; Environmental Policy; and EMP
- After submission the Transnet Procurement Department will invite the Transnet PER to evaluate tender submissions (environmental section);
- The Transnet PER evaluates the prospective Contractor's environmental submission.
- The Contract is awarded to the successful bidder.

6.2 Construction Stage (prior to Site Access)

- The Contractor appoints the Contractor's Environmental Officer (EO) accepted by Transnet SOC Ltd.
- The Contractor provides his EO with all documents submitted during tender, including but not necessarily limited to:
 - All environmental documents provided by Transnet in the tender e.g. policies, SOPs, standards, environmental approvals etc;
 - commitment to conform to this SOP; and
 - The EMP.
- The Contractor's EO conducts an activity-based environmental risk assessment;
- The Contractor's EO develops an appropriate environmental file for approval by the Transnet PER, including but not necessarily limited to all the documents specified in Section 5.7 above (the environmental file must always be available and up to date on the construction site);
- The Contractor's EO submits the environmental file for acceptance to the Transnet PER;

- Once accepted, the Transnet PER recommends that site access be granted to the Transnet PM; and
- The Transnet PM issues the Contractor with a Site Access Certificate

6.3 Construction Stage (post Site Access)

- The Transnet PER inducts all Contractor's staff on the environmental requirements of the site;
- The Transnet PER has an inception meeting with the Contractor's EO on site where the following is agreed:
 - The contents of the contractor's environmental file (in addition to what was approved prior to granting site access). This will include but not necessarily be limited to: a list of interested and affected parties that may be impacted by construction e.g. surrounding landowners, nearby communities etc.; energy consumption information; water use information; environmental induction and awareness information; activity-based environmental method statements; complaints records; record of external communications; environmental incident reports; minutes of contractors environmental meetings.
 - The composition of the Project Environmental Specification (PES) and how it will be implemented. This will include but may not necessarily be limited to: Environmental Approvals (e.g. Environmental Authorisations, Water Use Licenses, Waste Management Licences, Atmospheric Emissions Licences etc.); Environmental Management Programmes/Plans approved by external parties/authorities; and any third party auditors/monitoring specialists (e.g. Environmental Control Officers; Independent Auditors; Transnet Environmental Assurance Specialists; Water Quality Monitoring experts etc.) that have a bearing on the contractor's scope of work.
 - The frequency of inspections to be conducted by the Contractor's EO (e.g. daily, weekly etc.)
 - The frequency of inspections to be conducted by the Transnet PER (e.g. daily, weekly and/or monthly). Notwithstanding that the frequency of

Transnet PER inspections will be agreed, the Contractor may never refuse the Transnet PER

- The format used and elements to be checked during Contractor's inspections
 - Reporting frequency and requirements
 - The process to be followed in handling Environmental Occurrences and – Non-conformances
- **Note:** All the aforementioned agreements will be formalized in the form of minutes which the Transnet - and Contractor's EO must sign and must subsequently be approved by the Transnet Project Environmental Resource.
 - The Transnet PER reviews the Contractor's activity-based environmental risk assessment and instructs the Contractor's EO to submit activity-based method statements for construction activities that may pose an environmental risk (for more details on what method statements should entail the Contractor must refer to the Minimum Environmental Requirements for Construction). Only once a method statement has been approved by the Transnet PER and Transnet CM and ECO (where relevant) may the Contractor execute the relevant activity.
 - The Contractor's EO submits the method statements to the Transnet PER for approval (these must also be approved by the Transnet CM);
 - The Transnet PER compiles a site audit checklist (covering all environmental compliance and conformance requirements) for approval by the Transnet Project Environmental Manager
 - Whilst the Contractor executes the work in terms of the requirements of the Contract, the Contractor's EO and Transnet PER execute their monitoring functions as per this SOP and other monitoring stakeholders/auditors as per the PES.
 - The Transnet PER shall submit monthly reports to the Transnet CM and PM indicating the following:
 - Date of the inspection(s);
 - Details and expertise of the Transnet PER;

- Scope and purpose for which the report was prepared;
- Description of the methodology used during the inspection and report compilation;
- Compliance and/or conformance status of all relevant/individual elements as per the inspection checklist culminating in an overall compliance/conformance percentage for the project;
- Assumptions;
- Description of consultation processes undertaken during the inspection(s) with a summary and associated records of such consultations;
- Environmental incidents and non-conformances;
- Photos of pertinent construction and environmental matters that occurred on site;
- Water abstracted/withdrawn during the month (in kiloliters) as well as an indication of the source;
- Water recycled and/or reused during the month (in kiloliters);
- Waste water discharged (in kiloliters);
- Waste (both general and hazardous) disposed (in tonnages) with an indication of waste type;
- Waste recycled (in tonnages);
- Alien invasive species eradicated (in hectares);
- Number of listed species safely relocated;
- Environmental Fines, Non-Compliances or Directives issues by authorities;
- Any NEMA Section 30 or NWA Section 19 incidents;
- Environmental Grievances;
- Rehabilitated Land (in hectares);
- Number of graves and/or heritage artifacts moved;
- Energy consumption for the project [Electricity(kWh); Gas (GJ); Oil(l); Diesel(l); Petrol(l); LPG(GJ)];
- Status of previous findings and/or observations; and
- Recommendations for improvement.

6.4 Post Construction

- The Contractor's EO submits a rehabilitation and site closure method statement for approval by the Transnet PER and Transnet CM.
- Once approved, the Contractor implements the rehabilitation method statement accordingly.
- The Contractor's EO submits a site close-out report for acceptance by the Transnet PER and CM.
- Post rehabilitation, the Transnet PER conducts a site closure inspection to ensure all requirements of the rehabilitation method statement have been met.
- Once rehabilitation has been accepted by the Transnet PER, the Contractor's EO sends the Transnet PER a copy of the entire environmental file (original to be handed over to Transnet as per document handover requirements of the Contract).
- On receipt of the environmental file, the Transnet PER recommends that a site closure certificate can be issued to the Transnet PM.
- The Transnet PM issues the Contractor with a Site Closure Certificate.

7. RECORDS

7.1 The responsibility for maintaining all records required by this SOP shall rest with the Contractor's EO; Transnet PER as specified below:

Record	Maintained By
1. Transnet PER Appointment Letter	Transnet PER
2. Signed Tender Routing Slip	Transnet PER
3. Contractor's Confirmation to conform to this CEM SOP	Transnet PER; Contractor's EO
4. Recommendation of Contractor's EO	Transnet PER

Record	Maintained By
5. Contractor's Environmental Policy	Transnet PER; Contractor's EO
6. Contractor's Environmental Management Plan	Transnet PER; Contractor's EO
7. Tender Evaluation Records from Transnet PER	Transnet PER
8. Contract	Transnet PER
9. Contractor EO's Appointment Letter and CV	Transnet PER
10. Activity-Based Environmental Risk Assessment	Transnet PER; Contractor's EO
11. Contractor's Organogram	Transnet PER; Contractor's EO
12. Contractor's Contact Information	Transnet PER; Contractor's EO
13. List of Contractor's Plant and Equipment	Contractor's EO
14. List of Hazardous Substances used by Contractor	Contractor's EO
15. Material Safety Data Sheets	Contractor's EO
16. Site Layout Plan	Transnet PER; Contractor's EO
17. Site Establishment Method Statement	Transnet PER; Contractor's EO
18. Minutes of Transnet PER – Contractor's EO Inception Meeting	Transnet PER; Contractor's EO
19. Environmental Induction Attendance Register (including material used during induction)	Transnet PER; Contractor's EO
20. Activity-based Method Statements	Transnet PER; Contractor's EO

Record	Maintained By
21. Contractor's Inspection Reports	Transnet PER; Contractor's EO
22. Transnet PER Inspection Reports	Transnet PER
23. List of Local, Provincial and National Environmental legislation applicable to the site	Contractor's EO
24. Environmental Awareness Attendance Registers (including material used)	Contractor's EO
25. Environmental Incident Reports	Transnet PER; Contractor's EO
26. Minutes of SHE Meetings	Transnet PER; Contractor's EO
27. Waste Records	Transnet PER; Contractor's EO
28. Water Records	Transnet PER; Contractor's EO
29. Energy Records	Transnet PER; Contractor's EO
30. Non-Conformance Records	Transnet PER; Contractor's EO
31. Approval of Contractor's Environmental File	Transnet PER
32. Site Access Certificate	Transnet PER
33. Approved Transnet PER Checklist	Transnet PER
34. Transnet Monthly PER Reports	Transnet PER
35. Rehabilitation Method Statement	Transnet PER; Contractor's EO
36. Contractor's Site Close-Out Report	Transnet PER; Contractor's EO
37. Transnet PER Site Closure Report	Transnet PER
38. Contractor's Environmental File Handover Transmittal	Transnet PER; Contractor's EO
39. Site Closure Certificate	Transnet PER

8. ANNEXURES

8.1 List of Construction Environmental Management Templates, Forms and Guidelines

8.2 009-TCC-CLO-SUS-TMP-11386.22 - Construction Environmental Management File Index

8.3 009-TCC-CLO-SUS-TMP-11386.23 - *Construction Environmental Management Process Flow*

Annexure 8.1 List of Construction Environmental Management Templates, Forms and Guidelines

No	Item Description	Document No
1.	Construction Environmental Management File Index	009-TCC-CLO-SUS-TMP-11386.1
2.	Project Environmental Specification (PES)	009-TCC-CLO-SUS-TMP-11386.2
3.	Declaration of Understanding (Signed)	009-TCC-CLO-SUS-TMP-11386.3
4.	Contractor's Information	009-TCC-CLO-SUS-TMP-11386.4
5.	Appointment of Contractors EO and Declaration of Understanding (Including CV and Job Profile)	009-TCC-CLO-SUS-TMP-11386.5
6.	Schedule of Contractor's Construction Plant and Equipment	009-TCC-CLO-SUS-TMP-11386.6
7.	Hazardous Substances Register	009-TCC-CLO-SUS-TMP-11386.7
8.	Emergency Contacts Register	009-TCC-CLO-SUS-TMP-11386.8
9.	Energy Consumption Register	009-TCC-CLO-SUS-TMP-11386.9
10.	Water Usage Register	009-TCC-CLO-SUS-TMP-11386.10
11.	Project Start-Up Checklist	009-TCC-CLO-SUS-TMP-11386.11
12.	Site Access Certificate	009-TCC-CLO-SUS-TMP-11386.12
13.	Method Statement Register	009-TCC-CLO-SUS-TMP-11386.13
14.	Method Statements	009-TCC-CLO-SUS-TMP-11386.14
15.	Waste Disposal Register	009-TCC-CLO-SUS-TMP-11386.15
16.	Daily Inspection Checklist	009-TCC-CLO-SUS-TMP-11386.16
17.	Weekly Inspection Checklist	009-TCC-CLO-SUS-TMP-11386.17
18.	Monthly Inspection Checklist	009-TCC-CLO-SUS-TMP-11386.18

No	Item Description	Document No
19.	Public Complaints Register	009-TCC-CLO-SUS-TMP-11386.19
20.	Application for Exemption	009-TCC-CLO-SUS-TMP-11386.20
21.	Site Closure Certificate	009-TCC-CLO-SUS-TMP-11386.21
22.	Contractor's Environmental Management File Handover	009-TCC-CLO-SUS-TMP-11386.22
23.	Basic Environmental Rules for Visitors	009-TCC-CLO-SUS-GDL-11386.23
24.	Basic Environmental Rules for Contractors	009-TCC-CLO-SUS-GDL-11386.24
25.	Basic Site Procedure	009-TCC-CLO-SUS-GDL-11386.25
26.	Contractor Environmental and Sustainability Specification Guidelines (CESSG)	TRN-IMS-GRP-GDL-014.04

Annexure 8.2 Construction Environmental Management File Index

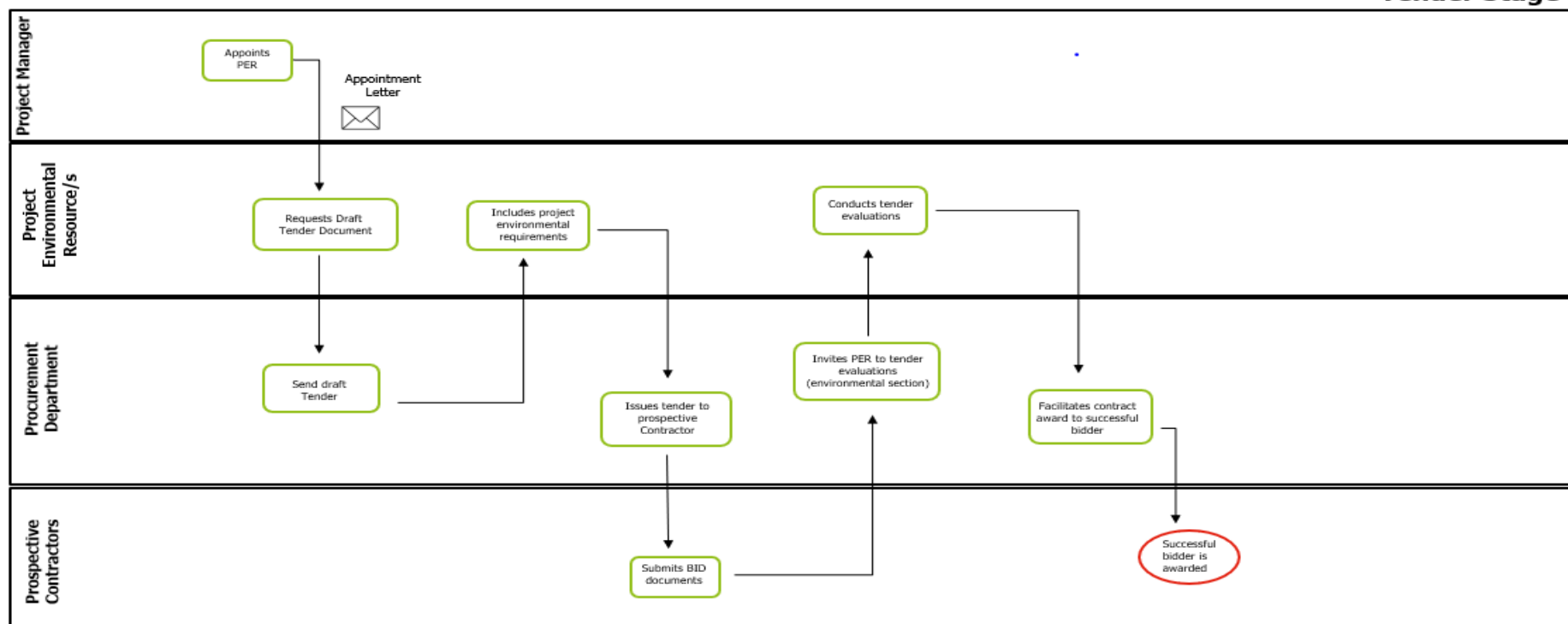
No	Item Description	Document No
1	Transnet Integrated management System (TIMS) Policy Statement	-
2.1	Standard Operating Procedure (SOP) - Construction Environmental Management (CEM)	009-TCC-CLO-SUS-11386
2.2	Environmental and Sustainability Specification Guidelines	TRN-IMS-GRP-GDL-014.04
3	Project Environmental Specification (PES)	009-TCC-CLO-SUS-TMP-11386.2
4	Declaration of Understanding (Signed)	009-TCC-CLO-SUS-TMP-11386.3
5.1	Contractor's Information	009-TCC-CLO-SUS-TMP-11386.4
5.2	Contractor's Environmental Policy	-
5.3	Contractor's Organogram	-
5.4	Contractor's Environmental Management Plan	-
5.5	Appointment of Contractors EO and Declaration of Understanding (Including CV and Job Profile)	009-TCC-CLO-SUS-TMP-11386.5
6	Schedule of Contractor's Construction Plant and Equipment	009-TCC-CLO-SUS-TMP-11386.6
7	Hazardous Substances Register	009-TCC-CLO-SUS-TMP-11386.7
8	Emergency Contacts Register	009-TCC-CLO-SUS-TMP-11386.8
9	Energy Consumption Register	009-TCC-CLO-SUS-TMP-11386.9
10	Water Usage Register	009-TCC-CLO-SUS-TMP-11386.10
11	Training Attendance Register	TIMS Procedure
12	Project Start-Up Checklist	009-TCC-CLO-SUS-TMP-11386.11
13	Site Access Certificate	009-TCC-CLO-SUS-TMP-11386.12
14	Method Statement Register	009-TCC-CLO-SUS-TMP-11386.13

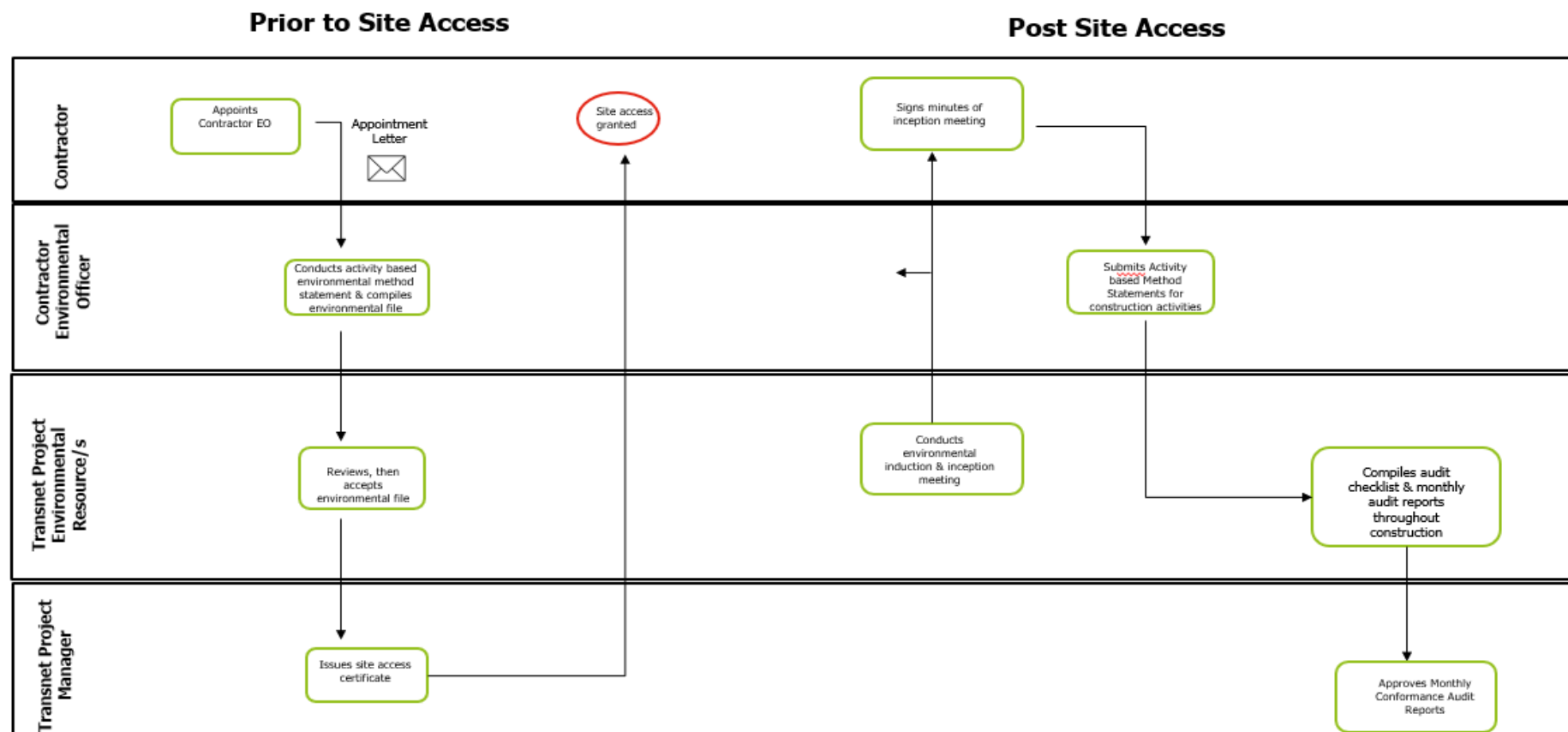
No	Item Description	Document No
15	Method Statements	009-TCC-CLO-SUS-TMP-11386.14
16	Waste Disposal Register	009-TCC-CLO-SUS-TMP-11386.15
17.1	Daily Inspection Checklist	009-TCC-CLO-SUS-TMP-11386.16
17.2	Weekly Inspection Checklist	009-TCC-CLO-SUS-TMP-11386.17
17.3	Monthly Inspection Checklist	009-TCC-CLO-SUS-TMP-11386.18
17.4	Environmental Inspection Findings Close-out Register	TIMS Procedure
18	Public Complaints Register	009-TCC-CLO-SUS-TMP-11386.19
19	Occurrence Register	TIMS Procedure
20	Transnet Occurrence Notification Report	TIMS Procedure
21.1	Environmental Occurrence Technical Form	TIMS Procedure
21.2	On-site Investigation Form – Incident Commander Report	TIMS Procedure
21.3	Investigation Form Report for Level 3 & 4 Occurrences	TIMS Procedure
21.4	Incident Commander Appointment Letter	TIMS Procedure
22	Non-Conformance Register	TIMS Procedure
23	Non-Conformance Report Form	TIMS Procedure
24	Non-Compliance Stop Certificate	TIMS Procedure
25	Application for Exemption	009-TCC-CLO-SUS-TMP-11386.20
26.1	Site Closure Inspection Form	TIMS Procedure
26.2	Site Closure Certificate	009-TCC-CLO-SUS-TMP-11386.21
26	Contractor's Environmental Management File Handover	009-TCC-CLO-SUS-TMP-11386.22

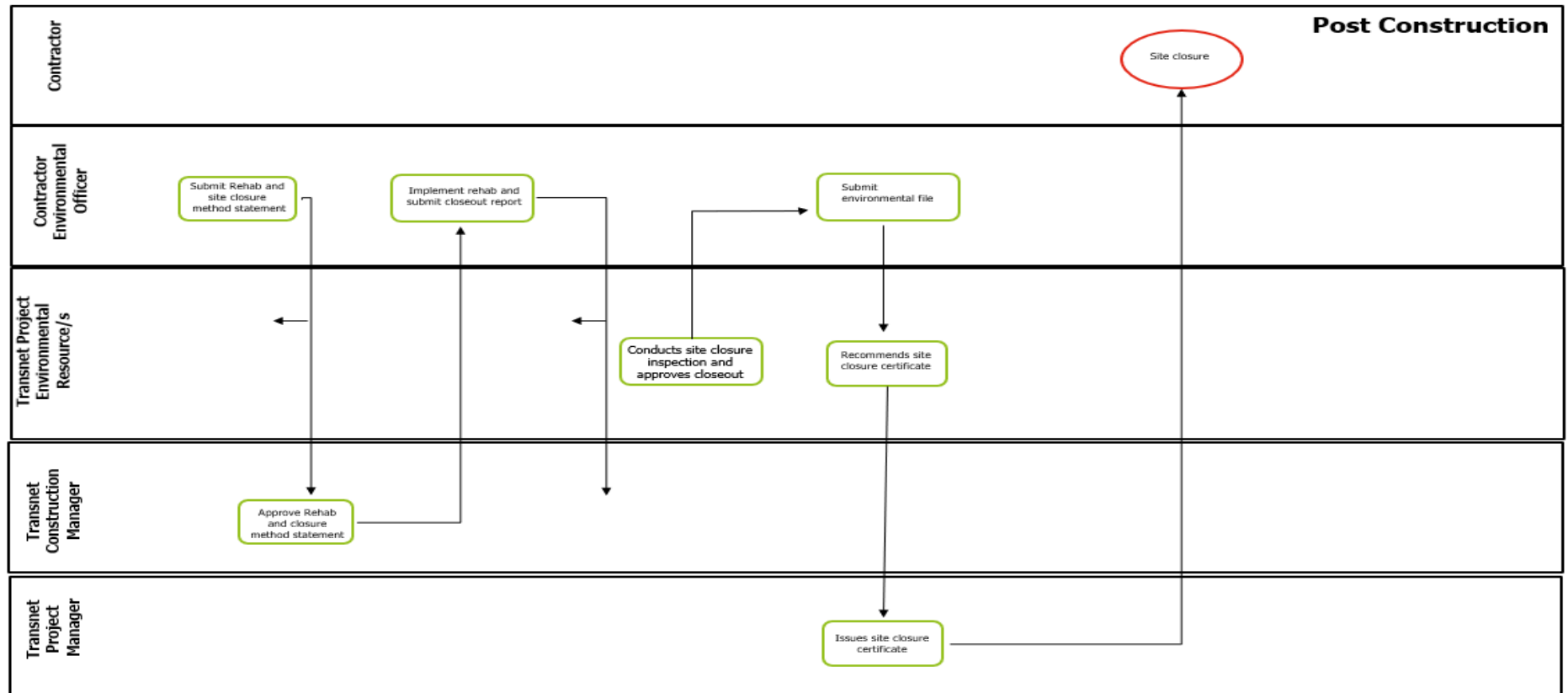
No	Item Description	Document No
27.1	Basic Environmental Rules for Visitors	009-TCC-CLO-SUS-GDL-11386.23
27.2	Basic Environmental Rules for Contractors	009-TCC-CLO-SUS-GDL-11386.24
27.3	Basic Site Procedure	009-TCC-CLO-SUS-GDL-11386.25

Annexure 8.3 Construction Environmental Management Process Flow

Tender Stage







Transnet Integrated Management System (TIMS) POLICY COMMITMENT STATEMENT

Transnet is a State-Owned Company that operates as an integrated freight transport company, formed around six core operating divisions namely Transnet Freight Rail (TFR), Transnet Engineering (TE), Transnet National Ports Authority (TNPA), Transnet Port Terminals (TPT) and Transnet Pipelines (TPL) and Transnet Property (TP) that complement each other.

Transnet has developed and implemented a TIMS that forms an integral part of the core business. We are committed to **transporting freight, passengers, and provide excellent service** to our customers along key transport corridors. This is done in order to **competitively grow our business**, enhance efficiency of South Africa's logistics system and thereby contribute to economic vibrancy.

TIMS is established, implemented and maintained in accordance with recognised best practices that will enable us to:

- Incorporate and comply with applicable **legislation, regulations, codes, standards, protocols, best practices and customer requirements** to which we subscribe in order to achieve our business objectives;
- Set and achieve **objectives and targets** that address significant enterprise-wide **strategic, tactical and operational risks, opportunities and mitigate the consequences** thereof;
- Proactively implement **waste and pollution prevention strategies** to prevent **environmental degradation**;
- Continually promote the prudent and **sustainable** use of **energy and natural resources**;
- Provide **quality products and services** in order to meet our customers' requirements;
- Provide **safe and secure environment** for our employees and stakeholder;
- Carry out our business in a manner which **protects our assets and information** and **prevents injuries and ill health** to our employees and stakeholders;
- Promote **safe operational principles** during operations to minimize occurrences of safety incidents;
- Strategically **source our contractors** through fair, equitable and transparent processes;
- Provide **socio-economic development** as a good corporate citizen;
- Promote **food safety practices** in our food preparation and handling environments;
- Ensure **proficiency and preparedness** to deal with and **effectively recover** from any **emergency situations**;
- **Develop, train and manage our employees** through inspirational leadership, provide the necessary **organizational information, knowledge and resources** to achieve the intention of this policy statement;
- **Communicate, engage and provide support** and **appropriate information** to relevant stakeholders in order to build relationships based on care, openness, mutual trust and involvement as well as promote a TIMS risks awareness culture;
- Allocate **responsibilities and accountabilities** for meeting the requirements of the TIMS policy statement.
- Drive an **integrated assurance management programme** to ensure **continual improvement** of TIMS.

The TIMS Policy Commitment Statement shall be **reviewed every three years or as circumstances dictate** to ensure that it remains **current and relevant**. Our progress on the achievement of the policy statement commitments shall be reported in the respective Governance Structures. Transnet recognises its accountability for TIMS; all employees including contractors have a role to play in delivering on the commitment set out in this policy statement.


Group Chief Executive

Date: 29/07/2020
Next Review Date: 29/06/2023

Copies of the approved TIMS Policy Commitment Statement can be made available to external Stakeholders on request.