NEC3 Term Service Contract (TSC)

entered into by and between

Transnet SOC Ltd
Registration Number 1990/000900/30
(hereinafter referred to as the *"Employer"*)

and

.....

Registration Number .....
(hereinafter referred to as the "*Contractor*")

Description of Service: **The refurbishment service of traction transformer and rehabilitation of transformer oil spillage on the ground, at Transnet Freight Rail Wesselsnek, Colworth, Cayingubo and Brankwal substations, for a service period of four (4) months.**

Contract Number: **HOAC-LSE-43251**

Start Date: **To be advised.**

Completion Date: **To be advised.**

CONTRACT DOCUMENTS

Form of Offer & Acceptance

Contract Data

Part One – Data provided by the *Employer*

Part Two – Data provided by the *Contractor*

Conditions of Contract (3rd Edition – available separately)

Prices

Service Information

Affected Property

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:

For the refurbishment service of traction transformer and rehabilitation of transformer oil spillage on the ground, at Transnet Freight Rail Wesselsnek, Colworth, Cayingubo and Brankwal substations, for a service period of four (4) months.

The tenderer, identified in the Offer signature block, has

either	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.
or	examined the 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 (Total price for schedules A, B, C & D).	
Value Added Tax @ 15% is	
The offered total of the Prices inclusive of VAT is (Total price for schedules A, B, C & D).	
(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)

Name & signature of witness

Date

Tenderer's CIDB registration number:

Acceptance

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

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*		
Name & signature of witness	*(Insert name and address of organisation)*	Date

Schedule of Deviations

Note:

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

No.	Subject	Details
1		
2		
3		
4		

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, trading through its operating division Transnet Freight Rail.
Name & signature of witness		

Date

C1.1 Contract Data

Part one - Data provided by the *Employer*

Clause	Statement	Data
1	**General**	
	The *conditions of contract* are the core clauses and the clauses for main Option:	
		A: Priced contract with price list
	dispute resolution Option	**W1: Dispute resolution procedure**
	and secondary Options	
		X2: Changes in the law
		X17: Low service damages
		X18: Limitation of liability
		X19: Task Order
		Z: *Additional conditions of contract*
	of the NEC3 Term Service Contract (June 2005) (and amended June 2006 and April 2013)	
10.1	The *Employer* is:	**Transnet SOC Ltd**
	Address	Registered address: **Transnet Corporate Centre** **138 Eloff Street** **Braamfontein** **Johannesburg** **2000**
	Having elected its Contractual Address for the purposes of this contract as:	**Transnet Freight Rail** **Ladysmith depot** **Cnr Lyell and Alexander Road** **Ladysmith** **Alfred Duma** **KwaZulu-Natal province**
	Tel No.	**066 299 1867**

10.1	The *Service Manager* is (name):	**Ntombifuthi Dube**
	Address	**Transnet Freight Rail** **Ladysmith depot** **Cnr Lyell and Alexander Road** **Ladysmith** **Alfred Duma** **KwaZulu-Natal province**
	Tel	**(036) 271 2164 / 066 299 1867**
	e-mail	**Ntombifuthi.dube@transnet.net**
11.2(2)	The Affected Property is	**Electrical substations** – refer to attached **Part C4).**
11.2(13)	The *service* is	**Refurbishment service of traction transformer and rehabilitation of transformer oil spillage on the ground.**
11.2(14)	The following matters will be included in the Risk Register	**No additional data is required for this section of the *conditions of contract*.**
11.2(15)	The Service Information is in	The Scope of Service
12.2	The *law of the contract* is the law of	**the Republic of South Africa subject to the jurisdiction of the Courts of South Africa.**
13.1	The *language of this contract* is	**English**
13.3	The *period for reply* is	**2 (two) weeks.**
2	**The *Contractor*'s main responsibilities**	No additional data is required for this section of the *conditions of contract*.
21.1	The *Contractor* submits a first plan for acceptance within	**2 weeks from the Contract Date**
3	**Time**	
30.1	The *starting date* is.	**To be advised.**
30.1	The *service period* is	**Four (4) months.**
4	**Testing and defects**	**No additional data is required for this section of the *conditions of contract*.**
5	**Payment**	

50.1	The *assessment interval* is	**25th (twenty fifth) day of each successive month.**
51.1	The *currency of this contract* 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 *interest rate* is	**The prime lending rate of the Standard Bank South Africa.**
6	**Compensation events**	**No additional data is required for this section of the *conditions of contract*.**
7	**Use of Equipment Plant and Materials**	**No additional data is required for this section of the *conditions of contract*.**
8	**Risks and insurance**	
80.1	These are additional *Employers* risks	**None**
83.1	The minimum limit of indemnity for insurance in respect of loss and damage to property (except goods, plant and materials and equipment) and liability for bodily injury 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 *Contractor* deems necessary as the *Employer* is not carrying this indemnity.**
83.1	The minimum limit of indemnity for insurance in respect of death of or bodily injury to employees of the *Contractor* arising out of and in the course of their employment in connection with this contract for any one event is:	**As prescribed by the Compensation for Occupational Injuries and Diseases Act No. 130 of 1993 and the *Contractor's* common law liability for people falling outside the scope of the Act.**
83.1	Motor Vehicle Liability Insurance comprising (as a minimum) "Balance of Third Party" Risks including Passenger and Unauthorised Passenger Liability indemnity with a minimum indemnity limit of R 10 000 000	

83.1	The *Contractor* liability to the *Employer* for indirect or consequential loss including loss of profit, revenue and goodwill, is limited to:	**The Total of the Prices.**
83.1	For any one event, the *Contractor* liability to the *Employer* for loss of or damage to the *Employers* property is limited to:	**The Total of the Prices.**
83.1	The *Contractor* total liability to the *Employer* for all matters arising under or in connection with this contract, other than the excluded matters, is limited to:	**The Total of the Prices.**
9	**Termination**	**There is no Contract Data required for this section of the *conditions of contract*.**
10	**Data for main Option clause**	
A	**Priced contract with price list**	
20.5	The *Contractor* prepares forecasts of the final total of the Prices for the whole of the *service* at intervals no longer than	**2 weeks.**
11	**Data for Option W1**	
W1.1	The *Adjudicator* is (Name)	**Both parties will agree as and when a dispute arises. If the parties cannot reach an agreement on the *Adjudicator*, the chairman of the Association of Arbitrators will appoint an *Adjudicator*.**
W1.2(3)	The *Adjudicator nominating body* is: If no *Adjudicator nominating body* is entered, it is	**The Association of Arbitrators (Southern Africa).**
W1.4(2)	The *tribunal* is:	**Arbitration**
W1.4(5)	The *arbitration procedure* is	**The Rules for the Conduct of Arbitrations of the Association of Arbitrators (Southern Africa).**
	The place where arbitration is to be held is	**Johannesburg, 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**

X17 Low service damages

X17.1 The *service level table*

Performance Level	**% Achieved of performance against Time worked for each task order.**	**Low Service damages for each task order.**
Rate of Tank refurbishment as per Part C3: Service Information.	96% - 100% performance achieved.	R0 (nil)
	90% - 95% performance achieved.	2.5% of the Price for Service Provided to date in terms of the Task Order.
	85% - 89% performance achieved.	5% of the Price for Service Provided to date in terms of the Task Order.
	80% - 84% performance achieved.	7.5% of the Price for Service Provided to date in terms of the Task Order.
	<84% performance achieved.	10% of the Price for Service Provided to date in terms of the Task Order.

X18	**Limitation of liability**	
X18.1	The *Contractor*'s liability to the *Employer* for indirect or consequential loss is limited to	**Nil.**

X18.2	For any one event, the *Contractor*'s liability to the *Employer* for loss of or damage to the *Employer*'s property is limited to	**The deductible of the relevant insurance policy**
X18.3	The *Contractor*'s liability for Defects due to his design of an item of Equipment is limited to	**The cost of correcting the defect.**
X18.4	The *Contractor*'s total liability to the *Employer*, for all matters arising under or in connection with this contract, other than the excluded matters, is limited to	**Total of the Prices.**
X18.5	The *end of liability date* is	**3 years after the end of the *service period*.**
X19	**Task Order**	
X19.5	The *Contractor* submits a Task Order programme to the *Service Manager* within	**5 days of receiving the Task Order**
Z	***Additional conditions of contract***	
Z1	**Obligations in respect of Termination**	
Z1.1		The following will be included under core clause 91.1: In the second main bullet, after the word 'partnership' add 'joint venture whether incorporated or otherwise (including any constituent of the joint venture)'; and Under the second main bullet, insert the following additional bullets after the last sub-bullet: • commenced business rescue proceedings (R22) • repudiated this Contract (R23)
Z1.2	Termination Table	The following will be included under core clause 90.2 Termination Table as follows: Amend "A reason other than R1 – R21" to "A reason other than R1 – R23"
Z1.3		Amend "R1 – R15 or R18" to "R1 – R15, R18, R22 or R23."

Z2	**Right Reserved by Transnet to Conduct Vetting through SSA**	
Z2.1		Transnet reserves the right to conduct vetting through State Security Agency (SSA) for security clearances of any Contractor who has access to National Key Points for the following without limitations: 1. Confidential – this clearance is based on any information which may be used by malicious, opposing or hostile elements to harm the objectives and functions of an organ of state. 2. Secret – clearance is based on any information which may be used by malicious, opposing or hostile elements to disrupt the objectives and functions of an organ of state. 3. Top Secret – this clearance is based on information which may be used by malicious, opposing or hostile elements to neutralise the objectives and functions of an organ of state.
Z3	**Additional clause relating to Collusion in the Construction Industry**	
Z3.1		The contract award is made without prejudice to any rights Transnet may have to take appropriate action later with regard to any declared bid rigging including blacklisting.
Z4	**Protection of Personal Information Act**	
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

C1.2 Contract Data

Part two - Data provided by the *Contractor*

The tendering contractor is advised to read both the NEC3 Term Service Contract (June 2005) and the relevant parts of its Guidance Notes (TSC3-GN) in order to understand the implications of this Data which the tenderer is required to complete.

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

Clause	Statement	Data
10.1	The *Contractor* is (Name): Address Tel No. Fax No.	
11.2(8)	The *direct fee percentage* is The *subcontracted fee percentage* is	% %
11.2(14)	The following matters will be included in the Risk Register	
11.2(15)	The Service Information for the *Contractor*'s plan is in:	
21.1	The plan identified in the Contract Data is contained in:	
24.1	The key persons are: 1. Name: Job: Responsibilities: Qualifications:	

Experience:

2. Name:

Job

Responsibilities:

Qualifications:

Experience:

CV's (and further key person's data including CVs) are in

A	**Priced contract with price list**	
11.2(12)	The *price list* is in	.....
11.2(19)	The tendered total of the Prices is	**R**.....

PART C2: PRICING DATA

Document reference	Title	No of pages
C2.1	Pricing instructions: Option A	1
C2.2	Price List	6

C2.1 Pricing instructions: Option A

1.1 The *conditions of contract*

1.2 How the contract prices work and assesses it for progress payments

Clause 11 in NEC3 Term Services Contract (TSC), June 2005 (with amendments June 2006 and April 2013) Option A states:

Identified and defined terms 11 11.2

(17) The Price for Services Provided to Date is the total of

- the Price for each lump sum item in the Price List which the *Contractor* has completed and
- where a quantity is stated for an item in the Price List, an amount calculated by multiplying the quantity which the *Contractor* has completed by the rate.

(19) The Prices are the amounts stated in the Price column of the Price List, where a quantity is stated for an item in the Price List, the Price is calculated by multiplying the quantity by the rate.

1.3 Measurement and Payment

1.3.1 The Price List provides the basis of all valuations of the Price for Services Provided to Date, payments in multiple currencies and general progress monitoring.

1.3.2 The amount due at each assessment date is based on activities and/or milestones completed as indicated on the Price List.

1.3.3 The Price List work breakdown structure provided by the *Contractor* is based on the activity/milestone 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 Price List work breakdown structure is compiled to the satisfaction of the *Employer* with any additions and/or amendments deemed necessary.**

1.3.4 The *Contractor's* detailed Price List summates back to the activity/milestone provided by the *Employer* and is sufficient detail to monitor completion of activities related to the operations on the Accepted Plan in order that payment of completed activities may be assessed.

1.3.5 The Prices are obtained from the Price List. The Prices includes for all direct and indirect costs, overheads, profits, risks, liabilities, obligations, etc. relative to the contract.

PRICE LIST

Activity no.	Description	UOM	Qty	Rate	Total price of each activity (excl. VAT)
	Brakwal 3 kV DC Traction Substation				
A	**INDOOR WORK**				
A1	Supply and install **AC primary circuit breaker control panel** with all protection relays in accordance with Transnet Freight Rail specification BBB 2721.	ea.	2.00		
A2	Supply and install **AC/DC distribution panel** with all protection relays in accordance with Transnet Freight Rail specification BBB 2721.	ea.	1.00		
A3	Supply and install **3kV DC Rectifier** with its associated control equipment.	ea.	2.00		
A4	Supply and install a complete **mechanical interlocking system** with a set of its mechanical keys in accordance with Transnet Freight rail specification BBB5452 version 6.	sum	2.00		
A5	Transport a 1.8 mH 3kV DC air **core Reactor** from Talana and Malonjeni and install at Brakwal substation. (Free issue).	ea.	2.00		
A6	Supply and install **Wave filter equipment** with its cables and busbars. It must be in accordance with Transnet Freight Rail specification BBB 3139 for capacitor, and Specification BBB 3162 for inductor coil.	sum	2.00		
A7	Supply and install **3kV DC Positive isolator** with its cables and busbars.	sum	2.00		
A8	Supply and install a 53 cell 110V Planté lead acid **battery bank.** The capacity of the battery should be 100 amperes.	sum	1.00		
A9	Supply and install 110V **Battery charger** in accordance with Transnet Freight Rail specification BBB 5452.	ea.	1.00		
A10	Supply and install **3kV DC high Speed circuit breaker** in accordance with Transnet Freight Rail specification BBB 5452.	ea.	6.00		
A11	Supply and install **3kV DC undervoltage relay** in accordance with Transnet Freight Rail specification BBB 5452.	ea.	1.00		

A12	Supply and install **Telecontrol system** with its associated control cables and cards.	sum	1.00		
A13	Supply and install **3kV DC earth leakage relay** in accordance with Transnet Freight Rail specification BBB 2721 and drawing CEE-TBD-0007.	ea.	1.00		
A14	Supply and install **indoor earthing** with all its **cables** in accordance with Transnet Fright rail drawing CEE-TBD-0007.	sum	1.00		
A15	Supply and install **safety and burglar doors (1.5m, 3 x 0.5m)** in accordance with Transnet freight rail specification BBB 5452 version 7.	ea.	4.00		
A16	Supply and install **indoor lights and emergency lightning.**	Sum	1.00		
	SUB TOTAL FOR BRAKWAL SUBSTATION INDOOR WORK:				

	Brakwal 3 kV DC Traction Substation				
B	**OUTDOOR WORK**				
B17	Supply and install **Metal Oxide surge arrester** in accordance with Transnet Freight Rail specification BBB 0845.	sum	2.00		
B18	Supply and install control cables for **Main Current transformer.**	sum	1.00		
B19	Supply and install **High voltage AC primary circuit breaker** in accordance with Transnet specification BBB 0938 or BBB 1267.	sum	1.00		
B20	Fill oil on and seal **Main Current transformer** in accordance with Transnet freight rail specification BBB 0937.	sum	1.00		
B21	Supply and install **88kV Main transformer** in accordance with Transnet freight rail specification BBB 5019.	ea.	2.00		
B22	Supply and install a three phase **150kVA Auxiliary Transformer** with its protection system in accordance with Transnet Freight rail specification BBB 2721.	ea.	1.00		
B23	Supply and fill the Main and Auxiliary transformers with **Transformer Oil** in accordance with Transnet specification	sum	1.00		

	BBB0937.				
B24	Supply and install the **AC-Earth leakage system** complete in the HT outdoor yard as per Specification no. BBB 3059 and drawing no. BBB 3620.	ea.	1.00		
B25	Supply and install **outdoor earthing material.** All material to complying with Transnet Fright rail specification BBB 3059 and drawing BBB 3620.	sum	1.00		
B26	Supply and install Hot dipped galvanised steel **palisade fence** in accordance with Transnet Freight Rail specification BBD 9751 and drawing CEE-TDF-0016.	m	170.00		
B26	Supply and install **Anti-Climb Security Fence (Clear-Vu Fence).**	m	180.00		
B27	Supply and install a Hot dipped galvanised **1.5m lockable steel gate** in accordance with Transnet Freight Rail specification BBD 9751 and drawing CEE-TDF-0016.	ea.	3.00		
B28	Supply and install new all **outdoor busbars** in accordance with Specification BBB5452 version 7.	Sum	1.00		
B29	Supply and install all **wall bushings** in accordance with Transnet Freight Rail specification BBB 5452.	sum	1.00		
B30	Supply yard stones (19mm).	sum	1.00		
B31	Supply **Metal Chequer plates** in accordance with Transnet Freight Rail specification BBB 5452 version 7.	Sum	1.00		
B32	Supply and install **outdoor light.**	Sum	1.00		
B33	Testing and commissioning.	Sum	1.00		
B34	Catalogues, manuals and drawings	sum	1.00		
B35	P's & G's	sum	1.00		

SUB TOTAL FOR BRAKWAL SUBSTATION OUTDOOR WORK:	

	Wesselsnek 3 kV DC Traction Substation				
C	**OUTDOOR WORK**				
C36	Refurbish **Main Traction Transformer** (transformer windings, complete re-gasketing and oil fill up) in accordance with Transnet specification.	sum	1.00		
C37	Supply and install **outdoor earthing material.** All material to complying with Transnet Fright rail specification BBB 3059 and drawing BBB 3620.	sum	1.00		
C38	Supply yard stones (19mm).	sum	1.00		
C39	Supply and install **Anti-Climb Security Fence (Clear-Vu Fence).**	m	180.00		
C40	Testing and commissioning.	sum	1.00		
C41	Catalogues, manuals and drawings	sum	1.00		
C42	P's & G's	sum	1.00		
SUB TOTAL FOR WESSELSNEK SUBSTATION OUTDOOR WORK:					

	Brakwal, Wesselsnek, Cayingubo and Colworth 3 kV DC traction substation				
D	**OUTDOOR WORK**				
D43	Contamination rehabilitation of transformer oil spillage on the ground at **Brakwal substation.**	m	120		
D44	Pre-rehabilitation sampling (soil samples) at **Brakwal substation.**	ea.	1.00		

D45	Post-rehabilitation sampling (soil samples) at **Brakwal substation.**	ea.	1.00		
D46	Disposal at landfill for **Brakwal substation.**	ton	1.00		
D47	Contamination rehabilitation of transformer oil spillage on the ground at **Wesselsnek substation.**	m	120.00		
D48	Pre-rehabilitation sampling (soil samples) at **Wesselsnek substation.**	ea.	1.00		
D49	Post-rehabilitation sampling (soil samples) at **Wesselsnek substation.**	ea.	1.00		
D50	Disposal at landfill for **Wesselsnek substation.**	ton	1.00		
D51	Contamination rehabilitation of transformer oil spillage on the ground at **Cayingubo substation.**	m	120.00		
D52	Pre-rehabilitation sampling (soil samples) at **Cayingubo substation.**	ea.	1.00		
D53	Post-rehabilitation sampling (soil samples) at **Cayingubo substation.**	ea.	1.00		
D54	Disposal at landfill for **Cayingubo substation.**	ton	1.00		
D55	Contamination rehabilitation of transformer oil spillage on the ground at **Colworth substation.**	m	120		
D56	Pre-rehabilitation sampling (soil samples) at **Colworth substation.**	ea.	1.00		
D57	Post-rehabilitation sampling (soil samples) at **Colworth substation.**	ea.	1.00		
D58	Disposal at landfill for **Colworth substation.**	ton	1.00		
D59	P's & G's	sum	1.00		

SUB TOTAL FOR WESSELSNEK SUBSTATION OUTDOOR WORK:	

E	**Total price for schedules A, B, C & D, exclusive if VAT**	**R**
F	**Add: 15% VAT portion (if applicable)**	**R**
G	**Total price for schedules A, B, C & D, inclusive of VAT (where applicable)**	**R**

PART C3: SERVICE INFORMATION

Document reference	Title	No of pages
	This cover page	1
C3.1	*Service Information*	3
	Total number of pages	4

C3.1 Service Information

1 Description of the *service.*

1.1 Executive overview.

The service that the *Contractor* is to perform includes:

a) The contractor shall supply and install indoor, outdoor equipment, traction transformer, auxiliary transformer, refurbish the transformer and clean up contaminated ground, as per scope under the jurisdiction of the Depot Engineer, Ladysmith.

b) Work be under the supervision of Transnet qualified Technical Officer/Technical Supervisor.

c) All work must be handed over to the Technical Officer/Supervisor on a daily or weekly basis.

d) All material shall conform to Transnet drawings & specifications and applicable SANS and IEC standards.

1.2 Background.

a) Ladysmith Infrastructure Maintenance Depot's Electrical department is experiencing high number of theft incidents and vandalism of substation equipment. From Glencoe to Rushbrook, Wesselsnek substation has been offload due to theft and vandalism of the traction transformer and between Danskraal to Harrismith, Brakwal Substations is off-loaded due to theft and vandalism.

b) These types of incidents impact Container Corridor substation availability, which directly reduces network availability due to low traction voltage thus preventing Transnet Freight Rails' ability to deliver goods to its customers safely and reliably which results in the negative impact of companies' revenue.

c) The Electrical department is requiring services to reinstate these substations back on-load within the safe operating standards, by where successful bidder shall repair vandalised damages, stolen equipment, sabotaged traction transformer amongst other equipment including environmental rehabilitation of transformer oil spillage at Wesselsnek, Brakwal and Colworth traction substations.

1.3 At Wesselsnek.

Outdoor earthing, transformer oil has been depleted, transformer windings stolen, and transformer top cover vandalized the substation cannot be switched on, and transformer oil spilled to the ground. As a result, Wesselsnek substation is off-load. The adjacent substations to Wesselsnek which are Elandslaagte and Wasbank are currently feeding the line which provides a strain to the network.

REPAIRING OF MAIN TRACTION TRANSFORMERS.

2.1.1. Transnet freight rail shall specify and authorise further action once the fault report and the repair details have been received.

2.1.2. For any additional work that is discovered during the repair process the Contractor must submit a further damage report and quote for the additional work. Only after an inspection by

Transnet freight rail, shall further action be authorised in writing by Transnet freight rail and the revised planning date will be approved.

2.1.3. On review of the repair time of transformers, Transnet freight rail reserves the right to request the Contractor to approach other approved suppliers. The main Contractor shall be responsible for the successful completion and guarantee of the work carried out by the other supplier.

TESTING AND ANALYSIS OF TRANSFORMER OIL

2.2.1. The contractor shall sample and test the transformer oil in accordance with the specification as shown below on Table 1. The test shall be done before the transformer is filled with oil.

Table 1. Tests to be done on virgin oil after delivery to site.

Oil	Unit	Specification	Reference and / or test method
Aromatic content	%	6 to 14 max	IEC 60590
Total fufural and furans	mg/kg	Not detectable	BS 148
Poly aromatics hydrocarbons	%	≤ 3,0 max	IP 346
Aniline point	^{0}C	63 to 84	ASTM D611
Interfacial tension @ 20 ^{0}C	mN/m	≥ 40 min	ISO 6295
Neutralization value	mg KOH/g	≤ 0,03 max	BS 148
Corrosive sulphur		Non corrosive	Cigre CCD - method
Moisture	mg/kg	≤ 20 max	IEC 60814
Antioxidant additives	% by mass	No additives	IEC 60666
Oxidation stability acidity after 164 h @ 110 ^{0}C	mg KOH/g	≤ 0,4 max	IEC 60074
Oxidation stability sludge after 164 h @ 110 ^{0}C	% by mass	≤ 0,1 max	IEC 60074
Dielectric Strength	kV/ 2,5 mm	≥ 60 min	IEC 60156
Dissipation factor @ 90 ^{0}C		≤ 0,005 max	IEC 60247
Gassing Tendency	mm^3/min	≤ 5	BS 148
Particles contamination and fibres per 100 ml	Particles size <15 µm	≤ 1000 particles/dm^3	ISO 4406 of 2000
Silicon Content	ppm	Not detectable	
Polychlorinated biphenyl	mg/kg	Not detectable	EPA 608b

2.2.2. The oil tests shall be done by an accredited laboratory. The copy of the accreditation certificate shall be submitted together with the oil results.

2.2.3. The Contractor shall provide the following tests 48 hours after energizing the transformer:

- Moisture Content
- Acid Content
- Dielectric Strength Test
- Dissolved Gas Analysis
- Sludge Test
- Chlorine Test
- PCB Test*
- Furanic Test
- PCB test will be performed only if the Chlorine test is positive

2.2.4. The contractor shall provide a hard copy of the results to the Project Manager and Technical officer.

2.2.5. For each parameter tested, the Contractor shall provide an allowable limit. For example, the report must show the breakdown of tests as shown below:

Test Value Allowable
Electric Strength 35kV >60kV

2.2.6. Contractor shall quote for:

a) Connect pipe work & drain transformer oil from transformer into oil tank at site.
b) Supply and install transformer windings
- 6 phase rectifier transformer (ASEA, 1982)
- Type TMY 23
c) Supply and replace complete gel breather and silica gel
d) Visual inspection – inside and outside the transformer
e) Re-gasket transformer completely
f) Winding temperature gauge (supply and replace)
g) Paint transformer (grey main transformer and white conservator tank)
h) Replace all earthing ac and earth mat
i) Testing and Commissioning, ratio test, winding and megger test
j) Install new palisade fencing 24x1.2m except gates

SERVICE CONDITIONS

2.4.1. The transformer shall be repaired to its rated design for continuous operation under the following conditions.

2.4.2. Altitude: 0 - 1 800 m above sea level.

2.4.3. Ambient temperature: Minus 10 degrees Celsius to plus 40 degrees Celsius.

2.4.4. (Daily average: plus 35 degrees Celsius)

2.4.5. Humidity: as high as 86 percent.

2.4.6. Exposed surfaces will be in a highly polluted and corrosive atmosphere.

CLEANING THE TRANSFORMER

2.5.1. In order to get rid of decomposed oil content (carbon) and sludge, the coils, core and the tank of the transformer shall be washed with suitable flushing agents.

DRYING THE TRANSFORMERS

2.6.1. The following methods of drying out the transformer may be used:

2.6.2. The vapour phase process.

2.6.3. The oven dry process.

2.6.4. The vacuum dry out process.

2.6.5. Contractors who offer a vapour phase process to clean and dry transformers must ensure that the process does not cause any deterioration on the aged insulation.

2.6.6. For the vapour phase process the moisture level shall be less than 1,0 percent.

2.6.7. The Contractor shall indicate what dry-out process is to be implemented and the method used to determine the specified moisture level.

INSULATING OIL

2.7.1. The Contractor shall ensure that the mineral insulating oil used for filling the repaired transformer at the works and for topping up on site shall be filtered and tested for electrical strength, water content, acidity, sludge, flashpoint, resistivity and dielectric dissipation factor. The oil shall comply with the requirements specified in SABS 555. 1995.

2.7.2. The Contractor shall test the oil from the transformer that has failed in service to determine the cause of failure and to ensure that the oil is not contaminated with Polychlorinated Biphenals (P.C.B's).

INSPECTION

2.7.3. Transnet freight rail reserves the right to be present during repair work and testing and must be timeously advised of the dates of commencement of the repair work and of testing.

2.7.4. Arrangements must be made timeously via the "Project Manager" for Transnet freight rail staff from the Ladysmith Depot to perform witness and authorise the tests for the repaired transformer.

2.7.5. Calibration certificates less than 11 months old issued by a recognised authority for all instruments to conduct tests on transformers shall be available for inspection, if requested by Transnet freight rail.

CORROSION PROTECTION AND PAINT FINISH

2.8.1. All interior and exterior metal surfaces of the transformer, and associated apparatus, subject to corrosion, shall be prepared for corrosion proofing and painted in accordance with the practice recommended in SABS 064.1979 and as specified in Transnet freight rail's Specification No. CEE.045.2002/1.

2.8.2. All external surfaces shall be finished with an acceptable outer coat colour to match the existing finish.

2.8.3. The conservator tank shall be painted white.

GUARANTEE

2.9.1. The Contractor shall guarantee the repaired transformer against faulty workmanship for a period of twelve months from the date the transformer has been energised.

2.9.2. The "Project Manager" shall notify the Contractor in writing of the date when the transformer is energised.

2.9.3. The Contractor shall certify that the transformer is free of P.C.B. contaminants and label the transformer accordingly.

PENALTIES

2.9.4. The following penalties will apply or part thereof for the delays. i.e. 0.5% per day of the repair price of the transformer.

OIL FILTERING EQUIPMENT

2.9.5. The oil purification plant shall be mobile, as the purification shall take place on the field. It shall be mounted on a roadworthy double axle trailer and be covered by a waterproof canopy.

2.9.6. Purification of the oil shall be carried out when the transformer is off load.

2.9.7. The oil shall be passed through a porous media for exposure to the effect of vacuum and easy of releasing moisture and gaseous contaminants. Porous media cartridge called coalescer is recommended for this process.

2.9.8. The filtration cartridges shall be constructed from non-migration type cellulose material with a high dirt holding capacity.

2.9.9. The plant shall have built in sensing devises to continually monitor all vital parameters. If any of the parameters deviate from normal operation, the plant shall shut down instantaneously preventing flow of oil.

2.9.10. The following parameters shall be monitored:

- Temperature
- Vacuum level
- Pressure
- Foam and overflow
- Motor overload

2.9.11. Diagnostic light shall remain on to inform the operator what failed and what corrective action is required.

2.9.12. A low watt density heater shall be used to prevent heat degradation of the oil. The maximum power density shall 1.7-watt/ cm2.

2.9.13. Heater elements shall be encapsulated in steel tubes and be completely insulated from the oil to prevent fire hazards and to provide uniform heating of the oil.

2.9.14. Heaters shall be protected by fail-safe electronic type temperature controller.

2.9.15. The purifying plant should be able to achieve the following from three passes: -

- Remove water from 50 ppm down to 10ppm.
- Remove gas from 11% by volume of oil to 1%.
- Remove 95% of particles over 0,5 micrometer.
- Improve the dielectric strength to at least 40 kV.

2.9.16. Instrumentation and electrical controls shall be located in a dust proof enclosure.

2.9.17. When the plant is operating automatically, a manual override of all functions shall be provided. A plant shall have an emergency shut down switch, which will override any operation.

2.9.18. If high foam is detected, vacuum shall be reduced to acceptable level, and if the foaming persists for five seconds the plant shall shut down.

2.9.19. If the inlet or discharge valve is closed during start up or operation low-level alarm should activate, and the plant shall be shut down.

2.9.20. The plant shall be fitted with phase sequence relay and automatic interlock to prevent incorrect rotation of equipment.

2.9.21. The plant shall be fitted with vacuum booster to enhance transformer dry out and the oil overflow shall be incorporated into this booster to prevent oil from transformer from entering into the booster.

2.9.22. The plant shall be fitted with programmable logic controller (PLC) to control the operation of the plant. The operator should simply push the start button and the PLC shall sequentially start the plant.

2.9.23. The plant shall also operate manually by the operator by selecting manual control. When the plant is operating manually, the PLC shall monitor all alarm functions of the plant.

2.9.24. The plant shall be equipped with an in-line water in oil monitor. The monitor shall display water content in the transformer oil in parts per million (ppm).

2.9.25. The plant shall be equipped with a temperature monitor. The monitor shall display the temperature of transformer oil in degree Celsius (0C).

Soil Rehabilitation

3.1.1. This contract covers the responsibilities and services to be rendered by the environmental service provider to undertake the requisite degree of due diligence, to assess the nature, level and extent of contamination, as well as to remediate/rehabilitate the polluted environment in in line with the requirements of Part 8 of the National Environment Management Act, 2008 as effected on 2 May 2013.

3.1.2. Conduct pre-rehabilitation contamination assessment through collection of samples and laboratory analysis (two soil samples from each site) through auguring methodology, two (2) surface water and two (2) ground water samples (only if a borehole water source may be identified).

3.1.3. Composite soil samples shall be taken at depth intervals of 0 to 300mm, to 500mm, to 1000mm and beyond (if need be, to the point or depth of treatment requirement.)

3.1.4. The contamination analysis should be completed as per the South African National Accreditation System (SANAS) accredited/certified analytical methodologies.

3.1.5. The proposed scope of work includes the remediation of hydrocarbons (Transformer Oil) polluted environment. The contaminated soil/ground and crusher stones (concrete) shall be preferable treated in-situ (on-site) and the disposal of highly saturated soil as a last resort.

3.1.6. Compile and submit remediation/rehabilitation report and associated documentation to Transnet Freight Rail for submission to the competent authorities (DFFE and DWS) to close the incident.

3.1.7. It is the incumbent service provider's duty to ensure that the remediation report, inclusive of the remediation/rehabilitation methodologies and monitoring results are of acceptable standards and is deemed enough by the competent authorities to close the incident.

3.1.8. All work shall in the traction substation shall be done within the confines of the Rail Network management's specifications.

3.1.9. In addition to the appointed service provider's own methodology to clean and remediate the polluted environment, the following is also mandated.

3.1.9.1.1. Remove crusher stones, then clean and back fill.
3.1.9.1.2. Highly contaminated soil must be disposed on the approved disposal site and a waste disposal certificate must be submitted to TFR.
3.1.9.1.3. Clean soil must be back filled and compacted.
3.1.9.1.4. If or when borrow soil material for back filling is brought to the site, a proof that the material was legally procured must be supplied to and approved by the environmental specialist or project manager.

3.1.10. The successful contractor is expected to conduct remediation/ rehabilitation activities as per the specifications below:

- Total area to be rehabilitated will be demined during site meeting.

Soil samples pre- and post-remediations:

- Number of soil samples will be agreed upon during site meeting.

Water samples

- Pre-remediation x2 (1 x Upstream and 1 x Downstream)
- Post-remediation X2 ((1 x Upstream and 1 x Downstream)

Total water samples = 4

3.1.11. After completion of work, contractor is expected to submit certificate from Environment stating that work was a complete success.

1.4 At Cayingubo and Colworth.

Transformer oil has been depleted and spilled on to the ground. As a result, the Cayingubo and Colworth substation soil need to be rehabilitated, these substations cannot be switched on and will remain offload. The adjacent substations to Cayingubo, are Danskraal and Besters are currently feeding the line and they are 15km apart. The adjacent substations to Colworth which is Brakwal is currently off-load, only Van Reenen and Bester substations are currently feeding the line and they are 37km apart.

2 At Brakwal.

All Indoor and outdoor equipment was completely damaged, transformer oil has been depleted and spilled onto the ground, transformer windings were stolen, transformer top cover was vandalized. As a result, the Brakwal substation cannot be switched back on and will remain off-load. The adjacent substations to Brakwal which is Colworth is off-load, only Van Reenen and Bester are currently feeding the line and they are 37 km apart.

However, should there be a fault on either of these four substations then the network will have an electrical a dead section and train movement will not be possible for both Danskraal – Harrismith and Glencoe - Rushbrook. This leads to train cancellations or inability to operate electrical locomotives and inherently leads to loss of revenue for the business.

INDOOR

1.1.1. Strip out the existing indoor electrical equipment and associated cables and busbar. Transport and deliver to the Infrastructure Maintenance Depot in Danskraal Ladysmith Depot.

1.1.2. Supply, install and commission new indoor electrical equipment in accordance with Transnet specification BBB 5452 (version-7).

Only equipment approved by Transnet shall be accepted.

- 2 x 6MVA Rectifiers
- 2 x Reactor coil (Free issue)
- 2 x Wave filters
- 6 x High speed circuit breakers
- 2 x AC Primary circuit breakers
- 2 x AC PCB control panel
- 1 x AC/DC Distribution panel
- 1 x 110V Battery bank
- 1 x 110V Battery charger
- 1 x 3kV undervoltage relay
- 1 x DC – Earth leakage relay
- 2 x Interlock system
- 1 x Telecontrol
- Indoor earthing
- 3 x Safety and burglar doors
- 2 x Rectifier Bay

1.1.3. All installations shall include the necessary required insulators, bolts and fasteners.

1.1.4. All copper connections to steel (galvanised) shall be tinned or silver coated and connection grease shall be used.

1.1.5. Nuts and bolts on busbar connections shall be stainless steel.

1.1.6. If necessary, where old equipment is removed, modified or new equipment installed, the rectifier bay fence must be suitably modified to close off the rectifier HT bay. If circumstances require replacement of the existing fence, the Contractor shall supply and install a new HT fencing similar to the existing fence.

1.1.7. Supply cables in accordance with Transnet specification BBC 0198 version-1.

1.1.8. All cabling shall be clearly marked with high quality permanent markers. Sticker marking numbers on cables will not be accepted.

1.1.9. The following cables shall be supplied and installed:

1.1.9.1. 110V DC supply cable (16mm^2 x 2 core) from control panel to all the high-speed circuit breakers.

1.1.9.2. 110V DC cable (16mm2 x 2 core) from the battery bank to the panel.

1.1.9.3. Control cable (2.5mm^2 x 12 core) from control panel to all the high-speed circuit breakers.

1.1.9.4. Control and protection cables to the control panel from the

- AC disconnects (2.5mm^2 x 4 core)
- CT's (4mm^2 x 4 core)
- PCB (2.5mm^2 x 19 core and 2.5mm^2 x 2 core for heater)
- transformer (2.5mm^2 x 4 core)

1.1.9.5. Auxiliary transformer (25mm^2 x 4 core)

1.1.9.6. Multi core cable (1.5mm^2 x 40 core) from control panel to Tele-control. Transnet shall connect the Tele-control end of the cable.

1.1.10. Ensure that painting of steel components of electrical equipment is in accordance with Transnet specification CEE.0045-2001/2.

1.1.11. Ensure that all steelwork is galvanised in accordance with SANS 121.

1.1.12. Ensure that all concrete work (i.e. casting of plinths and foundations) is in accordance with Transnet specification S420 (1999)

1.1.13. Patch up walls and floors where the old equipment has been removed.
1.1.14. On completion of the installation the Contractor shall submit as build drawings and schematic diagrams of all new equipment, indicating interfaces with existing equipment.

OUTDOOR

1.2.1. Strip out and dismantle the existing main high voltage outdoor equipment, and transport to the Infrastructure Maintenance Depot in Danskraal Ladysmith.

1.2.2. Supply and install outdoor equipment in accordance with Transnet specification BBB 2721 version 10.
Only equipment approved by Transnet shall be accepted.
- 2 x Main Traction Transformers
- 2 x Primary Circuit Breakers
- 1 x Main Current Transformer (Refill and seal)

1.2.3. All fasteners (nuts & bolts) shall be secured using flat or beveled washers as necessary, as well as lock washers.
1.2.4. All steelworks shall be galvanised in accordance with SANS 121, CEE 0183 and where required, painted in accordance with specification CEE 0045.
1.2.5. Cables and earthing conductors connected to the equipment installed on steel support structures shall be supported to the structure by means of a cable tray.
1.2.6. When doing trenching in the substation outdoor yard for laying cables, the ballast stone shall be removed, soil shall be properly compacted back, and the ballast cleaned and placed back neatly.
1.2.7. Joints in cables and busbars will not be accepted.
1.2.8. Junction boxes underground, shall not be used.
1.2.9. All equipment, tools, material, cleaning agents etc. for execution of the work done in the substation outdoor yard shall be provided by the Contractor.
1.2.10. Upon completion of the work, the Contractor shall submit as-build drawings, diagrams, catalogues and manuals.

OUTDOOR EARTHING

1.3.1. Conduct and record earth resistivity measurements. Design a suitable earth system for the specific location in accordance with specification no. BBB 3059 and drawing no. BBB 3620.
1.3.2. Remove the necessary crusher stone before excavation commences.
1.3.3. Excavate trenches for the interconnecting conductors between structures and the earthing system.
1.3.4. Supply and install earth spikes, interconnecting conductors, bonding cables and connections between the various structures. This shall include connections to all steel structures, screens, fences and the substation main earth spike/mat.
1.3.5. All electrical equipment shall be connected as prescribed by Specification no. BBB 3059 (Ver 1), section 8.0 and drawing no. BBB 3620.
1.3.6. Close up trenches, compact refill material and restore the crusher stone to its original condition.
1.3.7. The installed earth system at each substation shall be tested for compliance with the requirements of specification BBB 3059. Transnet Freight Rail's representative shall witness tests.

DESIGN OF THE OUTDOOR EARTH SYSTEM

1.4.1. The successful tenderer shall conduct tests, measuring the average resistivity of the soil condition for every substation outdoor yard. (This survey shall form part of the work scope and costs incurred must be included in the tendered amount per substation).

1.4.2. Drawing no. BBB 3620 (Ver4) shall be used as a guideline for designing the earthing systems at every substation. The contractor shall submit his design to the Maintenance Manager prior to any physical work commences at the substations.
1.4.3. Thus, cognisance shall be taken of the earth resistivity at the individual substations, the local conditions, size and configuration of substation yards when designing the earth system.

TRENCHING

1.5.1. Before any trenching commences, the contractor shall consult with Transnet Freight Rail staff for supervision and approval of the routing of the trenches in the outdoor yard.
1.5.2. The contractor shall ensure that the crusher stone is not contaminated during excavations.
1.5.3. The depth of the trenches shall be a minimum of 700mm.
1.5.4. The design/s of the earthing system at the substation and tendered prices shall allow for and include excavation in soil.
1.5.5. Should excavation be done in soft or hard rock, such excavation will be paid for at the relevant rates in Appendix 2 of Specification no. CEE.0023-ISS-2012.

Notes: Soft rock will be taken as broken or friable rock which can be removed by pick or mechanical excavator, or paving breaker.
Hard rock will be taken as rock which cannot be removed by mechanical excavator and requires drilling and blasting or splitting. This includes reinforced or plain concrete.

1.5.6. The contractor and Transnet Freight Rail staff shall inspect the trenches before being backfilled.
1.5.7. Care should be taken not to damage existing cables and services during trenching.
1.5.8. All materials to be used shall be in accordance with Specification no BBB 3059 Ver 1.

MECHANICAL INTERLOCKING DEVICES

1.6. Supply and install two (2) complete sets of interlocking mechanisms (similar to existing installation) of the key exchange type, which must include the AC disconnects, positive isolator, auxiliary transformer short out links to the HT bay gate in the correct sequence in accordance with the specification BBB 5452 version-7.

EARTHING AND CHEQUER PLATES

1.7.1. The Contractor shall only re-do earthing at the new panels inside the substation Building (i.e. indoor earthing) in accordance with the drawing no. CEE-TBD-7
1.7.2. The crimping lugs of the interconnection cables shall be correspondingly marked with the busbar as shown on drawing no. CEE-TBD-7.
1.7.3. Only hexagon crimps will be accepted on all crimping lugs.
1.7.4. Resistance between the DC earth leakage busbar and the substation earth matt shall not be less than 25 Ohms.
1.7.5. All exposed cable trenches shall be covered with chequer plates resting on a frame 3 mm below the floor level.
1.7.6. Should any modification or addition to the chequer plates be necessary, it shall have a thickness of 3 mm and shall be earthed to the DC earth leakage system.
1.7.7. Contractor shall use welded bolts on the chequer plates with crimping lugs of 95 mm^2 welding cable to connect the chequer plates to the DC earth leakage system.
1.7.8. The Contractor shall connect all existing checker plates as well as existing equipment (all indoor steelwork) to the DC earth leakage system.

INSTALLATION

1.8.1. The Contractor shall be responsible for the transport to site, off-loading, handling, storage and security of all material required for the construction/execution of the works.

1.8.2. The Contractor shall arrange own security for the duration of the installation until commissioning of the substation.

1.8.3. All fasteners on steelwork, components and electrical connections (nuts and bolts) shall be secured using flat as well as lock washers.

INTERCONNECTION OF EQUIPMENT

1.9.1. High conductive silicon grease shall be liberally applied to all the connections.

1.9.2. All dissimilar metal connections (Cu to Al) shall be made using bi-metallic clamps that are specifically designed and manufactured to make that connection (ad hoc fabricated clamps are not acceptable).

1.9.3. Conductors between separately mounted outdoor equipment shall incorporate a degree of flexibility to avoid over-stressing of the connections.

1.9.4. All HT electrical equipment interconnections shall be done using conductors similar to that being used in the existing installation.

2.4 *Employers* Objective.

The *Employer*'s current objective is to acquire the services of a CIDB electrical engineering *Contractor*, who can execute environmental rehabilitation activities as well, to cover the refurbishment service of traction transformer and rehabilitation of transformer oil spillage on the ground, at Transnet Freight Rail Wesselsnek, Colworth, Cayigubo and Brankwal substations, for a service period of four (4) months.

3 SERVICE

3.1 Temporary service, Affected Property & constraints on how the *Contractor* Provides the Service.

3.1.1 Affected Property entry and security control, permits, and Affected Property regulations.

The *Contractor* complies with the *Employer*'s Affected Property entry and security control, permits and Affected Property regulations.

3.1.2 Restrictions to access on Affected Property, roads, walkways and barricades:

3.1.2.1 The *Contractor* is specifically excluded from entering the *Employer*'s Operational Areas which are adjacent to the Affected Property. The *Contractor* plans and organises his work in such a manner so as to cause the least possible disruption to the *Employer*'s operations.

3.1.2.2 The *Contractor* ensures safe passage of his team, to traffic and around the Affected Property working areas at all times which includes providing flagmen.

3.1.2.3 The *Contractor* ensures that any of his staff, labour and Equipment moving outside of his allocated Affected Property and Service Areas, does not obstruct the operations of the *Employer*. To this end, access routes are allocated and coordinated by the *Service Manager.*

3.1.2.4 The *Contractor* ensures that all his Service staff, labour, and Equipment remains within his allocated and fenced off working Area.

3.1.2.5 All *Contractor's* staff and labour working within Affected Property complies with Transnet Freight Rail (TFR) operational safety requirements and are equipped with all necessary personnel protective equipment (PPE).

3.1.3 People restrictions on Affected Property; hours of work, conduct and records:

The *Contractor* keeps daily records of his people engaged on the Affected Property with access to such daily records available for inspection by the *Service Manager* at all reasonable times.

4 LIST OF REFERENCE SPECIFICATIONS.

The above stipulation is for information and reference purposes only.
Please refer to electronic references.

Drawing number	Revision	Title
n/a	n/a	**n/a**

5 PROCUREMENT.

4.1 The *Contractor's* Invoices

4.1.1 The invoice states the following:

- Invoice addressed to Transnet SOC Limited.
- Transnet Limited's VAT No: 4720103177.
- Invoice number.
- The *Contractor's* VAT Number; and

4.1.2 The invoice contains the supporting detail:

A bill format as per the tender document indicating previously paid, paid to date and amount due for the month.

The invoice is presented either by post or by hand delivery.

The invoice is presented as an original.

PART 4: AFFECTED PROPERTY

Core clause 11.2(2) states.

"Affected Property is property which

- Is affected by the work of the *Contractor* or used by the *Contractor* in Providing the Service
- 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 the Affected Property.

1. Description of the Affected Property and its surroundings.

1.1. General description.

a) Transnet Freight Rail electrical substations at Wesselsnek, Colworth, Cayingubo and Brakwal.

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

a) Transnet Freight Rail electrical substations at Wesselsnek, Colworth, Cayingubo and Brakwal.