NEC3 Engineering & Construction Contract

Between ESKOM HOLDINGS SOC Ltd
(Reg No. 2002/015527/30)

and [Insert at award stage]
(Reg No. _____)

for THE REFURBISHMENT OF COAL SILOS 1 TO 6 AT TUTUKA POWER STATION

Contents:		**No of pages**
Part C1	**Agreements & Contract Data**	**[●]**
Part C2	**Pricing Data**	**[●]**
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CONTRACT No.

Part C1: Agreements & Contract Data

Contents: **No of pages**

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:

Refurbishment of Coal Silos 1 to 6 at Tutuka Power Station

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

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.

Options B	The offered total of the Prices exclusive of VAT is	
	Sub total	
	Value Added Tax @ 15% is	
	The offered total of the amount due inclusive of VAT is[1]	
	(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 (if applicable) .....

[1] This total is required by the *Employer* for budgeting purposes only. Actual amounts due will be assessed in terms of the *conditions of contract*.

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 signed between them of this document, including the Schedule of Deviations (if any).

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

Signature(s)			
Name(s)			
Capacity	**Power Station General Manager**		
for the *Employer*	*Eskom Holdings SOC Ltd* *Megawatt Park, Maxwell Drive, Sandton, Johannesburg*		
Name & signature of witness		Date	

Note: If a tenderer wishes to submit alternative tenders, use another copy of this Form of Offer and Acceptance.

Schedule of Deviations to be completed by the *Employer* prior to contract award

Note:

1. 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.
4. Shall be revised to incorporate the effect of it.

No.	Subject	Details
1		
2		
3		
4		
5		
6		
7		

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		**Power Station General Manager**
On behalf of	*(Insert name and address of organisation)*	*Eskom Holdings SOC Ltd* *Megawatt Park, Maxwell Drive, Sandton, Johannesburg*
Name & signature of witness		
Date		

C1.2 ECC3 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	
		B: Priced contract with bill of quantities
	dispute resolution Option	**W1: Dispute resolution procedure**
	and secondary Options	
		X1: Price adjustment for inflation
		X2 Changes in the law
		X5: Sectional Completion and Delay
		X7: Delay damages
		X13: Performance Bond
		X15: Limitation of *Contractor's* liability for design to reasonable skill and care
		X16: Retention
		X18: Limitation of liability
		Z: *Additional conditions of contract*
	of the NEC3 Engineering and Construction Contract, April 2013 (ECC3)	
10.1	The *Employer* is (Name):	**Eskom Holdings SOC Ltd (reg no: 2002/015527/30), a state-owned company incorporated in terms of the company laws of the Republic of South Africa**
	Address	**Registered office at Megawatt Park, Maxwell Drive, Sandton, Johannesburg**
10.1	The *Project Manager* is:	
	Address	**Tutuka Power Station Bethal Road Standerton 2430**
	Tel	
	e-mail	

10.1	The *Supervisor* is: (Name)	
	Address	**Tutuka Power Station** **Bethal Road** **Standerton** **2430**
	Tel No.	
	e-mail	
11.2(13)	The *Works* are	**Refurbishment of Coal Silos 1 to 6 at Tutuka Power Station**
11.2(14)	The following matters will be included in the Risk Register	• **Inclement weather (Rain, wind, snow, storm, heat wave)** • **Integration/changes during outages** • **Access to the Plant** • **Outage movements** • **Poor or no general plant lighting** • **Working in dusty area** • **Working in very noisy area** • **Labour/ community unrest** • **Noncompliance to the approved Integrated Waste Licence and Water Use Licence leading to work stoppages, fines and or prosecutions** • **Hazards associated with the operation of construction machinery and equipment** • **Working at heights** • **Hazardous gas** • **Power supply interruptions or failure** • **Fire and smoke** • **Snakes** • **Construction hazards related to reinforced concrete Works** • **National disaster and any other unforeseen pandemics**
11.2(15)	The *boundaries of the site* are	**Areas within the boundaries of Tutuka Power Station necessary for the Contractor to perform the works.**
11.2(16)	The Site Information is in	**Part C4: Site Information**
11.2(19)	The *Works* Information is in	**Part C3: Scope of Work and all documents and drawings to which it refers.**
12.2	The *law of the contract* is the law of	**The Republic of South Africa**
13.1	The *language of this contract* is	**English**
13.3	The *period for reply* is	**Seven (7) calendar days and twenty (24) hours for health and safety related matters**
2.	**The *Contractor's* main responsibilities**	**Data required by this section of the core clauses is provided by the *Contractor* in Part C2 and terms in italics used in this section are identified elsewhere in this Contract Data.**

3. Time

11.2(3)	The completion date for the whole of the works is	**Thirty-six (36) months after contract award**		
11.2(9)	The *key date*s and the *condition*s to be met are:	***Condition* to be met**		***key date***
		1	**Site establishment**	**In accordance with the Accepted Programme**
		2	**Coal Silo 1**	**In accordance with the Accepted Programme**
		2	**Coal Silo 2**	**In accordance with the Accepted Programme**
		3	**Coal Silo 3**	**In accordance with the Accepted Programme**
		4	**Coal Silo 4**	**In accordance with the Accepted Programme**
		5	**Coal Silo 5**	**In accordance with the Accepted Programme**
		6	**Coal Silo 6**	**In accordance with the Accepted Programme**
30.1	The *access dates* are:	**Part of the Site**		**Date**
		1	**Site establishment**	**In accordance with the Accepted Programme**
		2	**Coal Silo 1**	**In accordance with the Accepted Programme**
		2	**Coal Silo 2**	**In accordance with the Accepted Programme**

		3	**Coal Silo 3**	**In accordance with the Accepted Programme**
		4	**Coal Silo 4**	**In accordance with the Accepted Programme**
		5	**Coal Silo 5**	**In accordance with the Accepted Programme**
		6	**Coal Silo 6**	**In accordance with the Accepted Programme**
31.1	The *Contractor* is to submit a first programme for acceptance within	**Two (2) weeks of the contract award**		
31.2	The *starting date* is	**TBC**		
32.2	The *Contractor* submits revised programmes at intervals no longer than	**Seven (7) calendar days**		
35.1	The *Employer* is not willing to take over the *Works* before the Completion Date.	**For sectional completion of each Coal Silo all commission must be completed and report submitted and accepted.**		
4.	**Testing and Defects**			
42.2	The *defects date* is	**52 weeks after Completion of the whole of the *Works* for each section.**		
43.2	The *defect correction period* is	**Two weeks for non-load loss and non-safety related defects and one week for load loss related defects**		
	Except that the defect correction period for	**Safety related defects shall be immediate or within 12 hours.**		
5.	**Payment**			
50.1	The *assessment interval* is	**The assessment interval shall be one (1) month, and assessments will be conducted on the 20th day of each month, or on the preceding Friday if the 20th falls on a weekend or public holiday.**		
51.1	The *currency of this contract* is the	**South African Rand.**		
51.2	The period within which payments are made is	**60 days after receipt of valid tax invoice.**		
51.4	The *interest rate* is	**the publicly quoted prime rate of interest (calculated on a 365-day year) charged from time to time by the Standard Bank of South Africa Limited (as certified, in the event of any dispute, by any manager of such bank, whose appointment it shall not be necessary to prove) for amounts due in Rands and**		

		(ii) the LIBOR rate applicable at the time for amounts due in other currencies. LIBOR is the 6 month London Interbank Offered Rate quoted under the caption "Money Rates" in The Wall Street Journal for the applicable currency or if no rate is quoted for the currency in question then the rate for United States Dollars, and if no such rate appears in The Wall Street Journal then the rate as quoted by the Reuters Monitor Money Rates Service (or such service as may replace the Reuters Monitor Money Rates Service) on the due date for the payment in question, adjusted *mutatis mutandis* every 6 months thereafter and as certified, in the event of any dispute, by any manager employed in the foreign exchange department of The Standard Bank of South Africa Limited, whose appointment it shall not be necessary to prove.
6.	**Compensation events**	
60.1(13)	Assumed values for the ten-year return *weather data* for each *weather measurement* for each calendar month are:	**As stated in Annexure A of the Contract Data**
7.	**Title**	**There is no reference to Contract Data in this section of the core clauses and terms in italics used in this section are identified elsewhere in this Contract Data.**
8.	**Risks and insurance**	
80.1	These are additional *Employer*'s risks	**None**
9.	**Termination**	**There is no reference to Contract Data in this section of the core clauses and terms in italics used in this section are identified elsewhere in this Contract Data.**
10.	**Data for main Option clause**	
B	**Priced contract with bill of quantities**	
60.6	The *method of measurement* is	**The method of measurement shall be in accordance with SABS/SANS 1200, as amended and stated in Part C2.1: Pricing Assumptions.**
11.	**Data for Option W1**	**Refer to dispute resolution procedure**
W1.1	The *Adjudicator* is	**the person selected from the ICE-SA Division (or its successor body) of the South African Institution of Civil Engineering Panel of Adjudicators by the Party intending to refer a dispute to him. (see www.ice-sa.org.za). If the Parties do not agree on an Adjudicator the Adjudicator will be appointed by the Arbitration Foundation of Southern Africa (AFSA).** **Adjudicator will be appointed when the need arises.**

W1.2(3)	The *Adjudicator nominating body* is:	**the Chairman of ICE-SA a joint Division of the South African Institution of Civil Engineering and the London Institution of Civil Engineers. (See www.ice-sa.org.za) or its successor body.**
W1.4(2)	The *tribunal* is:	**arbitration.**
W1.4(5)	The *arbitration procedure* is	**the latest edition of Rules for the Conduct of Arbitrations published by The Association of Arbitrators (Southern Africa) or its successor body.**
	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 for the time being or his nominee of the Association of Arbitrators (Southern Africa) or its successor body.**

12 Data for secondary Option clauses

X1 Price adjustment for inflation

X1.1(a) The *base date* for indices is **one (1) month prior to the tender closing Date.**

X1.1(c) The proportions used to calculate the Price Adjustment Factor are:

	proportion	**linked to index for**	**Index prepared by**
	0.15	**non-adjustable**	
Total	**1.00**		

NB:

- **Prices shall be fixed and firm for the first sixteen (16) months from the base date, after which the prices shall be adjusted in accordance with the agreed indices.**
- **Failure to propose contract price adjustment, or submit a CPA formula with the tender submission, will result in the pricing being considered fixed.**

X2	**Changes in the law**	**There is no reference to the Contract Data in this Option and terms in italics are identified elsewhere in this Contract Data.**		
X5	**Sectional Completion**			
X5.1	The *completion date* for each *section* of the *works* is:	***Section***	**Description**	***Completion date***
		1	**Site establishment**	**In accordance with the Accepted Programme**
		2	**Coal silo 1**	**In accordance with the Accepted Programme**
		3	**Coal Silo 2**	**In accordance with the Accepted Programme**
		4	**Coal Silo 3**	**In accordance with the Accepted Programme**
		5	**Coal Silo 4**	**In accordance with the Accepted Programme**
		6	**Coal Silo 5**	**In accordance with the Accepted Programme**
		7	**Coal Silo 6**	**In accordance with the Accepted Programme**
X5 & X7	**Sectional Completion and delay damages used together**			
X7.1 X5.1	Delay damages for late Completion of the *section*s of the *works* are:	***section***	**Description**	**Amount per day**
		1	**Site establishment**	**0.4% of the total of the Prices per day for each day that a Section is not completed by the required Completion**

			Date, capped at 10% of the total of the Prices for the section.
	2	**Coal silo 1**	**0.4% of the total of the Prices per day for each day that a Section is not completed by the required Completion Date, capped at 10% of the total of the Prices for the section.**
	3	**Coal Silo 2**	**0.4% of the total of the Prices per day for each day that a Section is not completed by the required Completion Date, capped at 10% of the total of the Prices for the section.**
	4	**Coal Silo 3**	**0.4% of the total of the Prices per day for each day that a Section is not completed by the required Completion Date, capped at 10% of the total of the Prices for the section.**
	5	**Coal Silo 4**	**0.4% of the total of the Prices per day for each day that a Section is not completed by**

				the required Completion Date, capped at 10% of the total of the Prices for the section.
		6	**Coal Silo 5**	**0.4% of the total of the Prices per day for each day that a Section is not completed by the required Completion Date, capped at 10% of the total of the Prices for the section.**
		7	**Coal Silo 6**	**0.4% of the total of the Prices per day for each day that a Section is not completed by the required Completion Date, capped at 10% of the total of the Prices for the section.**
	The total delay damages payable by the *Contractor* does not exceed:	**10% of the total of the Prices**		
X13	**Performance bond**			
X13.1	The amount of the performance bond is	**10% of the total of the Prices for the whole of the *Works*.**		
X15	**Limitation of the *Contractor*'s liability for his design to reasonable skill & care**	**There is no reference to Contract Data in this Option and terms in italics are identified elsewhere in this Contract Data.**		
X16	**Retention**			
X16.1	The *retention free amount* is	**R0.00**		
	The *retention percentage* is	**10% of the amount due in each payment assessment.**		

X18	**Limitation of liability**	
X18.1	The *Contractor*'s liability to the *Employer* for indirect or consequential loss is limited to:	**R0.0 (zero Rand)**
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 amount of the deductibles relevant to the event**
X18.3	The *Contractor*'s liability for Defects due to his design which are not listed on the Defects Certificate is limited to	**The greater of** **the total of the Prices at the Contract Date** **and** • **the amounts excluded and unrecoverable from the *Employer*'s assets policy for correcting the Defect (other than the resulting physical damage which is not excluded) plus the applicable deductible as at contract date.**
X18.4	The *Contractor*'s total liability to the *Employer* for all matters arising under or in connection with this contract, other than excluded matters, is limited to:	**the total of the Prices other than for the additional excluded matters.** **The *Contractor's* total liability for the additional excluded matters is not limited.** **The additional excluded matters are amounts for which the *Contractor* is liable under this contract for** • **Defects due to his design which arise before the Defects Certificate is issued,** • **Defects due to manufacture and fabrication outside the Site,** • **Loss of or damage to property (other than the *Works*, Plant and Materials), death of or injury to a person** • **Infringement of an intellectual property right.**
X18.5	The *end of liability date* is	**(i) (7) years from the defects date of each sectional completion.** **(ii) the date on which the liability in question prescribes in accordance with the Prescription Act No. 68 of 1969 (as amended or in terms of any replacement legislation) for any other matter.** **A latent Defect is a Defect which would not have been discovered on reasonable inspection by the *Employer* or the *Supervisor* before the *defects date*, without requiring any inspection not ordinarily carried out by the *Employer* or the *Supervisor* during that period.** **If the *Employer* or the *Supervisor* do undertake any inspection over and above the reasonable inspection, this does not place a greater responsibility on the *Employer* or the *Supervisor* to have discovered the Defect.**

Z	**The *Additional conditions of contract* are**	**Z1 to Z15 always apply.**

Z1 Cession delegation and assignment

Z1.1 The *Contractor* does not cede, delegate or assign any of its rights or obligations to any person without the written consent of the *Employer.*

Z1.2 Notwithstanding the above, the *Employer* may on written notice to the *Contractor* cede and delegate its rights and obligations under this contract to any of its subsidiaries or any of its present divisions or operations which may be converted into separate legal entities as a result of the restructuring of the Electricity Supply Industry.

Z2 Joint ventures

Z2.1 If the *Contractor* constitutes a joint venture, consortium or other unincorporated grouping of two or more persons or organisations then these persons or organisations are deemed to be jointly and severally liable to the *Employer* for the performance of this contract.

Z2.2 Unless already notified to the *Employer*, the persons or organisations notify the *Project Manager* within two weeks of the Contract Date of the key person who has the authority to bind the *Contractor* on their behalf.

Z2.3 The *Contractor* does not alter the composition of the joint venture, consortium or other unincorporated grouping of two or more persons without the consent of the *Employer* having been given to the *Contractor* in writing.

Z3 Change of Broad Based Black Economic Empowerment (B-BBEE) status

Z3.1 Where a change in the *Contractor's* legal status, ownership or any other change to his business composition or business dealings results in a change to the *Contractor*'s B-BBEE status, the *Contractor* notifies the *Employer* within seven days of the change.

Z3.2 The *Contractor* is required to submit an updated verification certificate and necessary supporting documentation confirming the change in his B-BBEE status to the *Project Manager* within thirty days of the notification or as otherwise instructed by the *Project Manager*.

Z3.3 Where, as a result, the *Contractor's* B-BBEE status has decreased since the Contract Date the *Employer* may either re-negotiate this contract or alternatively, terminate the *Contractor*'s obligation to Provide the *Works*.

Z3.4 Failure by the *Contractor* to notify the *Employer* of a change in its B-BBEE status may constitute a reason for termination. If the *Employer* terminates in terms of this clause, the procedures on termination are P1, P2 and P3 as stated in clause 92, and the amount due is A1 and A3 as stated in clause 93.

The penalty set out in 4.1.2 of the *Works* Information shall be the *Employer*'s sole and executive remedy for drop in B-BBEE recognition level.

Z4 Confidentiality

Z4.1 The *Contractor* does not disclose or make any information arising from or in connection with this contract available to Others. This undertaking does not, however, apply to information which at the time of disclosure or thereafter, without default on the part of the *Contractor*, enters the public domain or to information which was already in the possession of the *Contractor* at the time of disclosure (evidenced by written records in existence at that time). Should the *Contractor*

disclose information to Others in terms of clause 25.1, the *Contractor* ensures that the provisions of this clause are complied with by the recipient.

Z4.2 If the *Contractor* is uncertain about whether any such information is confidential, it is to be regarded as such until notified otherwise by the Disclosing Party.

Z4.3 In the event that the *Contractor* is, at any time, required by law to disclose any such information which is required to be kept confidential, the *Contractor*, to the extent permitted by law prior to disclosure, notifies the *Employer* so that an appropriate protection order and/or any other action can be taken, if possible, prior to any disclosure. In the event that such protective order is not, or cannot, be obtained, then the *Contractor* may disclose that portion of the information which it is required to be disclosed by law and uses reasonable efforts to obtain assurances that confidential treatment will be afforded to the information so disclosed.

Z4.4 The taking of images (whether photographs, video footage or otherwise) of the *Works* or any portion thereof, in the course of Providing the *Works* and after Completion, requires the prior written consent of the *Project Manager*. All rights in and to all such images vests exclusively in the *Employer*.

Z4.5 The *Contractor* ensures that all his Subcontractors abide by the undertakings in this clause.

Z5 Waiver and estoppel: Add to core clause 12.3:

Z5.1 Any extension, concession, waiver or relaxation of any action stated in this contract by the Parties, the *Project Manager*, the *Supervisor*, or the *Adjudicator* does not constitute a waiver of rights and does not give rise to an estoppel unless the Parties agree otherwise and confirm such agreement in writing.

Z6 Health, safety and the environment: Add to core clause 27.4

Z6.1 The *Contractor* undertakes to take all reasonable precautions to maintain the health and safety of persons in and about the execution of the *Works*. Without limitation the *Contractor*:

- accepts that the *Employer* may appoint him as the "Principal *Contractor*" (as defined and provided for under the Construction Regulations 2014 (promulgated under the Occupational Health & Safety Act 85 of 1993) ("the Construction Regulations") for the Site.
- warrants that the total of the Prices as at the Contract Date includes a sufficient amount for proper compliance with the Construction Regulations, all applicable health & safety laws and regulations and the health and safety rules, guidelines and procedures provided for in this contract and generally for the proper maintenance of health & safety in and about the execution of *Works*; and
- undertakes, in and about the execution of the *Works*, to comply with the Construction Regulations and with all applicable health & safety laws and regulations and rules, guidelines and procedures otherwise provided for under this contract and ensures that his Subcontractors, employees and others under the *Contractor's* direction and control, likewise observe and comply with the foregoing.

Z6.2 The *Contractor*, in and about the execution of the *Works*, complies with all applicable environmental laws and regulations and rules, guidelines and procedures otherwise provided for under this contract and ensures that his Subcontractors, employees and others under the *Contractor's* direction and control, likewise observe and comply with the foregoing.

Z7 Provision of a Tax Invoice and interest. Add to core clause 51

Z7.1 Within one week of receiving a payment certificate from the *Project Manager* in terms of core clause 51.1, the *Contractor* provides the *Employer* with a tax invoice in accordance with the

Employer's procedures stated in the *Works* Information, showing the amount due for payment equal to that stated in the payment certificate.

Z7.2 If the *Contractor* does not provide a tax invoice in the form and by the time required by this contract, the time by when the *Employer* is to make a payment is extended by a period equal in time to the delayed submission of the correct tax invoice. Interest due by the *Employer* in terms of core clause 51.2 is then calculated from the delayed date by when payment is to be made.

Z7.3 The *Contractor* (if registered in South Africa in terms of the companies Act) is required to comply with the requirements of the Value Added Tax Act, no 89 of 1991 (as amended) and to include the *Employer*'s VAT number 4740101508 on each invoice he submits for payment.

Z8 Notifying compensation events

Z8.1 Delete from the last sentence in core clause 61.3, "unless the *Project Manager* should have notified the event to the *Contractor* but did not".

Z9 *Employer's* limitation of liability

Z9.1 The *Employer's* liability to the *Contractor* for the *Contractor's* indirect or consequential loss is limited to R0.00 (zero Rand)

Z9.2 The *Contractor*'s entitlement under the indemnity in 83.1 is provided for in 60.1(14) and the *Employer*'s liability under the indemnity is limited.

Z10 Termination: Add to core clause 91.1, at the second main bullet point, fourth sub-bullet point, after the words "against it":

Z10.1 or had a business rescue order granted against it.

Z11 Addition to secondary Option X7 Delay damages (if applicable in this contract)

Z11.1 If the amount due for the *Contractor*'s payment of delay damages reaches the limits stated in this Contract Data for Option X7 or Options X5 and X7 used together, the *Employer* may terminate the *Contractor*'s obligation to Provide the *Works* using the same procedures and payment on termination as those applied for reasons R1 to R15 or R18 stated in the Termination Table.

Z12 Ethics

For the purposes of this Z-clause, the following definitions apply:

Affected Party means, as the context requires, any party, irrespective of whether it is the *Contractor* or a third party, such party's employees, agents, or Subcontractors or Subcontractor's employees, or any one or more of all of these parties' relatives or friends,

Coercive Action means to harm or threaten to harm, directly or indirectly, an Affected Party or the property of an Affected Party, or to otherwise influence or attempt to influence an Affected Party to act unlawfully or illegally,

Collusive Action means where two or more parties co-operate to achieve an unlawful or illegal purpose, including to influence an Affected Party to act unlawfully or illegally,

Committing Party means, as the context requires, the *Contractor*, or any member thereof in the case of a joint venture, or its employees, agents, or Subcontractor or the Subcontractor's employees,

Corrupt Action means the offering, giving, taking, or soliciting, directly or indirectly, of a good or service to unlawfully or illegally influence the actions of an Affected Party,

Fraudulent Action means any unlawfully or illegally intentional act or omission that misleads, or attempts to mislead, an Affected Party, in order to obtain a financial or other benefit or to avoid an obligation or incurring an obligation,

Obstructive Action means a Committing Party unlawfully or illegally destroying, falsifying, altering or concealing information or making false statements to materially impede an investigation into allegations of Prohibited Action, and

Prohibited Action means any one or more of a Coercive Action, Collusive Action Corrupt Action, Fraudulent Action or Obstructive Action.

Z12.1 A Committing Party may not take any Prohibited Action during the course of the procurement of this contract or in execution thereof.

Z12.2 The *Employer* may terminate the *Contractor*'s obligation to Provide the Services if a Committing Party has taken such Prohibited Action and the *Contractor* did not take timely and appropriate action to prevent or remedy the situation, without limiting any other rights or remedies the *Employer* has. It is not required that the Committing Party had to have been found guilty, in court or in any other similar process, of such Prohibited Action before the *Employer* can terminate the *Contractor*'s obligation to Provide the Services for this reason.

Z12.3 If the *Employer* terminates the *Contractor*'s obligation to Provide the Services for this reason, the amounts due on termination are those intended in core clauses 92.1 and 92.2.

Z12.4 A Committing Party co-operates fully with any investigation pursuant to alleged Prohibited Action. Where the *Employer* does not have a contractual bond with the Committing Party, the *Contractor* ensures that the Committing Party co-operates fully with an investigation.

Z13 Insurance

Z 13.1 Replace core clause 84 with the following:

Insurance cover 84

84.1 When requested by a Party, the other Party provides certificates from his insurer or broker stating that the insurances required by this contract are in force.

84.2 The *Contractor* provides the insurances stated in the Insurance Table A.

84.3 The insurances provide cover for events which are at the *Contractor*'s risk from the *starting date* until the earlier of Completion and the date of the termination certificate.

INSURANCE TABLE A

Insurance against	Minimum amount of cover or minimum limit of indemnity
Loss of or damage to the *Works*, Plant and Materials	The replacement cost where not covered by the *Employer*'s insurance The *Employer*'s policy deductible, as at Contract Date, where covered by the *Employer*'s insurance
Loss of or damage to Equipment	The replacement cost

Liability for loss of or damage to property (except the *Works*, Plant and 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	**Loss of or damage to property** *Employer*'s property The replacement cost where not covered by the *Employer*'s insurance The *Employer*'s policy deductible, as at Contract Date, where covered by the *Employer*'s insurance Other property The replacement cost **Bodily injury to or death of a person** The amount required by applicable law
Liability for death of or bodily injury to employees of the *Contractor* arising out of and in the course of their employment in connection with this contract	The amount required by the applicable law

Z 13.2

Replace core clause 87 with the following:
The *Employer* provides the insurances stated in the Insurance Table B.

INSURANCE TABLE B

Insurance against or name of policy	Minimum amount of cover or minimum of indemnity
Assets All Risk	Per the insurance policy document
Contract *Works* insurance	Per the insurance policy document
Environmental Liability	Per the insurance policy document
General and Public Liability	Per the insurance policy document
Transportation (Marine)	Per the insurance policy document
Motor Fleet and Mobile Plant	Per the insurance policy document
Terrorism	Per the insurance policy document
Cyber Liability	Per the insurance policy document
Nuclear Material Damage and Business Interruption	Per the insurance policy document
Nuclear Material Damage Terrorism	Per the insurance policy document

Z14 Nuclear Liability

Z14.1 The *Employer* is the operator of the Koeberg Nuclear Power Station (KNPS), a nuclear installation, as designated by the National Nuclear Regulator of the Republic of South Africa, and is the holder of a nuclear licence in respect of the KNPS.

Z14.2 The *Employer* is solely responsible for and indemnifies the *Contractor* or any other person against any and all liabilities which the *Contractor* or any person may incur arising out of or resulting from nuclear damage, as defined in Act 47 of 1999, save to the extent that any liabilities are incurred due to the unlawful intent of the *Contractor* or any other person or the presence of the *Contractor* or that person or any property of the *Contractor* or such person at or in the KNPS or on the KNPS site, without the permission of the *Employer* or of a person acting on behalf of the *Employer*.

Z14.3 Subject to clause Z14.4 below, the *Employer* waives all rights of recourse, arising from the aforesaid, save to the extent that any claims arise or liability is incurred due or attributable to the unlawful intent of the *Contractor* or any other person, or the presence of the *Contractor* or that person or any property of the *Contractor* or such person at or in the KNPS or on the KNPS site, without the permission of the *Employer* or of a person acting on behalf of the *Employer*.

Z14.4 The *Employer* does not waive its rights provided for in section 30 (7) of Act 47 of 1999, or any replacement section dealing with the same subject matter.

Z14.5 The protection afforded by the provisions hereof shall be in effect until the KNPS is decommissioned.

Z15 Asbestos

For the purposes of this Z-clause, the following definitions apply:

AAIA means approved asbestos inspection authority.

ACM means asbestos containing materials.

AL means action level, i.e. a level of 50% of the OEL, i.e. 0.1 regulated asbestos fibres per ml of air measured over a 4 hour period. The value at which proactive actions is required in order to control asbestos exposure to prevent exceeding the OEL.

Ambient Air means breathable air in area of work with specific reference to breathing zone, which is defined to be a virtual area within a radius of approximately 30cm from the nose inlet.

Compliance Monitoring means compliance sampling used to assess whether or not the personal exposure of workers to regulated asbestos fibres is in compliance with the Standard's requirements for safe processing, handling, storing, disposal and phase-out of asbestos and asbestos containing material, equipment and articles.

OEL means occupational exposure limit.

Parallel Measurements means measurements performed in parallel, yet separately, to existing measurements to verify validity of results.

Safe Levels means airborne asbestos exposure levels conforming to the Standard's requirements for safe processing, handling, storing, disposal and phase-out of asbestos and asbestos containing material, equipment and articles.

Standard means the *Employer*'s Asbestos Standard 32-303: Requirements for Safe Processing, Handling, Storing, Disposal and Phase-out of Asbestos and Asbestos Containing Material, Equipment and Articles.

SANAS means the South African National Accreditation System.

TWA means the average exposure, within a given workplace, to airborne asbestos fibres, normalised to the baseline of a 4 hour continuous period, also applicable to short term exposures, i.e. 10-minute TWA.

Z15.1 The *Employer* ensures that the Ambient Air in the area where the *Contractor* will Provide the Services conforms to the acceptable prescribed South African standard for asbestos, as per the regulations published in GNR 155 of 10 February 2002, under the Occupational Health and Safety Act, 1993 (Act 85 of 1993) ("Asbestos Regulations"). The OEL for asbestos is 0.2 regulated asbestos fibres per millilitre of air as a 4-hour TWA, averaged over any continuous period of four hours, and the short term exposure limit of 0.6 regulated asbestos fibres per millilitre of air as a 10-minute TWA, averaged over any 10 minutes, measured in accordance with HSG248 and monitored according to HSG173 and OESSM.

Z15.2 Upon written request by the *Contractor*, the *Employer* certifies that these conditions prevail. All measurements and reporting are effected by an independent, competent, and certified occupational hygiene inspection body, i.e. a SANAS accredited and Department of Employment and Labour approved AAIA. The *Contractor* may perform Parallel Measurements and related control measures at the *Contractor*'s expense. For the purposes of compliance the results generated from Parallel Measurements are evaluated only against South African statutory limits as detailed in clause Z15.1. Control measures conform to the requirements stipulated in the AAIA-approved asbestos work plan.

Z15.3 The *Employer* manages asbestos and ACM according to the Standard.

Z15.4 In the event that any asbestos is identified while Providing the Services, a risk assessment is conducted and if so required, with reference to possible exposure to an airborne concentration of above the AL for asbestos, immediate control measures are implemented and relevant air monitoring conducted in order to declare the area safe.

Z15.5 The *Contractor*'s personnel are entitled to stop working and leave the contaminated area forthwith until such time that the area of concern is declared safe by either Compliance Monitoring or an AAIA approved control measure intervention, for example, per the emergency asbestos work plan, if applicable.

Z15.6 The *Contractor* continues to Provide the Services, without additional control measures presented on presentation of Safe Levels. The contractually agreed dates to Provide the Services, including the Completion Date, are adjusted accordingly. The contractually agreed dates are extended by the notification periods required by regulations 3 and 21 of the Asbestos Regulations, 2001.

Z15.7 Any removal and disposal of asbestos, asbestos containing materials and waste, is done by a registered asbestos *Contractor*, instructed by the *Employer* at the *Employer*'s expense, and conducted in line with South African legislation.

Z16 Security Clearance/ Criminal Checks

These clauses are not only, but are especially, applicable for accessing critical infrastructure in terms of the Critical Infrastructure Protection Act, 2019 (previously referred to as National Key Points), but may include other sites, and/or where persons are rendering a service or have given notice of intention to render a service to an organ of state, which service may (1) give him or her access to classified information and intelligence in the possession of the organ of state; or (2) give him or her access to or information concerning areas designated as critical infrastructure.

Z16.1 The *Contractor* and its subcontractors implement risk and security management processes and measures to mitigate any threats against any premises, installations or sites, systems, or information of the *Employer* with only persons with criminal verification record security clearance certificates being given access after verification of these and identifying documents by the *Employer*'s security system.

Z16.2 The *Contractor* provides, at the *Contractor*'s cost, to the *Employer,* criminal verification record security clearance certificates for each person the *Contractor* or its subcontractors requires to access any premises, installations or sites, systems, or information of the *Employer*, with copies of their identifying documents, such as passports, before allowed such access by the *Employer*.

The *Employer*'s refusal to allow access to premises, installations or site/s, systems or information is at the *Employer*'s sole discretion and is not a compensation event.

Z16.3 The criminal verification record security clearance certificates provided are to have been issued by a service provider which is to be a reputable screening company accredited by the South African Police Services, are to be no older than four weeks since issue and valid for as long as each person is required to access premises, installations or sites, systems or information. The *Employer* may require updated certificates and identifying documents every 26 to 52 weeks, subject to safety and security concerns and the risk rating of the works or services undertaken and/or premises, installations or sites, systems or information.

Z16.4 If any such criminal verification record security clearance certificates is cancelled, withdrawn, invalidated, amended, or expires, or a criminal conviction is noted against any person requiring access, even if an appeal against the criminal conviction has been noted, the *Service Manager* may instruct the *Contractor* to ensure that such person leaves the premises, installations or site/s and is blocked from systems and information and the giving of this instruction is not a compensation event.

Z17 Protection of Personal Information Act Compliance

Z17.1 For the purposes of this clause, the terms "Data Subject", "Personal Information", "Processing" and "Regulator" and "Responsible Party" have the meanings given to them in the Protection of Personal Information Act, 2013 ("POPIA").

Z17.2 Each Party acknowledges that it is an independent Responsible Party in relation to the Personal Information processed in terms of this contract ("Shared Personal Information") and that it determines the purposes for which and the manner in which the Shared Personal Information is, or is to be, processed.

Z17.3 Each Party shall always comply with POPIA when performing its obligations under this contract and shall not perform any of their respective obligations under this contract in such a way as to cause the other Party to breach any of that other Party's obligations under POPIA.

Z17.4 Each Party shall ensure that, in respect of all Shared Personal Information provided to the other Party and in respect of the use of that Shared Personal Information under this contract:-

Z17.4.1 all necessary fair Processing notices have been provided to and consents obtained from Data Subjects by that Party, where required, in terms of POPIA, including to specify that the other Party is also a Responsible Party in respect of the Data Subject's Personal Information and to provide a link (for example, https://www.eskom.co.za/about-eskom/website-terms-and-conditions/) to the other Party's Privacy Statement or to include a statement that the other Party's Privacy Statement can be found on the other Party's corporate website; and

Z17.4.2 all necessary steps have been taken to ensure that Shared Personal Information has been collected and processed in accordance with the principles set out in POPIA, including in particular those relating to:

- lawful, fair and transparent Processing;
- specified, legitimate and explicit purposes of Processing; and
- adequate, relevant and not excessive Processing.

Z17.5 If either Party receives any complaint, notice or communication from the Regulator which relates directly to:

Z16.5.1 the other Party's Processing of the Shared Personal Data; or

Z16.5.2 a potential failure by the other Party to comply with POPIA in respect of the activities of the Parties under or in connection with this contract,

it shall, to the extent permitted by law, promptly notify the other Party and provide such information as it shall reasonably request in that regard.

Z17.6 If a Data Subject makes a written request to either Party to exercise any of their rights under POPIA, the receiving Party shall respond to that request in accordance with POPIA. To the extent the request concerns Processing of Shared Personal Information undertaken by the other Party, the receiving Party shall:

Z16.6.1 promptly and without undue delay forward the request to the other Party; and

Z16.6.2 cooperate and provide reasonable assistance in relation to that request to enable the other Party to respond in accordance with POPIA.

Z17.7 Each Party acknowledges that the other Party may disclose Shared Personal Information to any Regulator or law enforcement authority with jurisdiction to request access to the Shared Personal Information.

Z17.8 Neither Party discloses or otherwise makes available the Personal Information to any third party (including sub-contractors, but excluding its authorised employees who require access to such Personal Information strictly in order for the Parties to carry out their obligations pursuant to this contract), unless a Party has provided, to a requesting Party, its prior written consent to do so, and the requesting Party has submitted to the other Party (consenting Party), to its satisfaction, a copy of a written contract or undertaking that the requesting Party has entered into with a third party for the protection of Personal Information of the Data Subjects or unless there is an applicable exemption in terms of the law to process or further process the personal information.

Z17.9 The requesting Party indemnifies and holds harmless the consenting Party and its staff, successors, cessionaries, delegates, and assigns, from any and all losses, costs, expenses and damage, as well as penalties and fines arising from the requesting Party's non-compliance with the provision of any relevant legislation applicable to Personal Information or data protection, as well as damage to the consenting Party's reputation and costs of compliance as directed by the Regulator, including but not limited to publication of the data breach.

Annexure A: One-in-ten-year-return *weather data* obtained from SA Weather Bureau for [weather station]

If any one of these *weather measurements* recorded within a calendar month, before the Completion Date for the whole of the *Works* and at the place stated in this Contract Data is shown to be more adverse than the amount stated below then the *Contractor* may notify a compensation event.

	Weather measurement				
Month	Cumulative rainfall (mm)	Number of days with rain more than 10mm	Number of days with min air temp < 0 °C	Number of days with snow lying at 08:00 CAT	[Other measurements if applicable]
January	200	6	0	0	
February	150	6	0	0	
March	120	5	0	0	
April	110	4	0	0	
May	40	3	7	0	
June	20	2	21	11	
July	30	2	22	14	
August	30	2	12	0	
September	60	3	2	0	
October	180	15	0	0	
November	160	7	0	0	
December	170	6	0	0	

Only the difference between the more adverse recorded weather and the equivalent measurement given above is

C1.2 Contract Data

Part two - Data provided by the *Contractor*

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(18)	The *working areas* are the Site and	
24.1	The *Contractor's* key persons are: 1 Name: Job: Responsibilities: Qualifications: Experience: 2 Name: Job Responsibilities: Qualifications: Experience:	
11.2(3)	The *completion date* for the whole of the *Works* is	
11.2(14)	The following matters will be included in the Risk Register	
11.2(19)	The *Works* Information for the *Contractor*'s design is in:	
31.1	The programme identified in the Contract Data is	
B	**Priced contract with bill of quantities**	
11.2(21)	The *bill of quantities* is in	

11.2(31)	The tendered total of the Prices is	**(in figures)** **(in words), excluding VAT**		
	Data for Schedules of Cost Components	*Note "SCC" means Schedule of Cost Components starting on page 60, and "SSCC" means Shorter Schedule of Cost Components starting on page 63 of ECC3 (April 2013).*		
B	**Priced contract with bill of quantities**	**Data for the Shorter Schedule of Cost Components**		
41 in SSCC	The percentage for people overheads is:	**%**		
21 in SSCC	The published list of Equipment is the last edition of the list published by The percentage for adjustment for Equipment in the published list is	**Minus %**		
22 in SSCC	The rates of other Equipment are:	**Equipment**	**Size or capacity**	**Rate**
61 in SSCC	The hourly rates for Defined Cost of design outside the Working Areas are **Note: Hourly rates are estimated 'cost to company of the employee' and not selling rates.** **Please insert another schedule if foreign resources may also be used**	**Category of employee**		**Hourly rate**
62 in SSCC	The percentage for design overheads is	**%**		
63 in SSCC	The categories of design employees whose travelling expenses to and from the Working Areas are included in Defined Cost are:			
63 in SCC & SSCC	The categories of design employees whose travelling expenses to and from the Working Areas are included as a cost of design of the *Works* and Equipment done outside the Working Areas are:			

C1.3 Forms of Securities

Pro formas for Bonds & Guarantees

For use with the NEC3 Engineering & Construction Contract

[Note to contract compiler:
Once it has been decided which securities are required for this contract delete from this file the ones not required, revise the notes below accordingly and delete this note.]

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

Option X13: Performance Bond

Each of these secondary Options requires a bond or guarantee “in the form set out in the Works Information”. Pro forma documents for these bonds and guarantees are provided here for convenience but are to be treated as part of the Works Information.

The organisation providing the bond / guarantee does so by copying the pro forma document onto his 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.

1 Pro forma Performance Bond – Demand Guarantee (for use with Option X13)

(to be reproduced exactly as shown below on the letterhead of the Contractor's Parent Company)

Eskom Holdings SOC Ltd
Megawatt Park
Maxwell Drive
Sandton
Johannesburg Date:

Dear Sirs

Reference No. **[●]** *[Drafting Note: Bank reference number to be inserted]*

Performance Bond – Demand Guarantee: *[Drafting Note: Name of Contractor to be inserted]*

Project [ ] Contract Reference: …… *[Drafting Note: Contractor contract reference number to be inserted]*

1. In this Guarantee the following words and expressions shall have the following meanings:-

1.1. "Bank" - means [●], [●] Branch, (Registration No. [●]); [Drafting Note: Name of Bank to be inserted]

1.2. "Bank's Address" - means [●]; [Drafting Note: Bank's physical address to be inserted]

1.3. "Contract" – means the written agreement relating to the Project, entered into between Eskom and the Contractor, on or about the [●] day of [●] 200[●] (Contract Reference No. [.]as amended, varied, restated, novated or substituted from time to time; [Drafting Note: Signature Date and Contract reference number to be inserted]

1.4. "Contractor" – means [●] a company registered in accordance with the laws of [●] under Registration Number [●]. [Drafting Note: Name and details of Contractor to be inserted]

1.5. "Eskom" - means Eskom Holdings SOC Ltd, a company registered in accordance with the laws of the Republic of South Africa under Registration Number 2002/015527/30].

1.6. "Expiry Date" - means the date on which the Defects Certificate is issued in terms of the Contract.

1.7. "Guaranteed Sum" - means the sum of R [●] ([●] Rand);

1.8. "Project" - means [insert if applicable.].

2. At the instance of the Contractor, we the undersigned _____ and _____, in our respective capacities as _____ and _____ of the Bank, and duly authorized thereto, confirm that we hold the Guaranteed Sum at the disposal of Eskom, as security for the proper performance by the Contractor of all of its obligations in terms of and arising from the Contract and hereby undertake to pay to Eskom, on written demand from Eskom received prior to the Expiry Date, any sum or sums not exceeding in total the Guaranteed Sum.

3. A demand for payment under this guarantee shall be made in writing at the Bank's address and shall:

3.1. be signed on behalf of Eskom by a Group Executive, Divisional Executive, Senior General Manager, General Manager or its delegate;

3.2. state the amount claimed ("the Demand Amount');

3.3. state that the Demand Amount is payable to Eskom in the circumstances

contemplated in the Contract.

4. Notwithstanding the reference herein to the Contract the liability of the Bank in terms hereof is as principal and not as surety and the Bank's obligation/s to make payment:

4.1. is and shall be absolute provided demand is made in terms of this bond in all circumstances; and

4.2. is not, and shall not be construed to be, accessory or collateral on any basis whatsoever.

5. The Bank's obligations in terms of this Guarantee:

5.1. shall be restricted to the payment of money only and shall be limited to the maximum of the Guaranteed Sum; and

5.2. shall not be discharged and compliance with any demand for payment received by the Bank in terms hereof shall not be delayed, by the fact that a dispute may exist between Eskom and the Contractor.

6. Eskom shall be entitled to arrange its affairs with the Contractor in any manner which it sees fit, without advising us and without affecting our liability under this Guarantee. This includes, without limitation, any extensions, indulgences, release or compromise granted to the Contractor or any variation under or to the Contract.

7. Should Eskom cede its rights against the Contractor to a third party where such cession is permitted under the Contract, then Eskom shall be entitled to cede to such third party the rights of Eskom under this Guarantee on written notification to the Bank of such cession.

8. This Guarantee:

8.1. shall expire on the Expiry Date until which time it is irrevocable;

8.2. is, save as provided for in 7 above, personal to Eskom and is neither negotiable nor transferable;

8.3. shall be returned to the Bank upon the earlier of payment of the full Guaranteed Sum or expiry hereof;

8.4. shall be regarded as a liquid document for the purpose of obtaining a court order; and

8.5. shall be governed by and construed in accordance with the law of the Republic of South Africa and shall be subject to the jurisdiction of the Courts of the Republic of South Africa.

8.6. Any claim which arises or demand for payment received after expiry date will be invalid and unenforceable.

9. The Bank chooses domicilium citandi et executandi for all purposes in connection with this Guarantee at the Bank's Address.

Signed at _____ Date _____

For and behalf of the Bank

Bank Signatory: _____ Bank Signatory: _____

Witness: _____ Witness: _____
Bank's seal or stamp

PART 2: PRICING DATA
ECC3 Option B

Document reference	Title	No of pages
C2.1	Pricing assumptions: Option B	3
C2.2	The *bill of quantities*	34

C2.1 Pricing assumptions: Option B

How work is priced and assessed for payment

Clause 11 in NEC3 Engineering and Construction Contract (ECC3) Option B states:

Identified and defined terms 11 11.2

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

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

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

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

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

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

Function of the Bill of Quantities

Clause 55.1 in Option B states, “Information in the Bill of Quantities is not *Works* Information or Site Information”. This confirms that specifications and descriptions of the work or any constraints on how it is to be done are not included in the Bill, but in the *Works* Information. This is further confirmed by Clause 20.1 which states, “The *Contractor* Provides the *Works* in accordance with the *Works* Information”. Hence the *Contractor* does **not** Provide the *Works* in accordance with the Bill of Quantities. The Bill of Quantities is only a pricing document.

Guidance before pricing and measuring

*Employer*s preparing tenders or contract documents, and tendering *Contractor*s are advised to consult the sections dealing with the bill of quantities in the NEC3 Engineering and Construction Contract Guidance Notes before preparing the *bill of quantities* or before entering rates and lump sums into the *bill*.

There is no general provision in Option B for payment for materials on Site before incorporation into the *Works*. If secondary Option X14 Advanced payment has not been used then the tendering *Contractor* may obtain the same effect by inserting appropriate items in the method related charges where the *method of measurement* allows or alternatively making allowance in the rates of the *bill of quantities* for the financing of Plant and Materials until they are incorporated in the *Works.*

When compensation events arise, the default position is that the Bill of Quantities is not used to calculate the cost effect of the event. Defined Cost and the resulting Fee is used and Defined Cost includes all components of cost which the *Contractor* is likely to incur, including so called P & G items. Rates and lump sums from the Bill of Quantities, or from any other source, may be used instead of Defined Cost and the Fee only if the *Contractor* and *Project Manager* agree. If they are unable to agree, then Defined Cost plus Fee is used.

Measurement and payment

Symbols

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

Abbreviation	Unit
%	percent
h	hour
ha	hectare
kg	kilogram
kl	kilolitre
km	kilometre
km-pass	kilometre-pass
kPa	kilopascal
kW	kilowatt
l	litre
m	metre
mm	millimetre
m^2	square metre
m^2-pass	square metre pass
m^3	cubic metre
m^3-km	cubic metre-kilometre
MN	meganewton
MN.m	meganewton-metre
MPa	megapascal
No.	number
sum	Lump sum
t	tonne (1000kg)

1.1. General assumptions

1.1.1. Unless otherwise stated, items are measured net in accordance with the drawings, and no allowance has been made in the quantities for waste.

1.1.2. The Prices and rates stated for each item in the Bill of Quantities shall be treated as being fully inclusive of all work, risks, liabilities, obligations, overheads, profit and everything necessary as incurred or required by the *Contractor* in carrying out or providing that item.

1.1.3. An item against which no Price is entered will be treated as covered by other Prices or rates in the *bill of quantities*.

1.1.4. The quantities contained in the Bill of Quantities may not be final and do not necessarily represent the actual amount of work to be done. The quantities of work assessed and certified for payment by the *Project Manager* at each assessment date will be used for determining payments due.

1.1.5. The short descriptions of the items of payment given in the *bill of quantities* are only for the purposes of identifying the items. Detail regarding the extent of the work entailed under each item is provided in the *Works* Information.

1.2. Departures from the *method of measurement*

1.2.1.

1.3. Amplification of or assumptions about measurement items

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

1.3.1.

C2.2 the *bill of quantities*

Use this page as a summary page or as a cover page to the *bill of quantities.*

The BOQ is as follows and to be filled taking into consideration the scope of work which has the unique identifier 15ENG CIVIL-2041 which forms part of this contract.

TUTUKA POWER STATION						
N. GTU0500						
STRUCTURAL REPAIRS ON COAL SILOS 1 -6						
COAL SILO 1						
SECTION 1: GENERAL						
ITEM NO	**PAYMENT**	**DESCRIPTION**	**UNIT**	**QTY**	**RATE**	**AMOUNT**
1	**SANS 1200 A**	**SECTION 1: GENERAL**				
	8.3	**SCHEDULED FIXED-CHARGE AND VALUE RELATED ITEMS**				
1.01	8.3.1	Contractual Requirements	Sum	1		
	8.3.2	**Establishment of Facilities on the Site:**				
1.02	8.3.2.1	(a) Communication costs (cellular phone)	Sum	1		
	8.3.2.2	**Facilities for Contractor**				
1.03		(a) Offices and storage sheds (tools room, lockable and protected)	Sum	1		
1.04		(b) Workshops (materials storage yard)	Sum	1		
1.05		(c) Laboratories	Sum	1		
1.06		(d) Ablution and latrine facilities	Sum	1		
1.07		(e) Tools and equipment	Sum	1		
1.08		(f) Water supplies, electric power and communications	Sum	1		
1.10		(i) Plant.	Sum	1		
		(j) Working at Heights Training of employees	Sum	1		

		Medicals and Induction	Sum	1		
1.11		Site de-establishment	Sum	1		
1.12	PSA 8.3.3.1	Issuing of notices to end users and coordination of construction activities allowances. i.e., the contractor shall allow in his program the required time to shut off the pumps and conduct construction works with Eskom staff	Sum	1		
	PSA 8.3.3.2	**OHS Act Obligations:**				
1.13		i) General Safety obligations (incl. provision of personal protective equipment).	Sum	1		
1.14		ii) Health and Safety plan/file including health and safety training.	Sum	1		
	8.4	**SCHEDULED TIME-RELATED ITEMS**				
1.03		(a) Offices and storage sheds (tools room, lockable and protected)	Month	6		
1.04		(b) Workshops (materials storage yard)	Month	6		
1.05		(c) Laboratories	Month	6		
1.06		(d) Ablution and latrine facilities	Month	6		
1.07		(e) Tools and equipment	Month	6		
1.08		(f) Water supplies, electric power and communications	Month	6		
1.16		Living accommodation	Month	6		
1.17		Employee Transport to site	Month	6		
1.18		Safety Officer	Month	6		
		Safety Supervisor	Month	6		
1.19		Professional Civil Engineer	Hours	250		
		Project Manager	Month	6		
		Construction Site Manager	Month	6		

		Supervision for duration of construction (Quality Assurer)	Month	6		
		Equipment				
		HP cleaning machine with minimum 120bar pressure	Days	4		
		Heavy duty fan	Days	10		
		Other				
		Provision of general waste skip including waste removal	Month	4		
		Rebar scanning	m²	200		
	8.5	**SUMS STATED PROVISIONALLY BY ENGINEER**				
1.17		Design and certification of temporary structures, method statements of rope access rigging points, and load supports for Coal Silo refurbishment certified by a registered PrEng or specialist contractor	Prov Sum	1		
		Post-repair tests to verify bond strength, concrete cover & coating thickness	Prov Sum	1		
	8.8	**TEMPORARY WORKS**				
		Preamble				
1.18	8.8.2	Rope access systems and associated rigging for full external height and internal surfaces of the silo, including hopper access	Sum	1		
	8.7	**DAYWORKS**				
1.19		(a) Unskilled Labour	hours	4698		
1.20		(b) Semi-skilled Labour	hours	4698		
1.21		(c) Skilled Labour	hours	4698		
Total Carried Forward for Section 1						
2		**SECTION 2: EXTERNAL REPAIRS**				
		PREAMBLES				

		Existing Concrete Repairs				
		Repairs shall be executed in accordance with SANS 1200 G and GA (Concrete Works – Structural), SANS 2001-CC1:2012 (Concrete Works – Structural), and relevant manufacturer's specifications. Remove all loose and defective concrete, clean exposed reinforcement to bright metal, apply corrosion protection, reinstate with approved repair mortars and finish with specified protective coatings.				
		Exposal and Preparation of Surfaces				
		The contractor shall clean and scarify all areas to be repaired as instructed in the Scope of Works (SOW) to remove all loose material. Use high-pressure water cleaning to remove dust and debris. Expose the substrate for inspection and certification by the Engineer & Client's representative before commencing reinstatement works.				
		Carrying Away of Materials				
		Descriptions of carrying away of concrete breakout material from repair works shall be deemed to include loading and transporting all debris directly from site and disposing of it in a safe and environmentally acceptable manner off-site. Details of disposal sites shall be submitted to the Engineer for approval.				
		EXTERNAL REPAIRS				
		Sealing creaks				
2.01		Existing Concrete Repairs (EucoSeal or other equivalent)	m²	338		
2.02		Horizontal Crack Repairs (100 mm thick – Tamms Structural Mortar or other equivalent)	m	15		
2.03		Vertical Crack Repairs (100 mm thick – Tamms Structural Mortar or other equivalent)	m	18		

2.04		Concrete Spalling Repairs (100 mm thick – Tamms Structural Mortar or other equivalent)	m²	30		
		Concrete Degradation Repairs				
2.05		Provisional sum for the breaking down of deteriorated existing concrete works, inspection and replacing corroded steel rebars, casting Class R4 structural high-bond repair mortar or other equivalent and carting away waste material to a registered waste disposal site	Prov Sum	1		
		Protective Coatings				
2.06		Protective Coating to External Surfaces (Tamms Coat or other equivalent)	m²	1818		
2.07		Carbon Fibre Wrapping to External Structural Elements (PC CarboComp 300 or other equivalent) by specialist	m²	996		
2.08		Silo Roof Coating (Tamms Coat or other equivalent)	m²	201		
Total Carried Forward for Section 2						
3		**SECTION 3: INTERNAL REPAIRS**				
		Concrete and Structural Repairs				
		Repairs shall be executed in accordance with SANS 1200 G and GA (Concrete Works – Structural), SANS 2001-CC1:2012 (Concrete Works – Structural), and relevant manufacturer's specifications. Works include removal of loose and defective concrete, cleaning exposed reinforcement to bright metal, applying corrosion protection, reinstating with approved repair mortars, and finishing with specified protective or abrasion-resistant coatings.				
		Exposal and Preparation of Surfaces				
		The contractor shall clean and scarify all areas to be repaired as instructed in the Scope of Works (SOW) to remove all loose material. Use high-pressure water cleaning to remove dust and debris. Expose the substrate for inspection and certification by the Engineer before commencing reinstatement works.				
		Carrying Away of Concrete Breakout Material				

		Descriptions of carrying away of concrete breakout material from repair works shall be deemed to include loading and transporting all debris directly from site and disposing of it in a safe and environmentally acceptable manner off-site. Details of disposal sites shall be submitted to the Engineer for approval.				
		INTERNAL REPAIRS				
3.01		Horizontal Crack Repairs (100 mm thick – Tamms Structural Mortar or other equivalent)	m²	15		
3.02		Vertical Crack Repairs (100 mm thick – Tamms Structural Mortar or other equivalent)	m²	18		
3.03		Concrete Spalling/Exposed Rebar Repairs (100 mm thick – Tamms Structural Mortar or other equivalent)	m²	30		
		Protective Coatings				
		Hack off existing internal coating and prepare surface to receive new by pressure wash	m²	2165		
3.04		Abrasion Resistant Coating to Silo Wall, Q-Deck Slab Soffit, and Roof Beams (Carboguard System or other equivalent)	m²	2165		
3.05		Silo Stainless-Steel Hopper Liner Replacement (8 mm thick – 3CR12 or other equivalent)	m²	225		
		Stainless Steel Hopper Liner Replacement				
		Remove all missing and damaged worn stainless-steel liner plates	m²	225		
		Grind and clean the exposed concrete surface	m²	250		
		Install 3CR12 plates (1250 x 2500 x 8mm) on the top ring section	m²	225		
		Apply Norbak repair compound or equivalent cementitious filler	m²	1		
		Glazing				
		Remove all damaged or broken silo louvre panels and window glazing	No	16		

		Supply & Install silo louvre panels & window glazing	No	16		
Total Carried Forward for Section 3						
TOTAL CARRIED FORWARD FOR COAL SILO 1						
COAL SILO 2						
SECTION 1: GENERAL						
ITEM NO	**PAYMENT**	**DESCRIPTION**	**UNIT**	**QTY**	**RATE**	**AMOUNT**
1	**SANS 1200 A**	**SECTION 1: GENERAL**				
	8.3	**SCHEDULED FIXED-CHARGE AND VALUE RELATED ITEMS**				
1.01	8.3.1	Contractual Requirements	Sum	1		
	8.3.2	**Establishment of Facilities on the Site:**				
1.02	8.3.2.1	(a) Communication costs (cellular phone)	Sum	1		
	8.3.2.2	**Facilities for Contractor**				
1.03		(a) Offices and storage sheds (tools room, lockable and protected)	Sum	1		
1.04		(b) Workshops (materials storage yard)	Sum	1		
1.05		(c) Laboratories	Sum	1		
1.06		(d) Ablution and latrine facilities	Sum	1		
1.07		(e) Tools and equipment	Sum	1		
1.08		(f) Water supplies, electric power and communications	Sum	1		
1.90		(i) Plant.	Sum	1		
1.10		(j) Working at Heights Training of employees	Sum	1		
1.11		Medicals and Induction	Sum	1		
1.12		Site de-establishment	Sum	1		

1.13	PSA 8.3.3.1	Issuing of notices to end users and coordination of construction activities allowances. i.e., the contractor shall allow in his program the required time to shut off the pumps and conduct construction works with Eskom staff	Sum	1		
	PSA 8.3.3.2	**OHS Act Obligations:**				
1.14		i) General Safety obligations (incl. provision of personal protective equipment).	Sum	1		
1.15		ii) Health and Safety plan/file including health and safety training.	Sum	1		
	8.4	**SCHEDULED TIME-RELATED ITEMS**				
1.16		(a) Offices and storage sheds (tools room, lockable and protected)	Month	6		
1.17		(b) Workshops (materials storage yard)	Month	6		
1.18		(c) Laboratories	Month	6		
1.19		(d) Ablution and latrine facilities	Month	6		
1.20		(e) Tools and equipment	Month	6		
1.21		(f) Water supplies, electric power and communications	Month	6		
1.22		Living accommodation	Month	6		
1.23		Employee Transport to site	Month	6		
1.24		Safety Officer	Month	6		
1.25		Safety Supervisor	Month	6		
1.26		Professional Civil Engineer	Hours	250		
1.27		Project Manager	Month	6		
1.28		Construction Site Manager	Month	6		
1.29		Supervision for duration of construction (Quality Assurer)	Month	6		
		Equipment				

1.30		HP cleaning machine with minimum 120bar pressure	Days	4		
1.31		Heavy duty fan	Days	10		
		Other				
1.32		Provision of general waste skip including waste removal	Month	4		
1.33		Rebar scanning	m²	200		
	8.5	**SUMS STATED PROVISIONALLY BY ENGINEER**				
1.34		Design and certification of temporary structures, method statements rope access rigging points, and load supports for Coal Silo refurbishment certified by a registered PrEng or specialist contractor	Prov Sum	1		
1.35		Post-repair tests to verify bond strength, concrete cover & coating thickness	Prov Sum	1		
	8.8	**TEMPORARY WORKS**				
		<u>Preamble</u>				
1.36	8.8.2	Rope access systems and associated rigging for full external height and internal surfaces of the silo, including hopper access	Sum	1		
	8.7	**DAYWORKS**				
1.37		(a) Unskilled Labour	hours	4698		
1.38		(b) Semi-skilled Labour	hours	4698		
1.39		(c) Skilled Labour	hours	4698		
Total Carried Forward for Section 1						
2		**SECTION 2: External Repairs**				
		PREAMBLES				
		<u>Existing Concrete Repairs</u>				

		Repairs shall be executed in accordance with SANS 1200 G and GA (Concrete Works – Structural), SANS 2001-CC1:2012 (Concrete Works – Structural), and relevant manufacturer's specifications. Remove all loose and defective concrete, clean exposed reinforcement to bright metal, apply corrosion protection, reinstate with approved repair mortars and finish with specified protective coatings.				
		Exposal and Preparation of Surfaces				
		The contractor shall clean and scarify all areas to be repaired as instructed in the Scope of Works (SOW) to remove all loose material. Use high-pressure water cleaning to remove dust and debris. Expose the substrate for inspection and certification by the Engineer & Client's representative before commencing reinstatement works.				
		Carrying Away of Materials				
		Descriptions of carrying away of concrete breakout material from repair works shall be deemed to include loading and transporting all debris directly from site and disposing of it in a safe and environmentally acceptable manner off-site. Details of disposal sites shall be submitted to the Engineer for approval.				
		EXTERNAL REPAIRS				
2.01		Existing Concrete Repairs (EucoSeal or other equivalent)	m²	338		
2.02		Horizontal Crack Repairs (100 mm thick – Tamms Structural Mortar or other equivalent)	m	15		
2.03		Vertical Crack Repairs (100 mm thick – Tamms Structural Mortar or other equivalent)	m	18		
2.04		Concrete Spalling Repairs (100 mm thick – Tamms Structural Mortar or other equivalent)	m²	30		
		Concrete Degradation Repairs				

2.05		Provisional sum for the breaking down of deteriorated existing concrete works, inspection and replacing corroded steel rebars, casting Class R4 structural high-bond repair mortar or other equivalent and carting away waste material to a registered waste disposal site	Prov Sum	1		
2.06		Protective Coating to External Surfaces (Tamms Coat or other equivalent)	m²	2814		
2.07		Silo Roof Coating (Tamms Coat or other equivalent)	m²	64		
Total Carried Forward for Section 2						
3		**SECTION 3: INTERNAL REPAIRS**				
		<u>Concrete and Structural Repairs</u>				
		Repairs shall be executed in accordance with SANS 1200 G and GA (Concrete Works – Structural), SANS 2001-CC1:2012 (Concrete Works – Structural), and relevant manufacturer's specifications. Works include removal of loose and defective concrete, cleaning exposed reinforcement to bright metal, applying corrosion protection, reinstating with approved repair mortars, and finishing with specified protective or abrasion-resistant coatings.				
		<u>Exposal and Preparation of Surfaces</u>				
		The contractor shall clean and scarify all areas to be repaired as instructed in the Scope of Works (SOW) to remove all loose material. Use high-pressure water cleaning to remove dust and debris. Expose the substrate for inspection and certification by the Engineer before commencing reinstatement works.				
		<u>Carrying Away of Concrete Breakout Material</u>				
		Descriptions of carrying away of concrete breakout material from repair works shall be deemed to include loading and transporting all debris directly from site and disposing of it in a safe and environmentally acceptable manner off-site. Details of disposal sites shall be submitted to the Engineer for approval.				
		<u>INTERNAL REPAIRS</u>				

3.01		Horizontal Crack Repairs (100 mm thick – Tamms Structural Mortar or other equivalent)	m²	15		
3.02		Vertical Crack Repairs (100 mm thick – Tamms Structural Mortar or other equivalent)	m²	18		
3.03		Concrete Spalling/Exposed Rebar Repairs (100 mm thick – Tamms Structural Mortar or other equivalent)	m²	30		
		Protective Coatings				
3.04		Hack off existing internal coating and prepare surface to receive new by pressure wash	m²	2165		
3.05		Abrasion Resistant Coating to Silo Wall, Q-Deck Slab Soffit, and Roof Beams (Carboguard System or other equivalent)	m²	2165		
3.06		Silo Stainless-Steel Hopper Liner Replacement (8 mm thick – 3CR12 or other equivalent)	m²	225		
		Stainless Steel Hopper Liner Replacement				
3.07		Remove all missing and damaged worn stainless-steel liner plates	m²	225		
3.08		Grind and clean the exposed concrete surface	m²	250		
3.09		Install 3CR12 plates (1250 x 2500 x 8mm) on the top ring section	m²	225		
3.10		Apply Norbak repair compound or equivalent cementitious filler	m²	1		
		Glazing				
3.11		Remove all damaged or broken silo louvre panels and window glazing	No	16		
3.12		Supply & Install silo louvre panels & window glazing	No	16		
Total Carried Forward for Section 3						
TOTAL CARRIED FORWARD FOR COAL SILO 2						
COAL SILO 3						
SECTION 1: GENERAL						
	PAYMENT	**DESCRIPTION**	**UNIT**	**QTY**	**RATE**	**AMOUNT**

ITEM NO						
1	**SANS 1200 A**	**SECTION 1: GENERAL**				
	8.3	**SCHEDULED FIXED-CHARGE AND VALUE RELATED ITEMS**				
1.01	8.3.1	Contractual Requirements	Sum	1		
	8.3.2	**Establishment of Facilities on the Site:**				
1.02	8.3.2.1	(a) Communication costs (cellular phone)	Sum	1		
	8.3.2.2	**Facilities for Contractor**				
1.03		(a) Offices and storage sheds (tools room, lockable and protected)	Sum	1		
1.04		(b) Workshops (materials storage yard)	Sum	1		
1.05		(c) Laboratories	Sum	1		
1.06		(d) Ablution and latrine facilities	Sum	1		
1.07		(e) Tools and equipment	Sum	1		
1.08		(f) Water supplies, electric power and communications	Sum	1		
1.09		(i) Plant.	Sum	1		
1.10		(j) Working at Heights Training of employees	Sum	1		
1.11		Medicals and Induction	Sum	1		
1.12		Site de-establishment	Sum	1		
1.13	PSA 8.3.3.1	Issuing of notices to end users and coordination of construction activities allowances. i.e., the contractor shall allow in his program the required time to shut off the pumps and conduct construction works with Eskom staff	Sum	1		
	PSA 8.3.3.2	**OHS Act Obligations:**				
1.14		i) General Safety obligations (incl. provision of personal protective equipment).	Sum	1		

1.15		ii) Health and Safety plan/file including health and safety training.	Sum	1		
	8.4	**SCHEDULED TIME-RELATED ITEMS**				
1.16		(a) Offices and storage sheds (tools room, lockable and protected)	Month	6		
1.17		(b) Workshops (materials storage yard)	Month	6		
1.18		(c) Laboratories	Month	6		
1.19		(d) Ablution and latrine facilities	Month	6		
1.20		(e) Tools and equipment	Month	6		
1.21		(f) Water supplies, electric power and communications	Month	6		
1.22		Living accommodation	Month	6		
1.23		Employee Transport to site	Month	6		
1.24		Safety Officer	Month	6		
1.25		Safety Supervisor	Month	6		
1.26		Professional Civil Engineer	Hours	250		
1.27		Project Manager	Month	6		
1.28		Construction Site Manager	Month	6		
1.29		Supervision for duration of construction (Quality Assurer)	Month	6		
		Equipment				
1.30		HP cleaning machine with minimum 120bar pressure	Days	4		
1.31		Heavy duty fan	Days	10		
		Other				
1.32		Provision of general waste skip including waste removal	Month	4		
1.33		Rebar scanning	m²	200		

	8.5	**SUMS STATED PROVISIONALLY BY ENGINEER**				
1.34		Design and certification of temporary structures, method statements rope access rigging points, and load supports for Coal Silo refurbishment certified by a registered PrEng or specialist contractor	Prov Sum	1		
1.35		Post-repair tests to verify bond strength, concrete cover & coating thickness	Prov Sum	1		
	8.8	**TEMPORARY WORKS**				
		Preamble				
1.36	8.8.2	Rope access systems and associated rigging for full external height and internal surfaces of the silo, including hopper access	Sum	1		
	8.7	**DAYWORKS**				
1.37		(a) Unskilled Labour	hours	4698		
1.38		(b) Semi-skilled Labour	hours	4698		
1.39		(c) Skilled Labour	hours	4698		
Total Carried Forward for Section 1						
2		**SECTION 2: EXTERNAL REPAIRS**				
		PREAMBLES				
		Existing Concrete Repairs				
		Repairs shall be executed in accordance with SANS 1200 G and GA (Concrete Works – Structural), SANS 2001-CC1:2012 (Concrete Works – Structural), and relevant manufacturer's specifications. Remove all loose and defective concrete, clean exposed reinforcement to bright metal, apply corrosion protection, reinstate with approved repair mortars and finish with specified protective coatings.				
		Exposal and Preparation of Surfaces				

		The contractor shall clean and scarify all areas to be repaired as instructed in the Scope of Works (SOW) to remove all loose material. Use high-pressure water cleaning to remove dust and debris. Expose the substrate for inspection and certification by the Engineer & Client's representative before commencing reinstatement works.				
		Carrying Away of Materials				
		Descriptions of carrying away of concrete breakout material from repair works shall be deemed to include loading and transporting all debris directly from site and disposing of it in a safe and environmentally acceptable manner off-site. Details of disposal sites shall be submitted to the Engineer for approval.				
		EXTERNAL REPAIRS				
2.01		Existing Concrete Repairs (EucoSeal or other equivalent)	m²	338		
2.02		Horizontal Crack Repairs (100 mm thick – Tamms Structural Mortar or other equivalent)	m	15		
2.03		Vertical Crack Repairs (100 mm thick – Tamms Structural Mortar or other equivalent)	m	18		
2.04		Concrete Spalling Repairs (100 mm thick – Tamms Structural Mortar or other equivalent)	m²	30		
		Concrete Degradation Repairs				
2.05		Provisional sum for the breaking down of deteriorated existing concrete works, inspection and replacing corroded steel rebars, casting Class R4 structural high-bond repair mortar or other equivalent and carting away waste material to a registered waste disposal site	Prov Sum	1		
2.06		Protective Coating to External Surfaces (Tamms Coat or other equivalent)	m²	2814		
2.07		Silo Roof Coating (Tamms Coat or other equivalent)	m²	64		
Total Carried Forward for Section 2						

3		**SECTION 3: INTERNAL REPAIRS**				
		Concrete and Structural Repairs				
		Repairs shall be executed in accordance with SANS 1200 G and GA (Concrete Works – Structural), SANS 2001-CC1:2012 (Concrete Works – Structural), and relevant manufacturer's specifications. Works include removal of loose and defective concrete, cleaning exposed reinforcement to bright metal, applying corrosion protection, reinstating with approved repair mortars, and finishing with specified protective or abrasion-resistant coatings.				
		Exposal and Preparation of Surfaces				
		The contractor shall clean and scarify all areas to be repaired as instructed in the Scope of Works (SOW) to remove all loose material. Use high-pressure water cleaning to remove dust and debris. Expose the substrate for inspection and certification by the Engineer before commencing reinstatement works.				
		Carrying Away of Concrete Breakout Material				
		Descriptions of carrying away of concrete breakout material from repair works shall be deemed to include loading and transporting all debris directly from site and disposing of it in a safe and environmentally acceptable manner off-site. Details of disposal sites shall be submitted to the Engineer for approval.				
		INTERNAL REPAIRS				
3.01		Horizontal Crack Repairs (100 mm thick – Tamms Structural Mortar or other equivalent)	m²	15		
3.02		Vertical Crack Repairs (100 mm thick – Tamms Structural Mortar or other equivalent)	m²	18		
3.03		Concrete Spalling/Exposed Rebar Repairs (100 mm thick – Tamms Structural Mortar or other equivalent)	m²	30		
		Protective Coatings				
		Hack off existing internal coating and prepare surface to receive new by pressure wash	m²	2165		

3.04		Abrasion Resistant Coating to Silo Wall, Q-Deck Slab Soffit, and Roof Beams (Carboguard System or other equivalent)	m²	2165		
3.05		Silo Stainless-Steel Hopper Liner Replacement (8 mm thick – 3CR12 or other equivalent)	m²	225		
		Stainless Steel Hopper Liner Replacement				
3.06		Remove all missing and damaged worn stainless-steel liner plates	m²	225		
3.07		Grind and clean the exposed concrete surface	m²	250		
3.08		Install 3CR12 plates (1250 x 2500 x 8mm) on the top ring section	m²	225		
3.09		Apply Norbak repair compound or equivalent cementitious filler	m²	1		
		Glazing				
3.10		Remove all damaged or broken silo louvre panels and window glazing	No	16		
3.11		Supply & Install silo louvre panels & window glazing	No	16		
Total Carried Forward for Section 3						
TOTAL CARRIED FORWARD FOR COAL SILO 3						
COAL SILO 4						
SECTION 1: GENERAL						
ITEM NO	**PAYMENT**	**DESCRIPTION**	**UNIT**	**QTY**	**RATE**	**AMOUNT**
1	**SANS 1200 A**	**SECTION 1: GENERAL**				
	8.3	**SCHEDULED FIXED-CHARGE AND VALUE RELATED ITEMS**				
1.01	8.3.1	Contractual Requirements	Sum	1		
	8.3.2	**Establishment of Facilities on the Site:**				
1.02	8.3.2.1	(a) Communication costs (cellular phone)	Sum	1		

	8.3.2.2	**Facilities for Contractor**				
1.03	8.3.2.2	(a) Offices and storage sheds (tools room, lockable and protected)	Sum	1		
1.04	8.3.2.2	(b) Workshops (materials storage yard)	Sum	1		
1.05	8.3.2.2	(c) Laboratories	Sum	1		
1.06	8.3.2.2	(d) Ablution and latrine facilities	Sum	1		
1.07	8.3.2.2	(e) Tools and equipment	Sum	1		
1.08	8.3.2.2	(f) Water supplies, electric power and communications	Sum	1		
1.09	8.3.2.2	(i) Plant.	Sum	1		
1.10		(j) Working at Heights Training of employees	Sum	1		
1.11		Medicals and Induction	Sum	1		
1.12	8.3.4	Removal of Site establishment	Sum	1		
1.13	PSA 8.3.3.1	Issuing of notices to end users and coordination of construction activities allowances. i.e., the contractor shall allow in his program the required time to shut off the pumps and conduct construction works with Eskom staff	Sum	1		
	PSA 8.3.3.2	**OHS Act Obligations:**				
1.14		i) General Safety obligations (incl. provision of personal protective equipment).	Sum	1		
1.15		ii) Health and Safety plan/file including health and safety training.	Sum	1		
	8.4	**SCHEDULED TIME-RELATED ITEMS**				
1.16		(a) Offices and storage sheds (tools room, lockable and protected)	Month	6		
1.17		(b) Workshops (materials storage yard)	Month	6		
1.18		(c) Laboratories	Month	6		
1.19		(d) Ablution and latrine facilities	Month	6		

1.20		(e) Tools and equipment	Month	6		
1.21		(f) Water supplies, electric power and communications	Month	6		
1.22		Living accommodation	Month	6		
1.23		Employee Transport to site	Month	6		
1.24		Safety Officer	Month	6		
1.25		Safety Supervisor	Month	6		
1.26		Professional Civil Engineer	Hours	250		
1.27		Project Manager	Month	6		
1.28		Construction Site Manager	Month	6		
1.29		Supervision for duration of construction (Quality Assurer)	Month	6		
		Equipment				
1.30		HP cleaning machine with minimum 120bar pressure	Days	4		
1.31		Heavy duty fan	Days	10		
		Other				
1.32		Provision of general waste skip including waste removal	Month	4		
1.33		Rebar scanning	m²	200		
	8.5	**SUMS STATED PROVISIONALLY BY ENGINEER**				
1.34		Design and certification of temporary structures, method statements rope access rigging points, and load supports for Coal Silo refurbishment certified by a registered PrEng or specialist contractor.	Prov Sum	1		
1.35		Post-repair tests to verify bond strength, concrete cover & coating thickness	Prov Sum	1		

	8.8	**TEMPORARY WORKS**				
		Preamble				
1.36	8.8.2	Rope access systems and associated rigging for full external height and internal surfaces of the silo, including hopper access	Sum	1		
	8.7	**DAYWORKS**				
1.37		(a) Unskilled Labour	hours	4698		
1.38		(b) Semi-skilled Labour	hours	4698		
1.39		(c) Skilled Labour	hours	4698		
Total Carried Forward for Section 1						
2		**SECTION 2: External Repairs**				
		PREAMBLES				
		Existing Concrete Repairs				
		Repairs shall be executed in accordance with SANS 1200 G and GA (Concrete Works – Structural), SANS 2001-CC1:2012 (Concrete Works – Structural), and relevant manufacturer's specifications. Remove all loose and defective concrete, clean exposed reinforcement to bright metal, apply corrosion protection, reinstate with approved repair mortars and finish with specified protective coatings.				
		Exposal and Preparation of Surfaces				
		The contractor shall clean and scarify all areas to be repaired as instructed in the Scope of Works (SOW) to remove all loose material. Use high-pressure water cleaning to remove dust and debris. Expose the substrate for inspection and certification by the Engineer & Client's representative before commencing reinstatement works.				

		Carrying Away of Materials				
		Descriptions of carrying away of concrete breakout material from repair works shall be deemed to include loading and transporting all debris directly from site and disposing of it in a safe and environmentally acceptable manner off-site. Details of disposal sites shall be submitted to the Engineer for approval.				
		EXTERNAL REPAIRS				
2.01		Existing Concrete Repairs (EucoSeal or other equivalent)	m²	338		
2.02		Horizontal Crack Repairs (100 mm thick – Tamms Structural Mortar or other equivalent)	m	15		
2.03		Vertical Crack Repairs (100 mm thick – Tamms Structural Mortar or other equivalent)	m	18		
2.04		Concrete Spalling Repairs (100 mm thick – Tamms Structural Mortar or other equivalent)	m	30		
		Concrete Degradation Repairs				
2.05		Provisional sum for the breaking down of deteriorated existing concrete works, inspection and replacing corroded steel rebars, casting Class R4 structural high-bond repair mortar or other equivalent and carting away waste material to a registered waste disposal site	Prov Sum	1		
2.06		Protective Coating to External Surfaces (Tamms Coat or other equivalent)	m²	2814		
2.07		Silo Roof Coating (Tamms Coat or other equivalent)	m²	201		
Total Carried Forward for Section 2						

3		**SECTION 3: INTERNAL REPAIRS**				
		Concrete and Structural Repairs				
		Repairs shall be executed in accordance with SANS 1200 G and GA (Concrete Works – Structural), SANS 2001-CC1:2012 (Concrete Works – Structural), and relevant manufacturer's specifications. Works include removal of loose and defective concrete, cleaning exposed reinforcement to bright metal, applying corrosion protection, reinstating with approved repair mortars, and finishing with specified protective or abrasion-resistant coatings.				
		Exposal and Preparation of Surfaces				
		The contractor shall clean and scarify all areas to be repaired as instructed in the Scope of Works (SOW) to remove all loose material. Use high-pressure water cleaning to remove dust and debris. Expose the substrate for inspection and certification by the Engineer before commencing reinstatement works.				
		Carrying Away of Concrete Breakout Material				
		Descriptions of carrying away of concrete breakout material from repair works shall be deemed to include loading and transporting all debris directly from site and disposing of it in a safe and environmentally acceptable manner off-site. Details of disposal sites shall be submitted to the Engineer for approval.				
		INTERNAL REPAIRS				
3.01		Horizontal Crack Repairs (100 mm thick – Tamms Structural Mortar or other equivalent)	m²	15		
3.02		Vertical Crack Repairs (100 mm thick – Tamms Structural Mortar or other equivalent)	m²	18		
3.03		Concrete Spalling/Exposed Rebar Repairs (100 mm thick – Tamms Structural Mortar or other equivalent)	m²	30		
		Protective Coatings				
3.04		Hack off existing internal coating and prepare surface to receive new by pressure wash	m²	2165		

3.05		Abrasion Resistant Coating to Silo Wall, Q-Deck Slab Soffit, and Roof Beams (Carboguard System or other equivalent)	m²	2165		
3.06		Silo Stainless-Steel Hopper Liner Replacement (8 mm thick – 3CR12 or other equivalent)	m²	225		
		Stainless Steel Hopper Liner Replacement				
3.07		Remove all missing and damaged worn stainless-steel liner plates	m²	225		
3.08		Grind and clean the exposed concrete surface	m²	250		
3.09		Install 3CR12 plates (1250 x 2500 x 8mm) on the top ring section	m²	225		
3.10		Apply Norbak repair compound or equivalent cementitious filler	m²	1		
		Glazing				
3.11		Remove all damaged or broken silo louvre panels and window glazing	No	16		
3.12		Supply & Install silo louvre panels & window glazing	No	16		
Total Carried Forward for Section 3						
TOTAL CARRIED FORWARD FOR COAL SILO 4						
COAL SILO 5						
SECTION 1: GENERAL						
ITEM NO	**PAYMENT**	**DESCRIPTION**	**UNIT**	**QTY**	**RATE**	**AMOUNT**
1	**SANS 1200 A**	**SECTION 1: GENERAL**				
	8.3	**SCHEDULED FIXED-CHARGE AND VALUE RELATED ITEMS**				
1.01	8.3.1	Contractual Requirements	Sum	1		
	8.3.2	**Establishment of Facilities on the Site:**				
1.02	8.3.2.1	(a) Communication costs (cellular phone)	Sum	1		

	8.3.2.2	**Facilities for Contractor**				
1.03	8.3.2.2	(a) Offices and storage sheds (tools room, lockable and protected)	Sum	1		
1.04	8.3.2.2	(b) Workshops (materials storage yard)	Sum	1		
1.05	8.3.2.2	(c) Laboratories	Sum	1		
1.06	8.3.2.2	(d) Ablution and latrine facilities	Sum	1		
1.07	8.3.2.2	(e) Tools and equipment	Sum	1		
1.08	8.3.2.2	(f) Water supplies, electric power and communications	Sum	1		
1.09	8.3.2.2	(i) Plant.	Sum	1		
1.10		(j) Working at Heights Training of employees	Sum	1		
1.11		Medicals and Induction	Sum	1		
1.12	8.3.4	Removal of Site establishment	Sum	1		
1.13	PSA 8.3.3.1	Issuing of notices to end users and coordination of construction activities allowances. i.e., the contractor shall allow in his program the required time to shut off the pumps and conduct construction works with Eskom staff	Sum	1		
	PSA 8.3.3.2	**OHS Act Obligations:**				
1.14		i) General Safety obligations (incl. provision of personal protective equipment).	Sum	1		
1.15		ii) Health and Safety plan/file including health and safety training.	Sum	1		
	8.4	**SCHEDULED TIME-RELATED ITEMS**				
1.16		(a) Offices and storage sheds (tools room, lockable and protected)	Month	6		
1.17		(b) Workshops (materials storage yard)	Month	6		
1.18		(c) Laboratories	Month	6		
1.19		(d) Ablution and latrine facilities	Month	6		

1.20		(e) Tools and equipment	Month	6		
1.21		(f) Water supplies, electric power and communications	Month	6		
1.22		Living accommodation	Month	6		
1.23		Employee Transport to site	Month	6		
1.24		Safety Officer	Month	6		
1.25		Safety Supervisor	Month	6		
1.26		Professional Civil Engineer	Hours	250		
1.27		Project Manager	Month	6		
1.28		Construction Site Manager	Month	6		
1.29		Supervision for duration of construction (Quality Assurer)	Month	6		
		Equipment				
1.30		HP cleaning machine with minimum 120bar pressure	Days	4		
1.31		Heavy duty fan	Days	10		
		Other				
1.32		Provision of general waste skip including waste removal	Month	4		
1.33		Rebar scanning	m²	200		
	8.7	**DAYWORKS**				
1.37		(a) Unskilled Labour	hours	4698		
1.38		(b) Semi-skilled Labour	hours	4698		
1.39		(c) Skilled Labour	hours	4698		
Total Carried Forward for Section 1						

2		**SECTION 2: External Repairs**				
		PREAMBLES				
		Existing Concrete Repairs				
		Repairs shall be executed in accordance with SANS 1200 G and GA (Concrete Works – Structural), SANS 2001-CC1:2012 (Concrete Works – Structural), and relevant manufacturer's specifications. Remove all loose and defective concrete, clean exposed reinforcement to bright metal, apply corrosion protection, reinstate with approved repair mortars and finish with specified protective coatings.				
		Exposal and Preparation of Surfaces				
		The contractor shall clean and scarify all areas to be repaired as instructed in the Scope of Works (SOW) to remove all loose material. Use high-pressure water cleaning to remove dust and debris. Expose the substrate for inspection and certification by the Engineer & Client's representative before commencing reinstatement works.				
		Carrying Away of Materials				
		Descriptions of carrying away of concrete breakout material from repair works shall be deemed to include loading and transporting all debris directly from site and disposing of it in a safe and environmentally acceptable manner off-site. Details of disposal sites shall be submitted to the Engineer for approval.				
		EXTERNAL REPAIRS				
2.01		Existing Concrete Repairs (EucoSeal or other equivalent)	m²	338		
2.02		Horizontal Crack Repairs (100 mm thick – Tamms Structural Mortar or other equivalent)	m	15		
2.03		Vertical Crack Repairs (100 mm thick – Tamms Structural Mortar or other equivalent)	m	18		

2.04		Concrete Spalling Repairs (100 mm thick – Tamms Structural Mortar or other equivalent)	m	30		
		Concrete Degradation Repairs				
2.05		Provisional sum for the breaking down of deteriorated existing concrete works, inspection and replacing corroded steel rebars, casting Class R4 structural high-bond repair mortar or other equivalent and carting away waste material to a registered waste disposal site	Prov Sum	1		
2.06		Protective Coating to External Surfaces (Tamms Coat or other equivalent)	m²	2814		
2.07		Silo Roof Coating (Tamms Coat or other equivalent)	m²	201		
Total Carried Forward for Section 2						
3		**SECTION 3: INTERNAL REPAIRS**				
		Concrete and Structural Repairs				
		Repairs shall be executed in accordance with SANS 1200 G and GA (Concrete Works – Structural), SANS 2001-CC1:2012 (Concrete Works – Structural), and relevant manufacturer's specifications. Works include removal of loose and defective concrete, cleaning exposed reinforcement to bright metal, applying corrosion protection, reinstating with approved repair mortars, and finishing with specified protective or abrasion-resistant coatings.				
		Exposal and Preparation of Surfaces				
		The contractor shall clean and scarify all areas to be repaired as instructed in the Scope of Works (SOW) to remove all loose material. Use high-pressure water cleaning to remove dust and debris. Expose the substrate for inspection and certification by the Engineer before commencing reinstatement works.				
		Carrying Away of Concrete Breakout Material				
		Descriptions of carrying away of concrete breakout material from repair works shall be deemed to include loading and transporting all debris directly from site and disposing of it in a safe and environmentally acceptable manner off-site. Details of disposal sites shall be submitted to the Engineer for approval.				

		INTERNAL REPAIRS				
3.01		Horizontal Crack Repairs (100 mm thick – Tamms Structural Mortar or other equivalent)	m²	15		
3.02		Vertical Crack Repairs (100 mm thick – Tamms Structural Mortar or other equivalent)	m²	18		
3.03		Concrete Spalling/Exposed Rebar Repairs (100 mm thick – Tamms Structural Mortar or other equivalent)	m²	30		
		Protective Coatings				
3.04		Hack off existing internal coating and prepare surface to receive new by pressure wash	m²	2165		
3.05		Abrasion Resistant Coating to Silo Wall, Q-Deck Slab Soffit, and Roof Beams (Carboguard System or other equivalent)	m²	2165		
3.06		Silo Stainless-Steel Hopper Liner Replacement (8 mm thick – 3CR12 or other equivalent)	m²	225		
		Stainless Steel Hopper Liner Replacement				
3.07		Remove all missing and damaged worn stainless-steel liner plates	m²	225		
3.08		Grind and clean the exposed concrete surface	m²	250		
3.09		Install 3CR12 plates (1250 x 2500 x 8mm) on the top ring section	m²	225		
3.30		Apply Norbak repair compound or equivalent cementitious filler	m²	1		
		Glazing				
3.31		Remove all damaged or broken silo louvre panels and window glazing	No	16		
3.32		Supply & Install silo louvre panels & window glazing	No	16		
Total Carried Forward for Section 3						
TOTAL CARRIED FORWARD FOR COAL SILO 5						

COAL SILO 6						
SECTION 1: GENERAL						
ITEM NO	**PAYMENT**	**DESCRIPTION**	**UNIT**	**QTY**	**RATE**	**AMOUNT**
1	**SANS 1200 A**	**SECTION 1: GENERAL**				
	8.3	**SCHEDULED FIXED-CHARGE AND VALUE RELATED ITEMS**				
1.01	8.3.1	Contractual Requirements	Sum	1		
	8.3.2	**Establishment of Facilities on the Site:**				
1.02	8.3.2.1	(a) Communication costs (cellular phone)	Sum	1		
	8.3.2.2	**Facilities for Contractor**				
1.03	8.3.2.2	(a) Offices and storage sheds (tools room, lockable and protected)	Sum	1		
1.04	8.3.2.2	(b) Workshops (materials storage yard)	Sum	1		
1.05	8.3.2.2	(c) Laboratories	Sum	1		
1.06	8.3.2.2	(d) Ablution and latrine facilities	Sum	1		
1.07	8.3.2.2	(e) Tools and equipment	Sum	1		
1.08	8.3.2.2	(f) Water supplies, electric power and communications	Sum	1		
1.09	8.3.2.2	(i) Plant.	Sum	1		
1.10		(j) Working at Heights Training of employees	Sum	1		
1.11		Medicals and Induction	Sum	1		
1.12	8.3.4	Removal of Site establishment	Sum	1		
1.13	PSA 8.3.3.1	Issuing of notices to end users and coordination of construction activities allowances. i.e., the contractor shall allow in his program the required time to shut off the pumps and conduct construction works with Eskom staff	Sum	1		

	PSA 8.3.3.2	**OHS Act Obligations:**				
1.14		i) General Safety obligations (incl. provision of personal protective equipment).	Sum	1		
1.15		ii) Health and Safety plan/file including health and safety training.	Sum	1		
	8.4	**SCHEDULED TIME-RELATED ITEMS**				
1.16		(a) Offices and storage sheds (tools room, lockable and protected)	Month	6		
1.17		(b) Workshops (materials storage yard)	Month	6		
1.18		(c) Laboratories	Month	6		
1.19		(d) Ablution and latrine facilities	Month	6		
1.20		(e) Tools and equipment	Month	6		
1.21		(f) Water supplies, electric power and communications	Month	6		
1.22		Living accommodation	Month	6		
1.23		Employee Transport to site	Month	6		
1.24		Safety Officer	Month	6		
1.25		Safety Supervisor	Month	6		
1.26		Professional Civil Engineer	Hours	250		
1.27		Project Manager	Month	6		
1.28		Construction Site Manager	Month	6		
1.29		Supervision for duration of construction (Quality Assurer)	Month	6		
		Equipment				
1.30		HP cleaning machine with minimum 120bar pressure	Days	4		
1.31		Heavy duty fan	Days	10		

		Other				
1.32		Provision of general waste skip including waste removal	Month	4		
1.33		Rebar scanning	m²	200		
	8.5	**SUMS STATED PROVISIONALLY BY ENGINEER**				
1.34		Design and certification of temporary structures, method statements rope access rigging points, and load supports for Coal Silo refurbishment certified by a registered PrEng or specialist contractor	Prov Sum	1		
1.35		Post-repair tests to verify bond strength, concrete cover & coating thickness	Prov Sum	1		
	8.8	**TEMPORARY WORKS**				
		<u>Preamble</u>				
1.36	8.8.2	Rope access systems and associated rigging for full external height and internal surfaces of the silo, including hopper access	Sum	1		
	8.7	**DAYWORKS**				
1.37		(a) Unskilled Labour	hours	4698		
1.38		(b) Semi-skilled Labour	hours	4698		
1.39		(c) Skilled Labour	hours	4698		
Total Carried Forward for Section 1						
2		**SECTION 2: External Repairs**				
		PREAMBLES				
		<u>Existing Concrete Repairs</u>				
		Repairs shall be executed in accordance with SANS 1200 G and GA (Concrete Works – Structural), SANS 2001-CC1:2012 (Concrete Works – Structural), and relevant manufacturer's specifications. Remove all loose and defective concrete, clean exposed reinforcement to bright metal, apply corrosion protection, reinstate with approved repair mortars and finish with specified protective coatings.				

		Exposal and Preparation of Surfaces				
		The contractor shall clean and scarify all areas to be repaired as instructed in the Scope of Works (SOW) to remove all loose material. Use high-pressure water cleaning to remove dust and debris. Expose the substrate for inspection and certification by the Engineer & Client's representative before commencing reinstatement works.				
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2.04		Concrete Spalling Repairs (100 mm thick – Tamms Structural Mortar or other equivalent)	m	30		
		Concrete Degradation Repairs				
2.05		Provisional sum for the breaking down of deteriorated existing concrete works, inspection and replacing corroded steel rebars, casting Class R4 structural high-bond repair mortar or other equivalent and carting away waste material to a registered waste disposal site	Prov Sum	1		
2.06		Protective Coating to External Surfaces (Tamms Coat or other equivalent)	m²	2814		
2.07		Silo Roof Coating (Tamms Coat or other equivalent)	m²	201		
Total Carried Forward for Section 2						

3		**SECTION 3: INTERNAL REPAIRS**				
		Concrete and Structural Repairs				
		Repairs shall be executed in accordance with SANS 1200 G and GA (Concrete Works – Structural), SANS 2001-CC1:2012 (Concrete Works – Structural), and relevant manufacturer's specifications. Works include removal of loose and defective concrete, cleaning exposed reinforcement to bright metal, applying corrosion protection, reinstating with approved repair mortars, and finishing with specified protective or abrasion-resistant coatings.				
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3.03		Concrete Spalling/Exposed Rebar Repairs (100 mm thick – Tamms Structural Mortar or other equivalent)	m²	30		
		Protective Coatings				
3.04		Hack off existing internal coating and prepare surface to receive new by pressure wash	m²	2165		
3.05		Abrasion Resistant Coating to Silo Wall, Q-Deck Slab Soffit, and Roof Beams (Carboguard System or other equivalent)	m²	2165		

3.06		Silo Stainless-Steel Hopper Liner Replacement (8 mm thick – 3CR12 or other equivalent)	m²	225		
		Stainless Steel Hopper Liner Replacement				
3.07		Remove all missing and damaged worn stainless-steel liner plates	m²	225		
3.08		Grind and clean the exposed concrete surface	m²	250		
3.09		Install 3CR12 plates (1250 x 2500 x 8mm) on the top ring section	m²	225		
3.30		Apply Norbak repair compound or equivalent cementitious filler	m²	1		
		Glazing				
3.31		Remove all damaged or broken silo louvre panels and window glazing	No	16		
3.32		Supply & Install silo louvre panels & window glazing	No	16		
Total Carried Forward for Section 3						
TOTAL CARRIED FORWARD FOR COAL SILO 6						

PART 3: SCOPE OF WORK

Document reference	Title	No of pages
	This cover page	1
C3.1	*Employer*'s *Works* Information	37
C3.2	*Contractor*'s *Works* Information	
	Total number of pages	38

C3.1: *Employer*'s *Works* Information

Table of Contents

1 Description of the *Works*

The works to be carried out under this contract consist of the refurbishment of Coal Silos 1 to 6, as detailed in the Scope of Work and technical specification set out in document number **15ENG CIVIL-2041**.

1.1 Executive overview

Tutuka Power Station is situated near the town of Standerton in Mpumalanga, South Africa. The coordinates of the power station are 26°46'43" S, 29°21'07" E. It is a coal fired power station with six (6) generating units of 609 MW each. Tutuka Power Station coal is stored in six (6) 4 500-ton capacity silos, each of which can serve two boilers.

Following a comprehensive inspection and condition assessment, a range of structural defects and material degradations were identified in the silos. These include extensive internal and external concrete deterioration, failure of previous repair interventions, damage to stainless steel hopper liners, and exposure of corroded reinforcement. These issues pose a risk to the structural reliability and operational safety of the silos.

The Works Information, as set out in the technical specification for the Refurbishment of Coal Silos 1–6 (document number 15ENG CIVIL-2041), defines the Works required to reinstate the structural integrity of the silos. The Works include general and silo-specific repair requirements, including concrete remediation, crack sealing, application of protective coating systems, and hopper liner replacement. The Contractor provides the Works in accordance with the Works Information, all applicable Eskom standards, statutory safety regulations, and recognised industry best practice to ensure long-term durability and performance.

1.2 Employer's objectives and purpose of the Works

1.2.1 Objective:

To restore and strengthen the structural integrity of Coal Silos 1 to 6.

1.2.2 Purpose:

To ensure the long-term durability, safety, and performance of the silos.

1.3 Interpretation and terminology

The following terminology and abbreviations are used in this *Works* Information:

1.2.1. List of Definitions

Item	Description
Employer	The person named as the Employer in the Appendix to Tender and the legal successors in title to this person.
Contractor	The person(s) named as *Contractor* in the Letter of Tender accepted by the *Employer* and the legal successors in title to this person(s).
Project Manager	The person appointed by the *Employer* to act as the *Project Manager* for the purposes of the Contract and named in the Appendix to Tender, or other person appointed from time to time by the *Employer* and notified to the *Contractor* as per NEC procedures.
NEC	New Engineering Contract.

Works Information	The document/s forming part of the contract in which are described the methods of executing the various items of work to be done, and the nature and quality of the materials to be supplied and includes technical schedules and drawings attached thereto as well as all samples and patterns.

1.2.2. List of Abbreviations

Abbreviation	Description
B-BBEE	Broad Based Black Economic Empowerment
BPLwD	Black People Living with Disability
BWO	Black Woman Owned
BYO	Black Youth Owned
MS	Microsoft
NCR	Non-Conformance Report
NEC	New Engineering Contract
NEMA	National Environmental Management Act
PPE	Personal Protective Equipment
QA	Quality Assurance
QC	Quality Control
QCP	Quality Control Plan
QM	Quality Management
QMS	Quality Management System
RFID	Radio Frequency-Identification
SANS	South African National Standards
SAT	Site Acceptance Test
SBE	Small Black Enterprises
SD&L	Supplier Development and Localization
SHE	Safety, Health and Environment
SOC	State Owned Company

2 Management and start up

2.1. Management meetings

2.1.1. Purpose and General Overview

Regular meetings of a general nature may be convened and chaired by the Project Manager to monitor, review, and coordinate the execution of the Works.

These meetings provide a structured forum for the Contractor to report on overall progress, discuss technical and commercial matters, review programme schedules, and address any issues or concerns arising during the execution of the Works.

2.1.2. Frequency, Venue, and Attendance

a) Regular meetings shall be held monthly between the Project Manager and the Contractor and may include any other co-opted members as required.
b) The Contractor shall be represented at each meeting by the appropriate members of staff.
c) Additional ad hoc meetings may be called by the Project Manager to address urgent issues.
d) The Project Manager may, as and when necessary, require the Contractor to attend meetings with others performing work onsite, particularly during the same outage.
e) The venue for all meetings shall be determined by the Project Manager unless otherwise specified.
f) Attendees must have authority to make decisions and execute actions.

2.1.3. Reporting

During meetings, the Contractor shall report on overall progress, addressing at a minimum the following:

a) Contractor's current activity progress and planned finish dates
b) Contractor's planned start and finish dates for the Works
c) Progress on all items listed in NEC Core Clause 31
d) Comparison of the Contractor's and Project Manager's programme for delays and milestone targets
e) Current and projected manpower by class
f) Health, Safety, and Quality Management
g) Progress of any other relevant activities
h) Technical or commercial issues
i) Skills Development and Localisation
j) CSI and Infrastructure Project Implementation Plan
k) Procurement progress
l) Problem areas or concerns.

2.1.4. Minutes and Records

a) The Project Manager shall prepare minutes of each meeting.
b) Any action of the Project Manager, Supervisor, Contractor, or Adjudicator implied in the minutes, which has contractual implications, shall be confirmed by separate communication issued in accordance with the contract.
c) All meetings shall be recorded either through formal minutes, MS Teams recordings, or a meeting register prepared and circulated by the person convening the meeting.
d) Such minutes, recordings, or registers shall not be used to confirm contractual actions or instructions, which shall be done separately by the person identified in the Conditions of Contract to issue such actions or instructions.

2.1.5. Specialist and Other Meetings

a) Meetings of a specialist nature may be convened as specified elsewhere in this Works Information, or if not specified, at times and locations to suit the Parties, the nature, and the progress of the Works.
b) Records of specialist meetings shall be submitted to the Project Manager within five (5) days of the meeting.

2.1.6. Meetings Schedule

Title and purpose	Approximate time & interval	Location	Attendance by:
Risk reduction meeting	As and when required	Venue determined by the *Project Manager*	Relevant appointed members of a Risk or and Compensation event committee
Overall contract progress, technical and feedback (from contract date to execution commencement)	Weekly	Venue determined by the *Project Manager*	*Employer*, *Contractor*, *Supervisor*, and Others as determined by the *Project Manager*

Safety Meetings	Weekly	Venue determined by the *Project Manager*	*Employer*, *Contractor*, *Supervisor*, Safety Officers and Others as determined by the *Project Manager*
Interface meetings	Weekly	Venue determined by the Project Manager	*Project Manager, Contractor, Supervisor,* Planners and *Others* as determined by the *Project Manager*
Payment Assessment Meeting	Monthly – 20th of every month	Venue determined by the *Project Manager*	*Employer*, *Contractor*, *Supervisor*, Quantity *Supervisor*s and Others as determined by the *Project Manager*
Early Warning Meeting	As and when required	Virtual Meeting/Project Boardroom	*Employer*, *Contractor*, *Supervisor*, and Others as determined by the *Project Manager*
Quality and Engineering Meeting	Monthly or as determined by *Project Manager*	Venue determined by the *Project Manager*	*Employer*, *Contractor*, *Supervisor* Safety Officers and Others as determined by the *Project Manager*
Technical meetings	As and when required	Venue determined by the Project *Manager*	*Employer*, *Contractor*, *Supervisor*, and Others as determined by the *Project Manager*
Outage meetings (Including integration meetings with Others)	Daily during outage	Venue determined by the Project *Manager*	*Project Manager, Contractor, Supervisor,* Planners and *Others* as determined by the *Project Manager*

2.2. Documentation Management

2.2.1. Document identification

The documentation requirements cover the various engineering stages, from the design stage through fabrication, installation, testing and commissioning and most importantly for the operating, maintenance and training stage of the project.

The *Contractor* is responsible for the compilation and the supply of the documentation during the various project stages and to provide the documentation programme to link with the milestone dates. Documentation and drawings are programmed for delivery to meet the milestone dates and in accordance with the agreed VDSS supplied *Employer*

2.2.1.1. Documentation Submission

All documents and records are submitted according to Technical Document and Record Management Work Instruction (240-76992014), Reporting and Data Requirements Specification for Contractors (240-83561037) and all other Engineering standards referenced in this works information, for all drawing submission requirements refer to the technical specification. The Employer ensures that the Contractor is provided with latest revisions of all these documents. All documents used within the project follows the same standard of layout, style and formatting as described in the documents mentioned above.

In addition, the *Contractor* is provided with the following documents which must be adhered to:

- Technical Documentation Classification and Designation Standard (240-54179170).
- Project / Plant Specific Technical Documents and Records Management Procedure (240-53114186)

All documentation is submitted with a transmittal containing the following fields as a minimum:

- Name of the Package
- Name of Contractor and details Transmittal Number and Description Date of Submission

- Description of Document
- Document number (Both Employer's and Contractor's) Document revision
- Document type
- Document Approval Status
- Number of copies
- Purpose of submission
- Document Authorisation Status (i.e. Accepted with Comments, Not Accepted with Comments, Accepted)
- Transmittal Reason Issue

The *Contractor* submits all documentation to the *Project Manager* as well as the Project's Documentation Centre in the following media:

- Electronic copies are submitted to Eskom Documentation Centre through the project's email address that will be supplied to the *Contractor* only at Contract award. The email subject as a minimum has the following: (Project Name, Transmittal Number and Transmittal Description).
- The project's Document Controller is copied on submission. Electronic copies that are too large for email is delivered via ZendTo or on CD/DVD, large file transfer protocol and/or hard drives to the Project Documentation Centre.
- All transmittals must be signed and sent to the sender as agreed by both parties.
- Hard copies must be delivered to the Project Manager with a transmittal note

2.2.1.2. Documentation Review and Turn-around

For review purpose, all documentation is submitted, by the *Contractor*, in native electronic format as per the requirements prescribed in the Technical Specification. Final documentation is submitted in both electronic and hard copies to the *Project Manager* /Project Documentation Centre. The *Contractor* submits four (4) hard copies for each file and one (1) electronic copy (USB). Submission of documentation deliverables must be in accordance with the task completion or no later than 14 calendar days after completion of task as stipulated in the agreed VOSS.

The *Project Manager* has a maximum of fourteen (14) calendar days to review and consolidate review comments for documentation submitted by the *Contractor*.

The *Contractor* has a maximum of (5) calendar days to respond and / rectify as per the comments by the Employer.

2.3. Health and safety risk management

2.3.1. General

In carrying out its obligations to the *Employer* in terms of this contract, which obligations include, amongst others, providing the *Works*; using Plant, Materials and Equipment; and whilst at the site for any reason, the *Contractor* is the "*Employer*" in terms of the Occupational Health and Safety Act, No. 85 of 1993, in respect of its activities and in relation to its employees, agents, Subcontractor/s and mandatories.

The *Contractor* does not consider itself under the supervision or management of the *Employer* with regard to compliance with the Safety Health and Environmental requirements.

Furthermore, the *Contractor* does not consider himself to be a subordinate or under the supervision of the *Project Manager* in respect of these matters. The *Contractor* is responsible for the supervision of its employees, agents, Subcontractors and mandatories and takes full responsibility and accountability for ensuring that they are competent, aware of the Safety Health and Environmental requirements, whilst executing the *Works* in accordance with the Safety Health and Environmental requirements.

The *Contractor* ensures compliance with, amongst others:

a) The provisions of the Occupational Health and Safety Act, No. 85 of 1993 and all applicable regulations (as amended), binding in terms thereof;

b) The latest versions of standards, procedures, specifications, rules, systems of work and requirements of the Employer, copies of which will be provided to the Contractor on request. Refer to Section 6.

c) The Tutuka Power Station OHS Specification for Refurbishment of Coal Silos 1-6.

d) The SHE Requirements Procedure (32–726).

e) The provisions of the National Environmental Management Act (as amended) and all regulations in force from time to time in terms of that Act, including Environmental Authorizations, Integrated Waste Licence (Licence Number 12/9/11/L456/6/R1), Tutuka Power Station Waste Management Procedure (14RISK ENV-013), Integrated Water Use Licence (Licence Number 08/C11K/ABCFGI/1016).

(The documentation referred to in paragraphs 2.3.1 (a) (b) (c) and (d) are collectively referred to as the Safety Health and Environmental requirements and forms a part of the contract *Works* Information.)

The *Contractor* ensures that its employees, agents, Subcontractors and mandatories comply with the provisions of the Occupational Health and Safety Act, No. 85 of 1993, and all applicable regulations binding in terms thereof as well as the *Employer*'s Safety Health and Environmental Specification whilst making use of plant, materials and equipment and whilst at the Site for any reason whatsoever.

The *Contractor* implements a comprehensive health and safety management system, based on the ISO 45001:2018 requirements for utilisation at the project.

The *Contractor* appoints a person, qualified and competent in accordance with the safety health and environmental requirements, as the liaison with the *Employer*'s Project Safety, Health and Environment Manager/Officer or delegated person for all such matters as pertaining related to safety, health and the environment. The *Contractor* shall ensure that such a person is contactable 24 hours a day and is registered with a registered professional council approved by the Principal Director of the Department of Labour, as per the requirements of the latest Construction Regulations, inclusive of all exemptions and amendments pertaining thereto.

The *Contractor* hereby indemnifies the *Employer* and holds the *Employer* harmless in respect of any and all loss, costs, claims, demands, liabilities, damage, penalties or expenses that may be made against the *Employer* and/or suffered or incurred by the *Employer* (as the case may be) as a result of, any failure of the *Contractor*, its employees, agents, Subcontractors and mandatories to comply with their obligations, and/or the failure of the *Employer* to procure the compliance by the *Contractor*, its employees, agents, Subcontractors and/or mandatories with their responsibilities and/or obligations in terms of or arising from the Occupational Health and Safety Act, No. 85 of 1993.

2.3.2. Mandatory Agreements

The *Contractor* confirms that:

a) In terms of sections 37(1) and 37(2) of the OHSA, the *Employer* is relieved of any and all of its responsibilities and liabilities pertaining to the activities performed by the *Contractor* (and its employees, agents, Subcontractors and mandatories) relating to the *Works*; the use of plant, materials and equipment; and whilst at the Site for whatsoever reason.

b) The *Contractor* confirms that, in terms of the Construction Regulations, regulation 6, it is hereby mandated as the designer and must perform all duties required of a designer. (This will be applicable only where the *Contractor* is required to do design work as part of their Scope).

The *Contractor* confirms that he has been provided with sufficient information regarding the health and safety arrangements applicable to the *Works*, the use of Plant, Materials and Equipment, as well as at the Site.

In addition, the *Contractor* shall ensure that:

c) Prior to the *Contractor* commencing with any operations/ activities relating to the *Works* and/or prior to gaining access to the Site, the *Contractor* concludes a written mandatory agreement with the *Employer* in terms of section 37(2) of the OHSA and 5(1)(k) under the construction regulations. The aforementioned agreement constitutes a record of the written arrangements and procedures between the *Contractor* and *Employer* regarding health and safety.

d) As far as is reasonably practicable, the safety and absence of risks to health in connection with the production, processing, use, handling, storage or transport of articles or substances is maintained;

e) As far as is reasonably practicable, all hazards pertaining to the health and safety of persons and harm to the environment that are attached to any work which is performed, any article or substance which is produced, processed, used, handled, stored or transported and any plant or machinery which is used in its business, is clearly identified and, as far as is reasonably practicable, further establishes what precautionary measures should be taken with respect to such work, article, substance, plant or machinery in order to protect the health and safety of persons and or harm to the environment, and provides the necessary means to apply such precautionary measures;

f) Such information, instructions, training and supervision as may be necessary to ensure, as far as is reasonably practicable, the health and safety at work of its employees, agents, Subcontractors and mandatories is provided;

g) As far as is reasonably practicable, no employee, agent, Subcontractor and mandatory perform any work or produces, processes, uses, handles, stores or transports any article or substance or operates any plant or machinery, unless the precautionary measures contemplated in paragraph 2.3.3, or any other precautionary measures which may be prescribed have been taken;

h) Such measures as may be necessary in the interest of health and safety and the environment are enforced;

i) Work is performed and that plant, materials or equipment is used under the direct supervision of a person trained to understand the hazards associated with it and who has the authority to ensure that precautionary measures required by the *Employer* are implemented; and

j) All employees are informed of the scope of their authority as contemplated in Occupational Health and Safety Act, No. 85 of 1993.

2.3.3. Health and Safety Obligations

In addition to the mandatory agreements, the *Contractor*:

a) Ensures that all statutory appointments (as required in terms of the Occupational Health and Safety Act, No. 85 of 1993 and all applicable regulations binding in terms thereof, as amended) and other appointments required in terms of the SHE Requirements Procedure (32–726) are in place and that all appointees are cognisant of their duties and responsibilities in terms of such appointments;

b) Ensures that such appointees execute their duties and responsibilities as required by such an appointment.

c) Ensures that all personnel brought by itself onto site (including employees of *Contractor*s and Subcontractors) are suitably qualified and trained for the performance of the task, duties and functions, which will be allocated to them;

d) Immediately reports any occupational or other injuries, near miss events, property damage, environmental related incidents as well as any potential threat to the health and safety of individuals at the *Works* or on the site, as soon as he becomes aware thereof, to the *Project Manager*.

e) Complies with the *Employer*'s Environmental, Occupational Health & Safety Incident Management Procedure -32-95, relating to the reporting and investigation of incidents. The classification of incidents contained in such document are considered final and must be applied by the *Contractor* relating to any incidents/ injuries relating to its employees, agents, *Contractor*s, Subcontractors and mandatories whilst on Site;

f) Conducts a risk assessment regarding the utilisation of PPE and thereafter ensure that PPE of good quality is issued (at its own cost) to its employees, agents, *Contractor*s, Subcontractors and mandatories prior to such individuals accessing the site, alternatively performing activities related to the *Works* at the site, as specified in the Eskom PPE Specification - 240-44175132

2.3.4. Fire Protection

The *Contractor* ensures that adequate firefighting apparatus is provided in all applicable areas where the works are being carried out and that his employees are trained in the use of this apparatus.

Fire blankets are fitted over scaffolding planks and platforms whenever hot work is being carried out. The *Contractor* takes precautions to prevent any occurrence of fires or explosions while carrying out any work near flammable gas and liquid systems. Any tampering with the *Employers* fire equipment is strictly forbidden. All exit doors, fire escape routes, walkways, stairways, stair landings and access to electrical distribution boards are kept free of obstruction and are not used for work or storage at any time. Firefighting equipment remains accessible at all times.

In case of a fire, the *Contractor* immediately reports the location and extent of the fire to the Electrical Operating Desk using the Emergency Number 5400. The *Contractor* takes the necessary action to safeguard the area to prevent injury and spreading of the fire.

2.3.5. Hot work Permit

Any hot work, including welding, is applied for in accordance with the permit to work system. No hot work is allowed on Site unless a hot work permit is granted by the Employer in writing.

2.3.6. First aid

The *Contractor* shall provide First Aid services to his employees and sub-*Contractor*s. A First Aider shall be appointed by the *Contractor*. In the case of severe or serious injury, to his employees and sub-*Contractor*s the *Employer*'s Medical Centre and facilities will be made available and accessible to such persons.

2.3.7. Housekeeping

It is the *Contractor*s responsibility to ensure that the Site is cleaned daily. All electrical cables and hoses are routed so as not to cross unprotected over floors and walkways. All equipment is packed neatly without interference to access. The *Contractor* is responsible for the removal of any scrap material to the designated scrap area daily. It is the *Contractor* responsibility to provide own transport for these activities.

2.3.8. Barricading

Access to danger zones is restricted using handrail type guards at least 1.2 meters high and able to block access to the danger zone. Symbolic safety signs depicting 'Danger' and 'No entry' are attached to the guards. This includes access during the taking of X-rays.

The *Contractor* must supply their own solid barricading material (SANS approved) and no barricading net will be allowed on site. The *Contractor* must also barricade the work area and Materials to be used to carry out work. Barricading must not block all access routes for other *Contractor*s and staff. Refer to barricading Tutuka mechanical instruction unique identifier no: 15MNT MMD.1295

2.3.9. Radiographic Examinations

When radiographic tests are carried out in the plant by others, the danger area is evacuated with the exception only of authorized radiographic workers, and thereafter barricaded. To ensure that employees and contract staff working in Eskom premises are not exposed to more radiation than is reasonable level, compliance is with the Tutuka Power Station procedure 'Requirements and Rules for Radiation Protection and Safety of Radiation Sources', reference number 15MNT MSS PC-1267.

2.3.10. Permit to Work System

The *Contractor* allocates personnel to be trained and authorised as Responsible Persons according to Employer's Plant Safety Regulations (36-681). The *Contractor* ensures that an adequate number of its employees are trained and authorised as Responsible Persons and Authorised Supervisors prior to the outage date or implementation date of the *works*. The *Contractor* ensures that Responsible Persons and Authorised Supervisors are available on Site at all times.

2.3.11. Coal Dust-Silica

There is coal dust in the coal silos and work conducted in this area may result in exposure to respirable crystalline silica. The *Contractor* shall implement all necessary control measures to prevent or minimise such exposure, including the provision as well as use of appropriate personal protective equipment (PPE). The *Contactor* compiles with health and Safety regulations as well as other regulations.

A detailed risk assessment to be conducted by *Contractor* to evaluate the risk of Silica infection to personnel.

It is imperative that all personnel entering any part of the coal silos which may contain coal dust (silica) must wear a P3 filter in half face mask or a 3M Aura Particulate Respirator 9332+ covering both the nose and mouth.

2.4. Environmental constraints and management

The *Contractor* provides an Environmental Management Plan applicable to construction activities on site. The plan provides a guideline on the management of environment relating to the scope of *Works*. All waste will be handled in an environmentally friendly manner. The *Contractor* conforms to the "polluter pays principle", duty of care and other NEMA principles.

The *Contractor* conforms to all requirements dictated in the permits and licences for Tutuka Power Station Integrated Waste Licence (Licence Number 12/9/11/L456/6/R1), Tutuka Power Station Waste Management Procedure (14RISK ENV-013), Integrated Water Use Licence (Licence Number 08/C11K/ABCFGI/1016), Section 21 c and I water use licence (licence number: 10/C11L/CI/17331) and the ISO 14001: 2015 Environmental Management System requirements. The *Contactor* also conforms to all applicable environmental legislation including but not limited to National Environmental Management Act (NEMA, Act No. 107 of 1998) and the National Environmental Management Waste Act (NEMWA, Act No. 59 of 2008). This is achieved by undertaking inspections, audits, monitoring and reviews, conducted internally by the *Contractor* and externally by the *Project Manager.*

The *Contractor* ensures that all environmental authorization obligations, applicable legislative requirements and Employer's specific requirements are fulfilled. This includes all national, provincial and local environmental legislation and requirements. The *Contractor* compiles with:

- National Environmental Management: Waste Act (Act no. 59 of 2008) and Regulations
- National Water Act (Act no. 36 of 1998)
- National Road Traffic Act 93 of 1996 and Regulations
- Construction Regulations:2014
- Driven Machinery Regulations:2015
- All Acts, Regulations, Standards and Guidelines as mentioned in the "Normative" Section of this document. The most recently updated revisions of these documents shall be adhered to.

- The latest plant safety regulation.

The *Contractor* appoints a person, qualified and competent in accordance with the Environmental management requirements, as the liaison with the *Employer's* Project 's Environmental Manager/Officer or delegated person for all such matters as pertaining related to environmental management.

The *Contractor* issues on a weekly and monthly basis, Environmental Management Performance and Expenditure Reports to the *Project Manager*.

The *Contractor* conducts their environmental management based on the ISO 14001:2004 requirements and implement their environmental management practices accordingly.

The *Contractor* develops and implements as a minimum the following procedures:

- Environmental Management Plan,
- Incident management procedure
- Waste Management Procedure,
- Spill Management Procedure,
- Hazardous Chemical Substances Management and Storage Procedure,
- Stockpile
- Batch plant and concrete *Works* management procedure
- *Works*hop and wash bay
- Environmental Rehabilitation Procedure.
- Environmental Aspect and Impact Register

All environmental procedures, as listed above, shall be site-specific and shall align with *Employer*'s procedures, licences and Management plans and shall be submitted to the *Employer* for acceptance by the *Project Manager* before the commencement of construction activities.
Employer will provide a copy of the environmental authorisations, Water use licence and the environmental procedures to the *Contractor*.

2.4.1. Waste Management

All waste management activities, which includes the temporal storage methods on site, handling and final disposal or processing of all waste streams generated on the *Contractor*'s site, are conducted according to Tutuka Power Station Waste Management Procedure (14RISK ENV-013), and all requirements of the *Employer* as per the Environmental Management Programme licences and permits. All costs associated with waste management are the responsibility of the *Contractor*. The contractor shall implement waste separation on site.

All hazardous substances and hazardous waste are stored in sealed and covered skips or containers placed on an impermeable concrete surface, with appropriate secondary containment where required. The Contractor shall maintain accurate waste records, including waste manifests, safe disposal certificates, and records of quantities and types of waste generated, recycled, and disposed of. All waste shall be disposed of at licensed waste disposal facilities, and proof of disposal shall be made available to the Employer upon request.

No waste shall be burned, buried, or illegally dumped on site. Any spills or incidents related to waste handling shall be reported immediately and managed in accordance with site procedures.

2.4.2. Spill and Incident Management

The *Contractor*, at his cost, has available spill control measures (spill kits, drip trays, etc.), to the satisfaction of the *Employer*. All hazardous wastes generated from a spill are disposed of at a licensed disposal facility, at the cost of the *Contractor*, and safety disposal certificates are kept for record purposes. The *Contractor* shall ensure that all hazardous waste is stored in a sealed and covered skip placed on an impermeable concrete slab.

2.4.3. Environmental Rehabilitation

The *Contractor* rehabilitates its disturbed areas at the end of the project. The rehabilitation is done in accordance with recommendations made in the Environmental Management Programmes, as provided by the *Employer*. The *Contractor* submits to the *Project Manager* a rehabilitation plan and schedule at least 2 weeks before finalisation of the *Works* for approval by the *Project Manager*. All rehabilitation costs are the responsibility of the *Contractor*. The *Contractor* monitors rehabilitation *Works* and ensures that rehabilitation is successful.

2.4.4. Water Management

All water management activities on the *Contractor's* site shall be conducted in accordance with the *Employer's* requirements and applicable licences and permits. The *Contractor* shall ensure the efficient use of water and implement measures to prevent pollution of surface and groundwater. No contaminated water or effluent shall be discharged into stormwater systems or the environment without approval. Appropriate controls, such as containment measures, drip trays, and spill kits, shall be in place to prevent leaks and spills. The *Contractor* shall ensure proper handling and storage of hazardous substances to avoid water contamination, promptly address leaks, and report and manage any water-related incidents in line with site procedures.

2.5. Quality assurance requirements

2.5.1. General

The *Contractor* complies with the Supplier Quality Management Specification (240-105658000)/ QM58.

a) The *Contractor* and all Subcontractors comply with the *Employer's* quality requirements including those listed in the Supplier Quality Management Specification, (240-105658000)
b) Certified to ISO 9001 is a mandatory requirement for this contract. The *Contractor* uses the QMS for all phases of the Project. The *Contractor* provides evidence of a fully implemented QMS within its own organisation. The *Employer* may, at his sole discretion, carry out an audit on the *Contractor* or Subcontractor's QMS for acceptance.
c) Rights [BM3.1] of Access in accordance with Supplier Quality Management Specifications, Clause 3.8.1 Eskom:

   3.8.1.1 shall be granted electronic and hard-copy access to all quality plans, procedures, documentation, and other quality records relating to the work, including, but not limited to, data extracts;

   3.8.1.2 reserves the right to review, inspect, and audit any or all parts of the supplier's QMS, as well as any documentation, materials, or equipment associated with the work, at any time or project work location; and

   3.8.1.3 reserves the right to carry out assessments and audits on all new suppliers and sub-suppliers.

   The supplier:

   3.8.1.4 shall support Eskom's effort to monitor, verify, and/or witness any activities associated with the work at any time;

   3.8.1.5 shall cooperate with Eskom requests for documentation, records, and inspection and witnessing. Eskom participation in audits, appraisals, assessment of plans, and verification shall be conducted at no extra cost to Eskom;

3.8.1.6 shall ensure that a sub-supplier provides access to Eskom to all work procedures, records, and supporting documentation through provision of access to view and photocopy, as required, to support verification of scope of work requirements. Access shall include the ability to photograph Eskom equipment, systems, system components, materials, etc.;

3.8.1.7 shall provide access to all quality-related information pertaining to activities performed by itself or sub-suppliers, where Eskom might not have participated in the witnessing of their quality assurance or control (this refers to inspections, audits, etc. performed by the supplier on its own sub-suppliers);

3.8.1.8 shall allow Eskom to assess, audit, approve, or reject any sub-suppliers employed by Eskom's suppliers to assist with the product and/or service delivery to Eskom;

d) Eskom Rights to Information in accordance to Supplier Quality Management Specifications, Clause 3.8.2.

3.8.2.2 To have access to the supplier's information as determined by applicable legislation.

3.8.2.3 Eskom reserves the right to oversee the supplier's audit programmes by participating in selected audits as an observer and by assessing the supplier during key work stages. Eskom will coordinate with the supplier to develop an oversight schedule aligned with the supplier's audit schedule.

2.5.2. Quality Management Documents Requirements

The *Contractor* conforms to the quality management requirements as per ISO 9001 and Supplier Quality Management Specification (240-105658000). The *Contractor* shall adhere to the following:

During the Pre-Contract Award: Quality Requirements Categories (1, 2,3 and 4)

Eskom supplier quality requirements for all existing and potential suppliers and sub-suppliers are classified into four Categories. The following is the minimum documentation for Category 1:

CATEGORY 1.

- The supplier shall complete and sign Form A (Enquiry/Contract/Quality Requirements for Supplier Quality Management Specification 240-105658000/ QM 58 and ISO 9001).
- The supplier shall submit a valid copy of ISO 9001 or any applicable certificate of a QMS (the latest applicable revision). The QMS should drive the supplier's business management processes to ensure that all of Eskom's requirements are fully met on a consistent basis.
- The supplier shall submit the latest copy of the management system internal and external audit reports. The audit reports must include, if applicable, nonconformity identified, and the resulting remedial actions (correction and/ or corrective action reports).
- The supplier shall submit a draft contract quality plan that is specific to the scope of work as described in the tender documents. The plan must address the minimum requirements as per ISO 10005.
- Where applicable; the supplier shall submit a draft, or an example of an inspection and test plan (ITP) or quality control plan (QCP) on similar and/ or previous work done.
- The supplier shall submit documented information for Control of Externally Provided Processes, Products and Services.
- The supplier shall submit a copy of documented information for roles, responsibilities and authorities in relation to the QMS. Examples of relevant documented information are; organization charts, job descriptions, work instructions, duty statements, manuals, procedures.

- The supplier shall submit documented information retained (records) of management review meetings that include agenda, meeting minutes, attendance registers, reports, presentations, etc.
- Note: specific requirements per tender will be selected using the List of Tender Returnable documents (240-12248652).

2.5.3. The Contract Quality Plan (CQP)

The *Contractor* submits to the *Project Manager* within 30 days of Contract Date for review and acceptance prior to the commencement of work, a CQP which will detail the *Contractor's* organisation, quality assurance and quality control procedures within that organisation specific to this project. The CQP must be aligned to, and reference ISO 10005:2018 QMS, guidelines for quality plans and in compliance with the guideline in QM 240-105658000.

The CQP will make reference to the *Contractor*'s QMS documents to be used in this Contract:

a) The *Contractor's* QMS compliance with the requirements of ISO 9001
b) *Contractor's* quality manual
c) *Contractor's* quality procedures
d) *Contractor's* quality forms and work instructions
e) *Contractor's* quality system documents referenced in this *Works* Information
f) *Employer's Works* Information, drawings, specifications, standards and codes, etc

2.5.4. Quality Control Plan or Inspection and Test Plan

As defined in the approved CQP the *Contractor* drafts and submits to the *Project Manager* for acceptance, prior to the commencement of any *Works*, the requisite Inspection and Test Plan (ITP) or Quality Control Plan (QCP). The ITP/QCP shows each activity from the *Works* Information. The *Project Manager* inserts intervention points based on the risk profile of the equipment. The ITP/QCP will be reviewed by the appointed QC/QA Inspector and approved by the *Project Manager*.

a) The interventions points include all witness, hold, verification, surveillances and review points required by the *Project Manager*. The *Contractor*'s failure to allow the intervention points will constitute a non-conformance.
b) The intervention requirements take into consideration the criticality of the Plant and Materials.
c) Where intervention points have been bypassed without prior written waver from the *Project Manager*, result in the repeat performance of the activity in question and a Non-conformance (NC) is issued.

2.5.5. Operational Documents

The *Contractor* submits as a minimum the following documents, as required by the *Project Manager* during the execution of the *Works*:

a) Updated QCP register
b) Inspection notifications accompanied by their inspection report
c) Non-conformance and Defects registers and reports
d) Updated Site and off-site inspection schedules.
e) Inspection and or FAT / SAT dates.
f) Inspections (completed and outstanding).
g) Inspection and test reports
h) Weekly and monthly contract quality progress report
i) Data books for the completed *Works*, before commissioning can commence (refer to the data book specification)

2.5.6. Inspections and Tests

All Plant and Materials is comprehensively tested in accordance with the agreed ITP/ QCPs prior to delivery. The *Employer* reserves the right to appoint others to inspect all parts during manufacturing, erection and commissioning to be present at any of the tests specified. The witnessing of tests by the *Supervisor* or Others, and if the *Supervisor* chooses to waive the witnessing of any tests, it does not relieve the *Contractor* of his responsibilities.

Tests that are required by the *Employer* are carried out by the *Contractor* during manufacturing, construction and commissioning to prove compliance with the specification independently of any test that may have been carried out at the *Contractor's* premises.

The *Supervisor* inspects parts of the Plant at his discretion during manufacturing stages and before shipment as per the agreed ITP/QCP:

a) The *Contractor* is responsible for the inspection of all the work that is performed and the *Supervisor* only verifies that the work is conducted as per the *Works* Information.
b) The *Contractor* conducts all inspections in accordance with the accepted ITP/QCP.
c) The *Contractor* provides suitably qualified personnel to conduct on-and-offsite inspections
d) The *Contractor* ensures that all are inspected and approved before the *Supervisor* is invited for verification.
e) The *Contractor* provides a minimum of five (5) working days' notice for local off-site inspections, 24 hours for local on-site inspection, and 21 working days' notice for foreign inspections. The notice contains copies of the *Contractor's* inspection reports.

2.5.7. Quality Responsibility

The *Contractor* responsibilities include but are not limited to the following:

a) The *Contractor* is accountable for the quality of the output and liable for any failures.
b) Implementation of their QMS on site
c) Administration of their QA/QC systems on site
d) Verification of approval status of Subcontractor's Quality programmes, that is, CQP's, QCPs, NC's, Defects and all their operational procedures and *Works* instructions
e) On-and-offsite inspections
f) Weekly and monthly progress reporting on quality performance
g) The *Contractor* is responsible for defining the level of intervention of QA/QC or inspections in line with the *Employer*s requirements.
h) The *Contractor* is responsible for defining the level of intervention of QA/QC or inspections to be imposed on his Subcontractor, suppliers and sub-suppliers and must ensure that these are in line with the *Employer's* requirements.

The *Supervisor* will be responsible for the following:

a) Reviews of the quality submissions
b) Verification of the *Contractor*'s intervention points
c) Reviews the *Contractor*'s ITP/QCP documents (procedures, test results)
d) Reviews the data book
e) Issue of Defects Certificate
f) Checks and marks off materials off site

2.5.8. Non-Conformances and Defects

Where Non-Conformance (NC) notifications are issued, the *Contractor* acknowledges receipt within the period of reply and proposes corrective and preventive actions to the *Supervisor*. The corrective and preventive actions will include the implementation and completion dates. Progress on all NCs notifications issued to the Contractor must be reported to the Supervisor on weekly basis and it will be tracked through SAP QIM. The NCR process will be followed accordingly.

a) The *Contractor's* Quality Manager keeps a register of all NC notifications issued
b) Records of NCs notifications are kept and form part of the data book records.
c) Deviations from the Contract are treated as a non-conformance.

During the contract execution phase, the *Contractor* will be monitored by the *Supervisor* for performance on quality related aspects. The monitoring will be in the form of audits and assessments.

2.5.9. Quality Reporting

The *Contractor* submits a monthly quality report, on the last working day of the month. The report includes but not limited to the following:

a) A register of NCRs and defects
b) Updated QCP / ITP register
c) QA monthly report summary
d) Planned and completed local and foreign inspection dates
e) Completed and outstanding Inspections
f) Audit findings report
g) Risks with Mitigation plan

2.6. Programming constraints

The *Contractor* shall submit a detailed programme, compiled in Microsoft Project/Primavera or similar program, which will provide details of the list of activities and the duration of each activity. The program should be no longer than 36 months. The *Contractor* shall submit a program two weeks after the signing of the contract. The program shall be updated daily during execution of the *Works*. The *Contractor* submits, as part of his/her tender response, a Level 3 programme which contains the following as a minimum:

- The *Key Dates*
- The access dates from clause 30.1 of the *Contract Data* by the *Employer*,
- The detail on how the *Contractor* intends to achieve the *Key Dates* and the access dates.
- Duration of long lead item
- Total manufacturing and execution durations
- The date of Site establishment
- Show all the critical paths;
- The Contractor ensures that his programme contains sufficient float in order for the *Contractor* to add interface and alignment with the Employer and Others.
- Other factors, information, methodologies, detail and dates which the Contractor believes are necessary for achievement of the interface with others, *Key Dates*, *Completion Dates* and *Access dates*

The *Contractor* submits an updated programme daily during execution or as agreed to between the *Project Manager* and *Contractor*.

The level of detail for each is set out below.

The *Contractor* submits a single programme that incorporates the services and work (programs) of all his Subcontractors and suppliers. The *Accepted Programme* clearly indicates interfaces between the *Contractor*, the *Employer*, *Others* and his Subcontractors.

The *Contractor* ensures that the *Key Dates* and interfaces with the *Employer* and *Others* are incorporated into the *Accepted Programme*. To improve integration and interfaces with *Others* and the *Employer*, the *Contractor* participates in the integration meetings with the *Employer* and *Others* as required by the *Project Manager*. The information obtained from these integration meetings are incorporated into the revised programmes submitted to the *Project Manager*. The *Contractor* ensures that all dates, including *Key Dates*, between the *Contractor*, the *Employer* and *Others* are aligned in the revised programme.

The *Contractor's* obligation to meet the *Key Dates* and *Completion Date* is not altered by the *Contractors* obligation to ensure that the *Contractor's* programme shows and aligns with the interface requirements set out in the *Works* Information.

2.6.1. Planner Requirements

The *Contractor's* planner is experienced, qualified and must be dedicated to the Contract/Project to perform the planning and programming requirements in accordance with this section. During execution, the *Contractor* provides a full-time planner at the Site.

2.7. Contractor's management, supervision, and key people

The Contractor shall provide the following key resources, including all personnel required by statutory regulations under the Construction Regulations:

a) Dedicated Structural Engineer/Technologist (minimum of 5 years structural design/ reinforced concrete design/repairs experience, professionally registered with ECSA as Engineer/Technologist).
b) Dedicated Site manager (minimum of 4 years reinforced concrete repairs experience and a minimum diploma in civil engineering)
c) Dedicated Safety Officer (SAMTRAC and minimum experience of 3 years relevant experience, professionally registered with SACPCMP as a Construction Health and Safety Officer)
d) Dedicated Quality Officer (minimum of 3 years relevant experience and must have completed ISO 9001: 2015 (Management System) and ISO 9011 (Auditing))
e) Dedicated Site Supervisor (RP)

For the purposes of this project, "dedicated" means that the person is allocated only to this project full time, must not be working on any other contract, must be available during construction phase and must respond promptly to instructions.

2.8. Invoicing and payment

Within one week of receiving a payment certificate from the *Project Manager* in terms of core clause 51.1, the *Contractor* provides the *Employer* with a tax invoice showing the amount due for payment equal to that stated in the *Project Manager*'s payment certificate. The *Contractor* shall address the tax invoice to Eskom Holdings SOC Ltd and include on each invoice the following information:

- Name and address of the *Contractor* and the *Project Manager*.
- The contract number and title;
- *Contractor*'s VAT registration number;
- The *Employer*'s VAT registration number 4740101508;
- Description of service provided for each item invoiced based on the BOQ;
- Total amount invoiced excluding VAT, the VAT and the invoiced amount including VAT;

2.9. Insurance provided by the Employer.

To be dealt with in accordance with ECC3 Core Clause 87.1, 87.2 and 87.3 and additional requirements are also stipulated in Clause Z13.

2.10. Contract change management.

Changes during a term of the Contract are inevitable and when they occur, they need to be managed within the policies and procedures of Eskom. Changes can be minor which are administrative or substantial which may affect the price and delivery. There are two ways to change a contract:

a) Bilateral

b) Unilateral

Bilateral is when both Parties (*Contractor* and *Employer*) agree that a change is necessary. The second one

is the unilateral whereby the *Employer* may exercise a right to modify the contract without the *contractor's* consent. In case of latter one, the Eskom procurement and supply chain management procedure-32-1034 must be followed.

All changes relating to the contract will be treated accordingly. The following process will be followed: Change will be initiated, followed by negotiation and approval, Implemented, monitored, and closed out accordingly. Reference shall also be made to the latest version of Eskom Procurement & Supply Chain management procedure and policy, Engineering Change Management Procedure as well as Eskom Project Life Cycle Model.

The *Contractor* shall ensure that all approved changes are documented and kept as record.

2.11. Provision of bonds and guarantees.

The Contractor provides a performance bond equal to 10% of the total of the Prices for the whole of the works.

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

The Employer may withhold payment of amounts due to the *Contractor* until the bond required in terms of this contract has been received and accepted by the person notified to the *Contractor* by the Project Manager to receive and accept such bond . Such withholding of payment due to the *Contractor* does not affect the Employer's right to termination stated in this contract.

2.12. Records of Defined Cost, payments & assessments of compensation events to be kept by the Contractor.

As per the NEC ECC3 contract both parties have an obligation to keep contract records for a period of five years. *Project Manager* shall be given access to the records where needs arise and shall be provided in hard copy or electronically.

The Contractor submits the following for compensation event assessment:

a) Quotation indicating Current market rate if not included in the short schedule of cost components
b) Labour time sheets
c) Early warning to the Project Manager
d) Project Manager's Instruction
e) Percentage fee applied
f) CPA Calculation where short schedule of cost components rates were utilised
g) Signed Record of decisions (ROD) or design change request form for Engineering design changes
h) A revised programme where key date and completion date is affected
i) A revised programme, where instructed to accelerate by the Project Manager
j) A Invoice from supplier and service providers

2.13. Training Workshops and technology transfer

The Contractor provides training (if applicable) on the works regarding operating, maintenance and engineering aspects. The Contractor provides training material and a separate training course for operating, maintenance and engineering personnel.

3 Engineering and the *Contractor*'s design

3.1 Employer's design

The documentation listed below provides essential technical background, structural assessments, and inspection data required for planning and executing the repair and refurbishment of Coal Silos 1 to 6. These documents will be made available to the appointed contractor upon contract award to inform the preparation of detailed method statements, repair strategies and execution planning.

- Approved Structural Condition Assessment Reports for Silos 1 to 6, which include findings from internal and external visual inspections, drone surveys, compressive strength testing, and non-destructive testing (NDT) results. These reports identify critical deterioration areas and contain detailed repair recommendations.
- Laser-Scanned 3D As-Built Drawings, capturing the current geometry of each silo shell and hopper, including shape deformations and deviations from original design to support repair profiling and accurate quantity determination.
- High-Resolution Inspection Photographs, including internal and external views of each silo, showing typical areas of spalling, cracking, exposed reinforcement, and coating failures.
- Repair Specification Guidelines and Repair Material Data Sheets used during the investigation phase to inform the development of this Scope of Works. These documents will serve as a baseline for proposing suitable materials.

3.2 Parts of the *Works* which the *Contractor* is to design

The *Contractor* shall design, check, certify and maintain all temporary works necessary for execution of the refurbishment, including but not limited to rope-access rigging arrangements, temporary support systems, suspended work platforms, liner handling supports and any temporary load-transfer arrangements. All such temporary works shall be designed and certified by a professionally registered ECSA engineer and submitted to the Project Manager for acceptance prior to implementation.

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

3.3.1 Design Review Procedure

Where the *Contractor* has design work in their scope, the *Contractor* is the Design Authority as defined in the Design Review Procedure (240-53113685). The Contractor is responsible for following the design procedure and the Practice Note: Receiving of Drawings Done by Third Party *Contractor*s for Tutuka Power Station as well as conducting all the design reviews as specified in this procedure. The Contractor is responsible for conducting the following design reviews:

a) Detail Design Freeze Review
b) Integrated Design Review
c) Construction Completion Review
d) Acceptance Testing Review

3.3.2 Procedure for submission and acceptance of Contractor's design

Contractor to refer to the Practice Note: Receiving of Drawings done by Third Party Contractors for Tutuka Power Station (15ENG DES-039).

3.3.3 Time Required for Acceptance of Design

Contractor to refer to the Design Review Procedure (240-53113685) and the Practice Note: Receiving of Drawings Done by Third Party Contractors for Tutuka Power Station (15ENG DES-039).

3.4 Other requirements of the *Contractor*'s design

Contractor refers to the *Employer's Works* information as outlined in the documents with unique identifier 15ENG CIVIL-2041Title Tutuka Power Station Scope of Work for Refurbishment of Coal Silos 1-6 Scope of Work.

3.5 Use of *Contractor*'s design

Not applicable.

3.6 Design of Equipment

Where applicable, Clause 23.1 shall apply.

3.7 Equipment required to be included in the *Works*.

Where applicable designs shall be provided by the *Contractor* and reviewed by the *Employer*.

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

3.8.1 Drawing Requirements

Not applicable.

3.8.2 Drawing Numbering System

Not applicable.

3.8.3 As-Built Drawings

Not applicable.

4 Procurement

4.1 People

4.1.1 Minimum requirements of people employed on the Site.

All personnel employed on the Site shall, as a minimum, meet the following requirements before commencing work:

Police Clearance: All staff must provide valid police clearance certificates to demonstrate suitability for employment on-site.

Medical Fitness: All staff must undergo and provide evidence of medical examinations confirming their fitness to perform assigned duties safely.

Site Induction: All staff must complete a Site-specific induction covering safety, environmental, security, and operational procedures before being permitted to work on the Site.

The Contractor shall maintain records of compliance for all personnel and make these available to the Project Manager upon request.

4.1.2 BBBEE and preferencing scheme

A maximum of 10 points may be awarded to a tenderer for the specific goal specified for the tender. The points scored for the specific goal must be added to the points scored for price and the total must be rounded off to the nearest two decimal places. Subject to section 2(1)(f) of the Preferential Procurement Policy Framework Act, the contract must be awarded to the tenderer scoring the highest points.

B-BBEE Status Level of Contributor	Number of points (90/10 system)
1	10
2	9
3	6
4	5
5	4

6	3
7	2
8	1
Non-compliant contributor	0

NB: The following documents are required to claim preference points,

- Valid B-BBEE certificate issued by a SANAS accredited verification agency / sworn affidavit / CIPS affidavit
- Proof of ownership / shareholding (preferably CIPC documentation) inclusive of shareholding breakdown
- Certified ID copies of shareholder(s)
- Proof of Disability (where applicable)
- In a case of a trust, consortium or joint venture (including incorporated consortia and joint ventures),a consolidated B-BBEE status level verification certificate.

Tenderer failing to provide documentation for the allocation of preference points will not be disqualified, but'

- May only score point out of 90 for price
- Scores 0 points out of 10 for specific goals

4.1.3 Supplier Development Localisation and Industrialization (SDL&I)

Eskom Holding SOC Limited as a state-Owned Enterprise is supportive of the South African Government's growth, poverty eradication and job creation strategy, Supplier Development Localisation and Industrialization (SDL & I) as well as the New Growth Path as announced by the State President.

Eskom's contribution to this initiative is to set Local Content, Local Content to Site, Black Economic Empowerment targets to Large Black Suppliers, Small Black Enterprises (SBE) Black Woman Owned (BWO), and Black Youth Owned Enterprises (BYO), Enterprises owned by Black People Living with Disability (BPLwD) as well as Skills Development targets as key evaluation criteria in awarding of all formal tenders.

The *Contractor* complies with and fulfils the *Contractor's* obligations in respect of the Supplier Development and Localisation (SD&L) in accordance with and as provided for in the *Contractor's* SD&L Compliance Schedule IT 1.2 SD&L requirements. Moreover, the *Contractor* complies with the CIDB skills development goals and setting as contained on the annexures to this *Works* Information.

Eskom is committed to Supplier Development and Localisation and its prime objectives of economic growth, skills development, job creation and poverty eradication. This commitment shall be achieved through leveraging Eskom's procurement spend in a manner that allows flexibility within the business in order to accommodate government local development initiatives and policies.

The *Contractor* keeps accurate records and provides the *Project Manager* with reports on the *Contractor's* actual delivery against the above stated Supplier Development and Localisation criteria.

The *Contractor's* failure to comply with his SD&L obligations constitutes substantial failure on the part of the *Contractor* to comply with his obligations under this contract.

4.1.4 Contract Skills Development Goals (CSDG):

The Standard for Developing Skills through Infrastructure Contracts published by the Construction Industry Development Board on 03 July 2020 (Board Notice 363 of 2020, Government Gazette 43495) ("the CIDB Skills Standard") will apply to this contract. In terms of the classification system of engineering and construction

Works contracts the Works is classified as Civil Engineering Works (CE). As such for the purposes of the CIDB Skills Standard the Contract Skills Development Goal (CSDG) for this contract is 0.25% of the Accepted Contract Amount.

The Contractor shall spend 0.25% of the Contract Amount on Skills Development in accordance with the Contractor's Skills Development Goals.

4.2 Subcontracting

4.2.1 Preferred subcontractors

If the *Contractor* subcontract, He is responsible for providing the *Works* as if he had not subcontracted. The contract agreement between the *Contractor* and the *Employer* applies as if a Sub-*Contractor*'s employees and equipment were the *Contractors.* The *Contractor* shall appoint Subcontractors as per the Eskom Supplier's Development Localisation and Industrialisation guidance. Advice shall be sought from the SDL&I Advisor.

4.2.2 Subcontract documentation, and assessment of subcontract tenders

a) The *Contractor* submits the proposed contract data for each subcontracting for acceptance to the *Project Manager*.
b) The *Contractor* prepares s subcontracting document as according to the NEC Contract.
c) The *Contractor* must inform the *Project Manager* when intending to subcontract some of the *Works* from the contract scope.
d) The *Contractor* takes note that their Subcontractors Safety Files will be accepted by the *Contractor* Safety Manager before it will be handed to the *Employer*'s SHE practitioner/Officers for verification of compliance before any work commence. Proof of acceptance by the *Contractor* Safety Manager needs to be in the Safety file when handed over to *Employer*'s SHE Practitioners for verification.
e) The *Contractor* only employs qualified sub-Contractors.

4.2.3 Limitations on subcontracting

Contractor may sub-contract at least 30% of the Contract amount to one or more suppliers on the following categories of suppliers:

- an EME or QSE which is at least 51% owned by black youth;
- an EME or QSE which is at least 51% owned by black women;
- an EME or QSE which is at least 51% owned by black people with disabilities;
- an EME or QSE which is at least 51% owned by black people living in rural or underdeveloped areas or townships;
- a cooperative which is at least 51% owned by black people;

Tender Returnables:

- Subcontracting agreement/s signed by both parties, or
- Letter of intent to subcontract
- B-BBEE certificate or B-BBEE sworn-affidavit of subcontractor/s.

The limitation in terms of percentage that the *Contractor* subcontract shall be agreed upon by both parties unless otherwise stated on the tender returnable as per the Procurement and Supply Chain management policies and procedures. Specialised work shall be subcontracted accordingly. Sub-contracting to align with skills and competency aligning with *Employer's* scope of work as outlined in the documents with unique identifier 15ENG CIVIL-2041 Title the Refurbishment of Coal Silo 1-6.

4.3 Plant and Materials

4.3.1 Quality

All Plant and Materials are either new or used. All New Plant and Materials will be free from defects. No Reconditioned Plant and/or Materials are regarded as new under any circumstances.

It will be the responsibility of the *Contractor* to ascertain the condition of any used equipment or materials, transport to site, corrosion protection, as well as any spares compatibility issues that may present itself in the future.

The *Contractor* will not use Plant or Materials which are generally recognised as being unsuitable or otherwise to be avoided for the purpose for which they are intended.

Plant and Materials withstand ambient conditions and the variations of temperature arising under working conditions without distortion, deterioration or undue strains in any part.

No repair of defective Plant and/or Materials will be permitted without the *Project Manager*'s approval and any such repair, if approved, will be carried out to the satisfaction of the *Employer*.

The *Contractor* ensures that co-ordinated and formally documented management system is in place for the assurance of quality as specified in ISO 9001, Quality management Systems – Requirements.

The *Project Manager* is free to specify hold and witness points during the construction and on-site testing stages of the project. The *Contractor* issues preliminary notification of such hold and witness points by fifteen working days advance notice to the *Project Manager* and confirms such hold and witness points at least seven days prior to the activity.

Typical holding points are listed below:

a) Design Review
b) FAT
c) Delivery to Site
d) Erection
e) SAT
f) All manuals and drawings (in the specified format)
g) Commissioning

In addition to maintaining appropriate inspection and test records to substantiate conformance to requirements, the following records are safely stored for a minimum period of seven years following the final completion of the *Works*:

a) Construction, layout and component approvals
b) Routine test certificates
c) Construction drawings and approvals

After this period, the *Contractor* offers these records to the *Employer* (in writing) and obtains a disposal instruction.

Documentation regarding quality procedures is submitted within thirty days of Contract Award. The *Employer* will review and comment on the acceptability of these documents in a time frame as per the requirements of the contract for contractual correspondence.

4.3.2 Plant & Materials provided “free issue” by the Employer

The Employer shall not provide any free "issue" plant and materials to the *Contractor*.

4.3.3 Contractor’s procurement of Plant and Materials

The *Contractor* provides suitable storage at site to store parts and equipment during the implementation/installation process. The store needs to be watertight, and the parts and equipment should be sealed to prevent moisture and dust. In general, the warrantee is one year after commissioning of the unit.

- The *Contractor* shall supply and use suitable and sufficient construction plant, tools and equipment and materials as may be required to carry out the *Works* efficiently.
- The *Contractor* at all times provides protection for all plant and materials from damage or loss due to weather, fire, theft, unexplained disappearance or similar.
- The *Contractor* at all times protects from damage, due to the *Contractors* service to provide the *Works*, all plant and materials and equipment and all items on the site that are the property of the *Employer* or Others.
- The *Contractor* provides or manages, as part of *Works* everything necessary for the receiving, inspection, safe keeping and storage, issuing, handling, management and administration of all plant and materials purchased by the *Contractor*.

4.3.4 Spares and consumables

The *Contractor* supplies the *Employer* with a detailed complete list of all spares required in order to maintain the Plant.

4.4 Tests and inspections before delivery

All spares are delivered in approved packaging suitable for storing such parts over a period of ten (10) years without damage or deterioration. The Contractor will be expected to provide a warranty for all spares.

The *Contractor* provides all test Equipment required for Plant and Materials testing. The *Contractor* does not use any of the *Employer*'s tools and testing equipment for Plant and Materials testing.

Inspection and testing prior to delivery is conducted in accordance with requirements of Eskom Procurement Quality Standard QM58 par 3.5.5 and 3.5.6 with the control of the associated generated documents aligned to that standard and approved project quality plan.

The Supervisor carries out quality inspections at his discretion. All inspections and testing are performed in accordance with the quality control plan (QCP) developed by the *Contractor*.
The *Project Manager*, *Supervisor* and Others are provided access to the *Contractor*'s premises for the purpose including but not limited to:

- Establishing compliance with the contractual requirements by means of inspections, surveillance and audits.
- Witnessing the performance of any tests.

The Contractor obtains clearance from the Project Manager before despatching of certain Plant and Materials, these Plant and Materials are agreed upon by the Project Manager and Contractor. This factory release inspection does not release the Contractor of any of his obligations under the contract.

No Plant and Materials is released for dispatch without the **AS MANUFACTURED** documentation and drawings accompanying them.

4.5 Marking Plant and Materials outside the Working Areas

Where applicable, the *Contractor* marks all Plant and Material with the following information while outside the working areas and ensures that the information is accurate and clear/readable.

- *Project Manager* name
- Contract name
- Contract number
- AKZ code and description
- Plant and Material description if AKZ number is not applicable

The *Contractor* shall book all the equipment's and materials at the security gate, so that they can be identifiable on completion of the work for removal from site. Marking plant and materials outside the working areas intended for this contract to be as per clause 71.1 of the NEC ECC in a case whereby payment must be effected by the *Employer*.

4.6 Contractor's Equipment (including temporary Works)

The *Contractor* supplies all Equipment that he requires to provide the works. The *Contractor* is liable for safe storage of his own tools and equipment to be used during execution.

5 Construction

Before commencing any repair activity listed in the Works Information, the *Contractor* shall submit to the *Project Manager* for acceptance the relevant detailed method statements, product data sheets, applicator qualifications, mock-up proposals where required, inspection and test plans, and hold-point schedules.

Applicator qualifications shall include, as applicable, proof of relevant training / certification by the product manufacturer or equivalent recognised training body, together with project references demonstrating successful execution of similar works.

No repair activity shall commence until the relevant submission has been reviewed and accepted by the *Project Manager*.

5.1 Temporary Works, Site services & construction constraints

5.1.1 Employer's Site entry and security control, permits, and Site regulations

5.1.1.1 Access to Site and Permit to Work System

During refurbishment project there are a large volume of people entering the power station premises. Access to the main gate could be a problem. The *Contractors* are also required to observe the speed limit within Eskom Premises.

Access to the site is controlled and it is governed by the terms and conditions lay down by Tutuka Power Station security officials. All vehicles entering and exiting Tutuka Power Station are subject to full inspections and searches, which could result in delays for which the *Contractor* must allow for in his planning and pricing.

The proposed site will be shown to the *Contractor* during the site meeting or clarification meeting by the *Employer*.

The *Contractor* liaises with the *Employer's* SHE Practitioner/Officers for Safety Induction prior work to commence. During Safety Induction, site access permits with a copy of the medical and a certified ID copy/passport (not older than three months) should be handed to the *Employer's* SHE Practitioner/Officer for approval.

The *Contractor's* employees will take the signed site access documents to security reception official in order to finalize their site access.

Annual Eskom refresher induction will be done when returning to work after December holidays (January to March). No access will be granted if the re-induction is not done upon returning to work.

The *Contractor* ensures that all its employees carry their site access forms with them all the time.

The *Contractor* is subjected to alcohol testing on a daily basis.

The *Contractor* submits his application for vehicle permit to the *Project Manager*. The personnel and vehicles entering and leaving the site are subjected to routine searches.

The *Contractor* obtains a "Gate Removal Permit" from the *Project Manager* before materials and equipment can be removed from site. The "Gate Removal permit" gives itemised list of materials and equipment to be removed from site.

The *Contractor* ensures that a tool list is available on the day of arrival and that all tools are captured on the tool list. The tool list will be handed over to the Reception Security official that will stamp the tool list. The tool list will be kept safe and will be used when tools need to be removed from site. This message should be handed over to any Subcontractor that will be working on Tutuka Power Station.

5.1.1.2 Site Regulations

The *Contractor* complies with the Site Regulations as per *Employer*'s Safety Health and Environmental Specification 240-143825536.

Any subject within the authority of the *Project Manager* may be addressed by a Site Regulation.

Before work starts on Site, a kick-off meeting is held with the *Contractor* and the *Project Manager*, to explain in detail all requirements of the Site Regulations.

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

All vehicles shall comply with the Road Traffic act 93 of 1996 . Vehicle inspections will be conducted daily and check sheets shall be kept at the *Contractor*'s offices. The *Contractor* and its employees inclusive of visitors and *s*ubcontractor*s* are not allowed to access any site except the ones referred hereto. Barricaded areas must be respected by the *Contractor* and its employees inclusive of visitors and subcontractors. Access for the *Contractors* visitors and subcontractors shall be upon approval of the *Project Manager* and shall be done in advance not on the day of arrival.

5.1.3 People restrictions on Site; hours of work, conduct and records.

Persons employed by the *Contractor*, and *Contractor's* visitors, may not enter areas not related to the *Works* without the *Employer*'s permission. The *Contractor* shall keep daily records of his employee's working timesheets. Records of employee's conduct and any disciplinary hearings will be in accordance with statutory procedures. *Contractor* shall comply to Labour Relations Act 66 of 1995 as amended, and Basic Conditions of Employment Act as amended.

The working hours for Tutuka Power Station are from 07H00 -16H15. The *Contractor* and its employees shall however be requested to work according to the schedule that may arise from site at any given situation/time. The *Employer* may from time-to-time request all *Contractors* on site to attend Compulsory Work stoppage which then the *Contractors* will be requested to attend including his sub-*Contractor*s.

5.1.4 Health and safety facilities on Site

The medical centre is used by all people on site for injuries and first aid related issues. The Fire Department is also available for fire and other related emergencies. Their respective contact details to be provided during induction. Eskom procedures and policy inclusive of relevant government protocols shall be always adhered to.

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

Integrated Waste Licence (Licence Number 12/9/11/L456/6/R1), Tutuka Power Station Waste Management Procedure (14RISK ENV-013), National Environmental Management Act (NEMA, Act No. 107 of 1998) and the National Environmental Management Waste Act (NEMWA, Act No. 59 of 2008).

The *Contractor* is responsible for disposal of all the waste generated from Providing the Works in an environmentally friendly manner, ensuring that hazardous (contaminated rubble) and general waste are disposed of at a nearest registered landfill site. The *Project Manager* needs to be notified of the disposal site before any disposal can be done. For all scrap metal, cables and material the *Contractor* must submit with the tender the price per tonne for disposal of such material. In case of salvaged equipment, identified by the *Project Manager*, the *Contractor* will be expected to safely remove such equipment and store it at the designated site as identified by the *Supervisor*. The list of all salvaged equipment will be issued to the *Contractor* before the start of the works / (outage).

5.1.6 Title to materials from demolition and excavation

All demolition/ scrap material to be discarded in a licensed location to be decided when the contract has been awarded or dedicated scrap bin within the power station as be their respective classification. The *Contractor* has no claim to any material from any demolition/Stripping of the old plant material. The *Contractor* to make provision for hauling of material at a distance of not more than 30km (return).

5.1.7 Cooperating with and obtaining acceptance of Others

The *Contractor* is required to plan his activities to evade the following interface risks and any other risks which may arise:

- Interface issues arising from working in close proximity to Others, risk of disrupting each Other's critical path, for instance, through working in the same space at the same time, shutting down utility supplied by one contractor (1) which is required by another contractor.
- Access
- Material storage
- Delivery, receiving deliveries at Site on the same day

The *Contractor* is encouraged to corporate with *Other's*, to plan his activities to accommodate *Other's* and where required his plan is sufficiently flexible to accommodate changes which may arise during execution.

5.1.8 Publicity and progress photographs

Contractor is not allowed to take any photographs on Site, unless written permission was received from the Project Manager.

5.1.9 Contractor’s Equipment

The *Contractor* has an obligation to keep records of all *his/her* equipment that will be brought to site to provide the *Works* whether hired or owned by the *Contractor*. All necessary certificates certifying the equipment safe for use shall be kept and the *Employer* has the right to request such certificates. All rigging equipment to be tested before putting to work and the *Contractor* is expected to keep records of all the rigging equipment certificates as proof.

a) The *Contractor* provides all Equipment that is required to complete the *Works*.

b) The *Contractor* shall ensure that all his construction labour and equipment remain within the fenced off allocated construction area.

a) The *Contractor* shall ensure that any staff, labour, or equipment moving outside his allocated construction site does not obstruct the normal operation of t the power station. Any additional access routes required must be coordinated with the *Project Manager*.

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

c) All Equipment used by the *Contractor* in providing the *Works* shall comply with the General Machinery Regulation 4 of the Occupational Health and Safety Act (Act 85 of 1993).

The *Contractor* is required to furnish and maintain the necessary Equipment for the completion of the works which includes, but is not limited to:

- Manual and power tools.
- Rigging.
- Vehicles.
- Site workshops.
- Mobile Cranes.
- Etc.

The *Contractor* marks all tools, scaffolds, and other Equipment for easy identification. *Others* are allowed to inspect the shipment of tools and Equipment leaving the Site if so requested. A detailed list of tools and Equipment being shipped off Site is required to be submitted to the Project Manager from the *Contractor* prior to removal from Site.

The *Contractor* includes a construction execution plan outlining the means and methods they intend to use in executing the works. The plan includes the proposed position of Equipment required (e.g. mobile crane arrangement) in sufficient detail to determine the viability of the *Contractor's* execution plan.

The *Contractor* provides all test Equipment for testing the individual modules, the sub-assemblies and the functional groups for site testing and commissioning.

5.1.10 Equipment provided by the Employer

Scaffolding shall be provided by the *Employer*. When required, the *Contractor* shall submit a request to the *Project Manager* 24 hours in advance.

5.1.11 Site services and facilities

Refer to 5.1.12

5.1.12 Facilities provided by the Contractor

The table below list the high level assessed required, available facilities and utilities. The *Contractor* shall have the responsibility to provide some of the utilities and the *Employer* Tutuka Power Station shall also have the responsibility to provide the *Contractor* with certain utilities and facilities. The *Contractor* will develop a detailed plan on how he intends to safeguard his/her equipment while on site during project execution. Certain facilities and utilities will be shared by both the *Contractor* and the *Employer*.

Site Facilities, Utilities and Services	**Provided by**		
Item	***Contractor***	***Employer***	**Details**
Field Office			
Field office structure	**X**		
Field office furniture	**X**		
Field office equipment	**X**		
Field office supplies	**X**		
Employees Staff change facilities	**X**		
Area for site establishment		**X**	
Fabrication shops	**X**		
Resources (Including site contacts)			
Safety Watch/Officer	**X**		Form part of *Contractor*'s Crew to provide the Scope of work
Fire Watch	**X**		
Qualified machinery operators	**X**		
Signalmen	**X**		
Tools			
Erection tools	**X**		
Special erection tools	**X**		
Equipment			
Construction equipment	**X**		
Contractor equipment operator testing	**X**		
Communication			
Internet connection	**X**		
Radio & cell phone communication	**X**		
Telephone			
Supply telephone main service line			Not applicable
Construction telephone line connection to *Contractor* field office	**X**		
Contractor's telephone equipment and system wiring	**X**		
Electrical Power			
Connection to main power source and maintenance		**X**	
Construction power primary distribution system and maintenance		**X**	
Construction power *Contractor*'s distribution system	**X**		
Construction power *Contractor*'s distribution system maintenance	**X**		
Structures interior temporary lighting and maintenance	**X**		
Contractor specific work area temporary lighting and maintenance	**X**		

Site Facilities, Utilities and Services		Provided by		
Item		***Contractor***	***Employer***	**Details**
	General areas site lighting and maintenance	**X**	**X**	
	Contractor areas site temporary lighting and maintenance	**X**		
Water - potable and non-potable				
	Portable water source supply		**X**	*Contractor* to provide all the necessary containers to collect water to the nearest point/source. Alternatively, *Contractor* to provide his own drinking water.
Sanitary Facilities				
	Contractor's structures construction sanitary facilities and maintenance	**X**		
Access Roads				
	Primary access roads and maintenance		**X**	
	Contractor specific access roads and maintenance	**X**		
	Primary access road dust control		**X**	
	General Work-related dust control	**X**		
Storage Facilities				
	Onsite lay-down space		**X**	During Construction stage
	Contractor storage area maintenance	**X**		
	Tool storage facilities	**X**		
	Equipment Storage Facilities	**X**		
Security				
	Overall site security		**X**	
	Contractor specific areas security			
	Overall site security access card		**X**	
Medical Facilities				
	Onsite first aid/medical services		**X**	
	Medical Centre emergency ambulance		**X**	
Fire Protection				
	Provide own site fire extinguishers	**X**		
	Provision of fire equipment & vehicles		**X**	
Clean-up				
	General refuse offsite disposal		**X**	
	Contractor general refuse collection and onsite disposal	**X**	**x**	*Contractor* to clean his/her area and *Employer* collect for disposal

Site Facilities, Utilities and Services		Provided by		
Item		*Contractor*	*Employer*	Details
	Contractor field office cleaning service	X		
	Hazardous waste disposal and clean up	X		
Food Services				
	Allowed onsite	X		*Contractor* to provide meals for his teams. Allowed to bring to site
	Tuck-shop		X	

NB: The *Contractor* shall provide everything else necessary for Providing the *Works*.

5.1.13 Existing premises, inspection of adjoining properties and checking work of Others

For each designated area of the Site and its surrounds the *Contractor*, together with the *Project Manager*, within 14 days prior site establishment of any facility or the starting of any work therein, make detailed records, of the existing state of all areas, structures and other features which will be affected by his facilities.

Such records, photographs, drawings or statements as appropriate, are dated and two (2) copies of each submitted to the *Project Manager* prior site establishment of any facility or the starting of any work in that area. The *Contractor* maintains a duplicate record on Site. The *Contractor* ensures he has a permit to take photographs on Site.

5.1.14 Survey control and setting out of the Works

Not applicable

5.1.15 Excavation and associated water control

Where required, the *Contractor* is fully responsible for keeping the excavations free from water whilst the construction work is being carried out. The *Contractor* provides the necessary pumping equipment, pipes and other necessary equipment and temporary works to deal with water. The Contractor refers to the safety documentation for requirements on how to deal with storm water and ground water and any contaminated water. Furthermore, the *Contractor* submits a method statement as per VOSS for the acceptance by the *Project Manager* specifying how he is going to deal with water.

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

Tutuka P.S. has a network of subsurface cable tunnels and cable tunnel network. The existing pipe trenches and cable racks installed can be used. The *Contractor* is responsible to conduct all scans require to detect any underground services in the areas of construction and excavations.

There are existing pipe trenches and cable racks installed at Tutuka P.S., where possible the existing infrastructure should be reused.

The *Contractor* is responsible to conduct all scans require to detect any underground services in the areas of construction and excavations.

The *Contractor* is held responsible for any damage to known services (i.e. services that are within the Site and are shown on the drawings) and he takes all necessary measures to protect them. All work or protective measures are subject to acceptance by the Supervisor. In the event of a service being damaged, the

Contractor immediately notifies the *Supervisor*, the *Contractor* does not repair any such service unless instructed to do so.

As soon as any underground service not shown on the drawings is discovered, it is deemed to be a known service, and the *Contractor* is held responsible for any subsequent damage to it.

Where the *Project Manager* elects to carry out, on its own account, any alterations or protective measures, the *Contractor* co-operates with and allow such party reasonable access and sufficient space and time to carry out the required work. Permanent alterations to or permanent diversion of services necessitated by the execution of the works and authorised is paid for in terms of the conditions of contract.

5.1.17 Control of noise, dust, water and waste

The *Contractor* maintains a high standard of cleanliness during the conduct of his activities at Tutuka Power Station. This includes areas allocated for storage of materials, site offices etc. to the satisfaction of the *Project Manager.* The *Contractor* keeps these areas clean and free from accumulation of waste materials and refuse regardless of the source.

The *Contractor* ensures during sweeping and dusting, that a minimum amount of dust is liberated into the atmosphere. Cleaning by vacuum cleaners is preferred and the use of compressed air for cleaning is prohibited.

The *Contractor* is responsible for the prompt removal of all waste to a designated disposal area. The disposal area will be on or in the vicinity of the Power Station and be indicated by the *Project Manager.*

For the purpose hereof, “waste” any matter, whether liquid or solid or any combination thereof, which is a by-product, emission, residue or remainder of any process or activity carried out in connection with the *Works* and which is not reused on the Site in the in the ordinary course of carrying out the *Works* within seven days of production.

The *Contractor* provides an adequate number of marked bins and containers at offices, in yards, at *Works*hops and on the Site for the temporary storage of waste. These bins and containers are subject to approval by the *Project Manager.* The *Contractor* is required to segregate certain items of waste by type as designated by the *Project Manager.*

Bins and containers are emptied and waste removed to the designated area at least once a week. All the waste removed to the designated area at least once a week. All the temporary storage areas for bins and containers are kept tidy and must not constitute a nuisance to others. The *Contractor* takes all required steps to avoid spillage of waste alongside the bins and containers during removal and disposal thereof.

All waste that cannot be contained in either a bin or container is placed on a temporary waste site which the *Project Manager* identifies. The waste is removed as soon as possible but, in any event, at least once a week. No burning of waste is allowed at the Power Station.

Hazardous waste is dealt with in accordance with the safety, health and/or environmental requirements of the *Works* and the *Contractor* is solely responsible for the proper disposal thereof. Hazardous waste will be disposed of at an authorised landfill site. Waste manifest will be kept for record keeping and hand over at the end of the Project.

5.1.18 Sequences of construction or installation

The *Contractor* is responsible for the construction of the *Works* according to the *Contractor*’s construction and installation plans.

5.1.19 Giving notice of work to be covered up

The *Contractor* is responsible for giving notice of work to the department of labour. The *Contractor* will give notice to the *Project Manager* well in advance at least 24 hours for any *Works* that needs to be covered in this contract for the purpose of proper planning.

5.1.20 Hook ups to existing Works

The *Contractor* to identify the hook up points if they don't exist, he shall point for the purpose of providing the works. The *Contractor* shall not hook up to any existing structure/*Works* unless permission sought and is granted by the *Employer*. In cases whereby the *Employer/ Project Manager* are not reachable the *Contractor* shall use his/her discretion on the basis that safety has been observed, and hazard conditions observed and monitored.

5.2 Completion, testing, commissioning, and correction of Defects

5.2.1 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*. The *Project Manager* cannot certify Completion until all the work has been done and is also free of Defects which would have, in his opinion, prevented the *Employer* from using the *Works* and Others from doing their work.

It will be the responsibility of the *Contractor* to perform the required tests during construction and to coordinate documentation with the *Supervisor*. Test documentation generated during the commissioning phase will be filed as the work is completed. All tests and inspections are to comply with the quality management plans and requirements for the project as per Sections 2.7 and 4.3.1.

Once all *Contractor* construction activities are complete, the *Contractor* will hand over the *Works* to the *Project Manager* for testing and checkout. Completeness of the construction will be verified through a joint walk down between the *Project Manager* and *Contractor*. Any minor outstanding work items found during the construction walk down will be recorded as Defects, and dates will be established for resolution of these Defects.
Constructed activities/ work with major omissions, errors, or problems found during the walk down will not be accepted for commissioning from construction. All construction documentation will be turned over to the *Project Manager* for review. This documentation will be reviewed for completeness and will be included in the final safety clearance with the *Project Manager*.

Once the *Project Manager* has accepted a part of the Works from construction, the responsible *Project Manager* will direct all pre-operational tests required to ready the subsystem for initial operation.

5.2.2 Use of the Works before Completion has been certified

The *Project Manager* utilises any of the Plant and Materials before *Completion* if there is an emergency which can result in production losses of any of the power station units or if required for commissioning. The *Project Manager* notifies the *Contractor* of the requirement for Plant and Materials to be utilised to prevent production losses. The time frame for the use of the required Plant and Materials is agreed upon between the *Project Manager* and the *Contractor*.

5.2.3 Materials facilities and samples for tests and inspections

The *Contractor* supplies all of the materials and facilities for all of the tests conducted for the works, the use of *Employers* testing equipment is not permitted.

5.2.4 Commissioning

Commissioning is defined as bringing into service all items of the works as specified, meeting the requirements of the functional Works Information, as well as the control system and all Plant and Materials performance including all necessary testing and verification of the stated performance.

The works covered by the Works Information is installed and complete in all respects by the dates stated in the *Accepted Programme*. The *Contractor* provides sufficient personnel for the satisfactory and timely commissioning of the equipment.

5.2.5 Start-up procedures required to put the Works into operation

Not applicable

5.2.6 Take over procedures

In accordance with the Eskom's Procedure, Commissioning and Completion of Power Station Projects, 32-365.

5.2.7 Access given by the Employer for correction of Defects

The *Project Manager* arranges with the *Employer* to allow the *Contractor* access to and use part of the *Works* which has been taken over if needed to correct a Defect.

5.2.8 Performance tests after Completion

Not applicable

5.2.9 Training and technology transfer

The *Contractor* provides training (if applicable) on the works regarding operating, maintenance and engineering aspects. The *Contractor* provides training material and a separate training course for operating, maintenance and engineering personnel.

5.2.10 Operational maintenance after Completion

Not applicable

6 Plant and Materials standards and workmanship

The *Contractor* complies with all standards, specifications and regulations as listed within this *Works* Information.

6.1 General

Table 2: General National/International Standards

	SANS and other applicable Local and International Standards	
No	**Document No**	**Description / Title**
1	OHSA	Occupational Health and Safety Act South Africa No 85 and amendments
2	AWS-QC1	Standard for AWS Certification of Welding Inspectors
3	ISO 17635	Non-destructive Testing of Welds
4	ASME BPVC Section IX	Welding and Brazing Qualifications
5	ISO 12944	Paints and Varnishes - Corrosion Protection of Steel
6	SANS 1091	National Colour Standard
7	ISO 1461	Hot dip galvanized coatings on fabricated iron and steel articles
8	COLTO	Standard Specification for Roads and Bridges for State Road Authorities (1998 Edition)

Table 3: Eskom Project Management and Project Controls Specifications

Applicable Eskom Specifications		
No	**Document No**	**Description / Title**
1	Regulations 16	Site regulation number 16 for use, conveyance and storage of Radioactive sources
2	32-365	Completion of Power Plant Projects, Commissioning, Take-over from *Contractor*s and Hand-over to the Generation Business
3	36-943	Engineering Drawing Office and Engineering Documentation Standard
4	240-53114026	Eskom Project Engineering Change Procedure
5	240-44175132	Eskom PPE Specification
6	32-95	Occupational Health and Safety Incident Management Procedure
7	240-49230046	Eskom FMEA Guideline
8	32-1034	Application of the Broad Based Black Economic Empowerment Codes of Good Practice within Eskom
9	240-85549846	Standard for Design of Drainage and Sewerage Infrastructure
10	240-57127953	Execution of Site Preparation and Earthworks Standard
11	240-57127955	Geotechnical and Foundation Engineering Standard
12	240-57127951	Standard for the Execution of Site Investigations
13	240-56364545	Structural Design and Engineering Standards
14	240-14433240	Eskom Power Stations Concrete Remedial Work
15	240-105658000	Supplier Quality Management: Specification
16	240-86973501	Engineering drawing Standard
17	240-66920003	Documentation Management Review and Handover Procedure for Generation Coal Projects
18	240-76992014	Project / Plant Specific Technical Documents and Records Management Work Instruction

6.2 Civil engineering and structural Works

6.2.1 SANS Specifications

The latest revisions of the SANS codes of practice and standardized specifications at the time of contract shall apply to this contract, copies not provided by the *Employer*.

SPECIFICATIONS - SANS 1200 (applicable codes only as per the table below)

SANS 1200 TITLE	NUMBER	REV	DATE
GENERAL	A	3	30-07-2002
SITE CLEARANCE	C	1A	01-08-1982
EARTH*WORKS*	D	3	30-07-2002
EARTH*WORKS* (Pipe trenches)	DB	3	30-07-2002
SMALL EARTH DAMS	DE		
CONCRETE (STRUCTURAL)	D		

GABIONS & PITCHING	DK		
EARTH*WORKS* (Roads, Subgrade)	DM		
CONCRETE (SMALL *WORKS*)	GA	2	30-07-2002
STRUCTURAL STEELWORK	H		
MEDIUM PRESSURE PIPELINES	L		
BEDDING (Pipes)	LB	2	30-07-2002
STORMWATER DRAINAGE	LE		
ROADS (General)	M		
SEGMENTED PAVING	MJ		
KERBING AND CHANNELING	MK		
SANS 10100 TITLE	**NUMBER**	**REV**	**DATE**
10100-1: REINOFRCED CONCRETE DESIGN			
10162:1: STRUCTURAL STEEL DESIGN			
10100-2: THE STRUCTURAL USE OF CONCRETE PART 2: MATERIALS AND EXECUTION WORK			

All references to Standard Specifications are to the latest amendment to such specifications. A SABS 1200 series specification or other standard not listed above and referred to in the Bill of Quantities and Pricing Data, a SABS 1200 series specification and/or the Drawings shall by such reference be deemed to form part of the contract documentation.

7 List of drawings

7.1 Drawings issued by the Employer

Refer to Technical Specification for the Refurbishment of Coal Silo 1-6 Scope of Work document number 15ENG CIVIL-2041

C3.2 *CONTRACTOR*'S *WORKS* INFORMATION

This section of the *Works* Information will always be contract specific depending on the nature of the *Works*.
It is most likely to be required for design and construct contracts where the tendering *Contractor* will have proposed specifications and schedules for items of Plant and Materials and workmanship, which once accepted by the *Employer* prior to award of contract now become obligations of the *Contractor* per core clause 20.1.

Typical sub-headings could be

a) *Contractor*'s design
b) Plant and Materials specifications and schedules
c) Other

This section could also be compiled as a separate file.

PART 4: SITE INFORMATION

Document reference	Title	No of pages
	This cover page	1
C4	Site Information	1
	Total number of pages	

8 Part 4: Site Information

8.1 General description

Tutuka Power station is in Mpumalanga province just 26 km outside Standerton town. The town approximately 200 km southeast of Johannesburg. It is surrounded by the farms and a coal mine next to it. It is about 60 km from Secunda, 140 from Emalahleni and 150 km from Middleburg.

8.2 Hidden services

None known of at the time of tender, the *Contractor* is obliged to address and ensure that all hidden services are dealt with, and all necessary scanning process is conducted by himself and share any findings with the *Employer*s on areas of concerns for discussion and conclusion at no cost to *Employer*.

8.3 Other reports and publicly available information

Nothing noted and available at issuing of tender that the *Employer* is aware of.