



NEC3 Engineering & Construction Contract

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

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

for South Smoke Stack Repairs

Contents:	No of pages
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CONTRACT No. [Insert at award stage]

Part C1: Agreements & Contract Data

Contents:	No of pages
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C1.2a Contract Data provided by the <i>Employer</i>	[•]
C1.2b Contract Data provided by the <i>Contractor</i>	[•]
C1.3 Proforma Guarantees	[•]

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:

South Smoke Stack Repairs

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 A	The offered total of the Prices exclusive of VAT is	R [●]
	Sub total	R [●]
	Value Added Tax @ 15% is	R [●]
	The offered total of the amount due inclusive of VAT is ¹	R [●]
	(in words) [●]	

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

Signature(s)

Name(s) _____

Capacity _____

For the tenderer:

(Insert name and address of organisation)

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

**for the
Employer**

.....
(Insert name and address of organisation)

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.

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 _____ On behalf of _____ _____ Name & signature of witness _____ _____ Date _____	_____ _____ _____ _____ _____ _____ _____ _____
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C1.2 ECC3 Contract Data

Part one - Data provided by the *Employer*

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

Clause	Statement	Data
1	General	
	<p>The <i>conditions of contract</i> are the core clauses and the clauses for main Option</p> <div style="background-color: #cccccc; width: 100px; height: 50px; margin-bottom: 10px;"></div> <p>dispute resolution Option and secondary Options</p> <div style="background-color: #cccccc; width: 100px; height: 50px; margin-bottom: 10px;"></div> <p>of the NEC3 Engineering and Construction Contract, April 2013 (ECC3)</p>	<p>A: Priced contract with activity schedule</p> <p>W1: Dispute resolution procedure</p> <p>X2 Changes in the law</p> <p>X7: Delay damages</p> <p>X16: Retention</p> <p>X17: Low performance damages</p> <p>X18: Limitation of liability</p> <p>Z: Additional conditions of contract</p>
10.1	<p>The <i>Employer</i> is (Name):</p> <p>Address</p>	<p>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</p> <p>Registered office at Megawatt Park, Maxwell Drive, Sandton, Johannesburg</p>
10.1	<p>The <i>Project Manager</i> is: (Name)</p> <p>Address</p> <p>Tel</p> <p>Fax</p> <p>e-mail</p>	
10.1	<p>The <i>Supervisor</i> is: (Name)</p> <p>Address</p>	

Tel No.

Fax No.

e-mail

11.2(13) The works are

Grootvlei Power Station South Smoke Stack Repairs:

The work shall consist of:

- a) Removal and disposal of loose debris.
- b) Repairing of refractory brick wall.
- c) Repairing of access cat ladder to a usable condition.
- d) Procurement of all materials required to complete the works.
- e) Provide all necessary equipment, including safety equipment, tools and materials required for the works.
- f) Ensure that surrounding equipment and structures are not damaged during execution.
- g) Supplying material and the mixing and placing of the chosen repair product as described on the product manufacturer's application manual and this specification.
- h) Supplying, fabricating, constructing, maintaining and removing temporary works, including false work and formwork.
- i) The quality control (QC) and testing of all material.

11.2(14) The following matters will be included in the Risk Register

- a) Injuries and incidents due to noncompliance with Environmental, health and Safety Regulation and Legislation
- b) Delayed access to site
- c) Use of unexperienced resources
- d) Adverse weather Conditions i.e., extreme rain, snow and strong winds. The contractor needs to take precautions when planning the sequence and resources for the works. Reliable wind speed meters should be acquired and recordings to be kept during periods where work could not be done due to high winds in the area.
- e) Material suppliers. Material suppliers to meet all Eskom requirements. Any disputes between the suppliers and the Contract will not be handled by Eskom
- f) Injuries and incidents due to noncompliance with Environmental, health and Safety Regulation and Legislation
- f) Labour issues. These issues are to be properly managed in the event that local labour is to be hired to limit any

- disruptions of the work by local residents.
g) Use of unexperienced resources
h) Theft. the site and working areas are to be guarded to ensure that no theft can take place that will affect the continuity of supply or loss to the employer's existing assets.

11.2(15)	The <i>boundaries of the site</i> are	Grootvlei Power station	
11.2(16)	The Site Information is in	Part 4: Site Information	
11.2(19)	The Works Information is in	Part 3: Scope of Work and all documents and drawings to which it makes reference.	
12.2	The <i>law of the contract</i> is the law of	the Republic of South Africa	
13.1	The <i>language of this contract</i> is	English	
13.3	The <i>period for reply</i> is	1 week Immediately for safety & health matters	
2	The Contractor's main responsibilities	Data required by this section of the core clauses is provided by the Contractor in Part 2 and terms in italics used in this section are identified elsewhere in this Contract Data.	
3	Time		
11.2(3)	The <i>completion date</i> for the whole of the works is		
11.2(9)	The <i>key dates</i> and the <i>conditions</i> to be met are:	Condition to be met	key date
		1 All works to be completed.	
		2 Project Schedule submission	As per the accepted programme
		3 Safety File	As per the accepted programme
30.1	The <i>access dates</i> are:	Part of the Site	Date
		1 South Smoke Stack	
31.1	The Contractor is to submit a first programme for acceptance within	1 week of the Contract Date.	
31.2	The <i>starting date</i> is		
32.2	The Contractor submits revised programmes at intervals no longer than	1 week.	
35.1	The Employer is not willing to take over the works before the Completion Date.		

4 Testing and Defects		
42.2	The <i>defects date</i> is	52 weeks after Completion of the whole of the works.
43.2	The <i>defect correction period</i> is	2 weeks. The Contractor notifies the Project Manager when the Contractor is unable to correct defects within 2 weeks. The Project Manager instructs the Contractor to submit a revised programme outlining how and when the defects will be corrected. The defects correction period remains 2 weeks until the Project Manager accepts the revised programme.
	except <i>defect correction period</i> for plant return to service: The Contractor must be fully available immediately to support the light up.	
5 Payment		
50.1	The <i>assessment interval</i> is	between the 25th day of each successive month.
51.1	The <i>currency of this contract</i> is the	South African Rand.
51.2	The period within which payments are made is	60 days
51.4	The <i>interest rate</i> is	<p>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</p> <p>(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 <i>mutatis mutandis</i> 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.</p>
6 Compensation events		
60.1(13)	The place where weather is to be recorded is:	Grootvlei Power Station

The *weather measurements* to be recorded for each calendar month are,

the cumulative rainfall (mm)

the number of days with rainfall more than 10 mm

the number of days with minimum air temperature less than 0 degrees Celsius

the number of days with snow lying at 09:00 hours South African Time

and these measurements:

The *weather measurements* are supplied by

South African Weather Bureau

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

Based on information recorded at the Heidelberg weather station, the average annual rainfall for the Heidelberg area is approximately 691 mm. (Weather Bureau, Pretoria).

and which are available from:

the South African Weather Bureau and included in Annexure A to this Contract Data provided by the *Employer*

60.1(13)	Assumed values for the ten year return <i>weather data</i> for each <i>weather measurement</i> for each calendar month are:	As stated in the South African Weather Bureau
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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.
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8	Risks and insurance
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80.1	These are additional <i>Employer's</i> risks	1. Community unrest 2. Delays in the program due to unavailability of spares
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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.
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In addition to core clause 9 termination clause above, the Employer reserves the right to terminate or modify the contract when a need arises or when there are changes requiring such in the organization. Such termination or modification will be subjected to reason for termination, procedure and accounts applicable to the NEC3 ECC core clause 9 termination.

10	Data for main Option clause
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A	Priced contract with activity schedule
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11 Data for Option W1						
W1.1	The <i>Adjudicator</i> 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).				
W1.2(3)	The <i>Adjudicator nominating body</i> 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 <i>tribunal</i> is:	arbitration.				
W1.4(5)	The <i>arbitration procedure</i> 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	South Africa				
	The person or organisation who will choose an arbitrator	the Chairman for the time being or his nominee of the Association of Arbitrators (Southern Africa) or its successor body.				
	- if the Parties cannot agree a choice or - if the arbitration procedure does not state who selects an arbitrator, is					
12 Data for secondary Option clauses						
X2	Changes in the law	There is no reference to Contract Data in this Option and terms in italics are identified elsewhere in this Contract Data.				
X7	Delay damages (but not if Option X5 is also used)					
X7.1	Delay damages for Completion of the whole of the <i>works</i> are	R10,000.00 per day on the specific activity that is delayed and must not exceed 10% of the activity. The delay damages set out in clause X7. shall be the Employer's sole and exclusive remedy for delays.				
X16	Retention (not used with Option F)					
	The <i>retention percentage</i> is	5%of each invoice 50% of the retained amount payable on completion of the project 50% of the retained amount payable after defects period				
X17	Low performance damages					
X17.1	The amounts for low performance damages are:	<table border="1"> <thead> <tr> <th>Amount</th> <th>Performance level</th> </tr> </thead> <tbody> <tr> <td>R 10 000 per</td> <td>For every incident where a QCP</td> </tr> </tbody> </table>	Amount	Performance level	R 10 000 per	For every incident where a QCP
Amount	Performance level					
R 10 000 per	For every incident where a QCP					

	day	is not submitted by the Contractor on time as planned in the accepted programme and delays the start of activities.
	R10 000 per day	For every incident of quality non-compliance to hold and witness points on QCP's
	R10 000 per day	For every incident where personnel are used which are not qualified or experienced as per the agreement
	R 15 000 per day	For every incident where a commissioning procedure is not submitted on time as planned in the accepted programme
		The amounts for low performance damages shall be capped at 10% of the contract value in aggregate

X18 Limitation of liability

X18.1	The <i>Contractor's</i> liability to the <i>Employer</i> for indirect or consequential loss is limited to:	R0.0 (zero Rand) neither party shall have any liability to the other for indirect or inconsequential loss (including loss of profit or loss of income)
X18.2	For any one event, the <i>Contractor's</i> liability to the <i>Employer</i> for loss of or damage to the <i>Employer's</i> property is limited to:	the amount of the deductibles relevant to the event
X18.3	The <i>Contractor's</i> liability for Defects due to his design which are not listed on the Defects Certificate is limited to	The greater of <ul style="list-style-type: none"> • the total of the Prices at the Contract Date and • the amounts excluded and unrecoverable from the <i>Employer's</i> 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 <i>Contractor's</i> total liability to the <i>Employer</i> for all matters arising under or in connection with this contract, other than excluded matters, is limited to:	<p>the total of the Prices other than for the additional excluded matters.</p> <p>The <i>Contractor's</i> total liability for the additional excluded matters is not limited.</p> <p>The additional excluded matters are amounts for which the <i>Contractor</i> is liable under this contract for</p> <ul style="list-style-type: none"> • Defects due to manufacture and fabrication outside the Site, • loss of or damage to property (other than the <i>works, Plant and Materials</i>),

		<ul style="list-style-type: none"> • death of or injury to a person and • infringement of an intellectual property right.
X18.5	The <i>end of liability date</i> is	<p>(i) 2 years after the <i>defects date</i> for latent Defects and</p> <p>(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.</p> <p>A latent Defect is a Defect which would not have been discovered on reasonable inspection by the <i>Employer</i> or the <i>Supervisor</i> before the <i>defects date</i>, without requiring any inspection not ordinarily carried out by the <i>Employer</i> or the <i>Supervisor</i> during that period. If the <i>Employer</i> or the <i>Supervisor</i> do undertake any inspection over and above the reasonable inspection, this does not place a greater responsibility on the <i>Employer</i> or the <i>Supervisor</i> to have discovered the Defect.</p>
Z	The Additional conditions of contract are	Z1 to Z15 always apply.
Z1	Cession delegation and assignment	
	Z1.1	The <i>Contractor</i> does not cede, delegate or assign any of its rights or obligations to any person without the written consent of the <i>Employer</i> .
	Z1.2	Notwithstanding the above, the <i>Employer</i> may on written notice to the <i>Contractor</i> 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 <i>Contractor</i> 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 <i>Employer</i> for the performance of this contract.
	Z2.2	Unless already notified to the <i>Employer</i> , the persons or organisations notify the <i>Project Manager</i> within two weeks of the Contract Date of the key person who has the authority to bind the <i>Contractor</i> on their behalf.
	Z2.3	The <i>Contractor</i> does not alter the composition of the joint venture, consortium or other unincorporated grouping of two or more persons without the consent of the <i>Employer</i> having been given to the <i>Contractor</i> in writing.
Z3	Change of Broad Based Black Economic Empowerment (B-BBEE) status	
	Z3.1	Where a change in the <i>Contractor's</i> legal status, ownership or any other change to his business composition or business dealings results in a change to the <i>Contractor's</i> B-BBEE status, the <i>Contractor</i> notifies the <i>Employer</i> 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.

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 *Project Manager*.
- 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 <i>works</i> , Plant and Materials	The replacement cost where not covered by the <i>Employer's</i> insurance The <i>Employer's</i> policy deductible, as Contract Date, where covered by the <i>Employer's</i> insurance
Loss of or damage to Equipment	The replacement cost
Liability for loss of or damage to property (except the <i>works</i> , Plant and Materials and Equipment) and liability for bodily injury to or death of a person (not an employee of the <i>Contractor</i>) caused by activity in connection with this contract	<u>Loss of or damage to property</u> <u>Employer's property</u> The replacement cost where not covered by the <i>Employer's</i> insurance The <i>Employer's</i> policy deductible, as Contract Date, where covered by the <i>Employer's</i> insurance <u>Other property</u> The replacement cost <u>Bodily injury to or death of a person</u> The amount required by applicable law
Liability for death of or bodily injury to employees of the <i>Contractor</i> arising out of and in the course of their employment in connection with this contract	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 limit 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 <i>Employer's</i> 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.

C1.2 Contract Data

Part two - Data provided by the *Contractor*

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

Clause	Statement	Data
10.1	The <i>Contractor</i> is (Name): Address Tel No. Fax No.	
11.2(8)	The <i>direct fee percentage</i> is The <i>subcontracted fee percentage</i> is	% %
11.2(18)	The <i>working areas</i> are the Site and	NEC Section 3.1
24.1	The <i>Contractor's</i> key persons are: 1 Name: Job: Responsibilities: Qualifications: Experience: 2 Name: Job Responsibilities: Qualifications: Experience:	
11.2(3)	The <i>completion date</i> for the whole of the <i>works</i> is	
11.2(14)	The following matters will be included in the Risk Register	
11.2(19)	The Works Information for the <i>Contractor's</i> design is in:	
31.1	The programme identified in the Contract Data is	
A	Priced contract with activity schedule	

11.2(21)	The <i>bill of quantities</i> is in	
11.2(31)	The tendered total of the Prices is	(in figures) (in words), excluding VAT

PART 2: PRICING DATA

ECC3 Option A

Document reference	Title	No of pages
C2.1	Pricing assumptions: Option A	
C2.2	The <i>activity schedule</i>	

C2.1 Pricing assumptions: Option A

1. How work is priced and assessed for payment

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

Identified and defined terms 11 11.2 (20) The Activity Schedule is the *activity schedule* unless later changed in accordance with this contract.

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

- each group of completed activities and
- each completed activity which is not in a group.

A completed activity is one which is without Defects which would either delay or be covered by immediately following work.

(30) The Prices are the lump sum prices for each of the activities on the Activity Schedule unless later changed in accordance with this contract.

This confirms that Option A is a lump sum form of contract where the work is broken down into activities, each of which is priced by the tendering contractor as a lump sum. Only completed activities are assessed for payment at each assessment date; no part payment is made if the activity is not completed by the assessment date.

2. Function of the Activity Schedule

Clause 54.1 in Option A states: "Information in the Activity Schedule 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 Activity Schedule 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 Activity Schedule. The Activity Schedule is only a pricing document.

3. Link to the programme

Clause 31.4 states that "The *Contractor* provides information which shows how each activity on the Activity Schedule relates to the operations on each programme which he submits for acceptance". Ideally the tendering contractor will develop a high level programme first then resource each activity and thus arrive at the lump sum price for that activity both of which can be entered into the *activity schedule*.

4. Preparing the *activity schedule*

Generally it is the tendering contractor who prepares the *activity schedule* by breaking down the work described within the Works Information into suitable activities which can be well defined, shown on a programme and priced as a lump sum.

The *Employer*, in his Instructions to Tenderers or in a Tender Schedule, may have listed some items that he requires the *Contractor* to include in his *activity schedule* and be priced accordingly.

It is assumed that in preparing his *activity schedule* the *Contractor*:

- Has taken account of the guidance given in the ECC3 Guidance Notes pages 19 and 20;
- Understands the function of the Activity Schedule and how work is priced and paid for;
- Is aware of the need to link the Activity Schedule to activities shown on his programme;
- Has listed and priced activities in the *activity schedule* which are inclusive of everything necessary and incidental to Providing the Works in accordance with the Works Information, as it was at the time of tender, as well as correct any Defects not caused by an *Employer's* risk;
- Has priced work he decides not to show as a separate activity within the Prices of other listed activities in order to fulfil the obligation to complete the *works* for the tendered total of the Prices.
- Understands there is no adjustment to the lump sum Activity Schedule price if the amount, or quantity, of work within that activity later turns out to be different to that which the *Contractor* estimated at time of tender. The only basis for a change to the Prices is as a result of a compensation event.

An activity schedule could have the following format:

C2.2 the *activity schedule*

Item No.	Programme Reference	Activity description	Price
1		Preliminaries and General	
2		Construction activities	
2.1		Design and Construction of a Hoist to access the top rim of the smoke stack (Maximum height = 152m)	
2.2		Supply of Material	
2.3		Removal of lightning arrestor prior to commencement of the works and replacement once the works is complete	
2.4		Preparation of working area removing all dust and debris Repair of joints around the top rim refractory brick wall	
2.5		Grout replacement around the capping	
2.6		Application of SikaWrap-230C around the top rim wall periphery as per manufacturer's instructions.	
TOTAL			

Note: The above table serves as a guideline only. The Contractor shall provide a detailed breakdown of the activities as per the guidelines provided.

Item	Description	Unit	Quantity	Hours	Rate	Month	Total (6 months)
	Preliminary and General Items						
	Fixed Related						
1	Site stores	Sum					
2	Site offices	Sum					
3	Contractor yard fencing	Sum					
4	Electrical establishment(Generator for all works)	Sum					
	De establishment						
5	Removal of site establishment on completion of the contract	Sum					

	Health and Safety						
6	Personal Protective Equipment (Overalls, gloves, gumboots, safety boots, safety harness, safety goggles, FFP2 /FFP3 dust masks, hard hats)	Sum					
7	Medicals and Induction for entire crew	Sum					
8	Police clearance for entire crew	Sum					
9	Provision of Safety File	Sum					
	Travelling costs						
10	Travelling of labours to site and back (Avanza)	Sum					
11	Transportation of Hardware to site (Double cab bakkie)	Sum					
12	Provision of lifting equipment(Crane and winch running)	Sum					
	Accommodation						
13	Accommodation of labourers	Sum					
	Sub-total 1						
	Description						
	Section 2 – Labour						
	Labour-Normal hours						
1	SACMP Registered Construction manager	Hrs					
2	Supervisor	Hrs					
3	QCQA	Hrs					
4	SHEQ Officer	Hrs					
5	Administration	Hrs					
6	Skilled labour	Hrs					
7	Un-skilled Labour	Hrs					
	Overtime(Weekdays and Saturdays)						
1	SACMP Registered Construction manager	Hrs					
2	Supervisor	Hrs					
3	QCQA	Hrs					
4	SHEQ Officer	Hrs					

5	Administration	Hrs					
6	Skilled labour	Hrs					
7	Un-skilled labour	Hrs					
	Overtime(Sundays and holidays)						
1	SACMP Registered Construction manager	Hrs					
2	Supervisor	Hrs					
3	QCQA	Hrs					
4	SHEQ Officer	Hrs					
5	Administration	Hrs					
6	Skilled labour	Hrs					
7	Un-skilled labour	Hrs					
	Sub-total 2						
	Section 3 - Construction activities						
1	Design and Construction of a Hoist to access the top rim of the smoke stack (Maximum height = 152m)	Sum					
2	Supply of Material	Sum					
3	Removal of lightning arrestor prior to commencement of the works and replacement once the works is complete	Sum					
4	Preparation of working area removing all dust and debris Repair of joints around the top rim refractory brick wall	Sum					
5	Grout replacement around the capping	Sum					
6	Application of SikaWrap-230C around the top rim wall periphery as per manufacturer's instructions.	Sum					
	Sub-total 3						
	Total						

Note: The above table serves as a guideline only. The Contractor shall provide a detailed breakdown of the activities as per the guidelines provided.

PART 3: SCOPE OF WORK

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C3.2	<i>Contractor's Works Information</i>	16
	Total number of pages	

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C3.1: EMPLOYER'S WORKS INFORMATION

a) Description of the works

a. Executive overview

Grootvlei Power Station is situated close to the town of Balfour in Mpumalanga province. The Power Station consists of six units with a capacity of 200 MW each and the total installed capacity is 1200 MW. The first of six units was commissioned in 1969. Three of the units were mothballed in 1989 and the rest in 1990. Grootvlei was one of the power stations being recommissioned. The return to service of the first unit occurred during 2007 and all six units were recommissioned during 2010. The power station is currently 51 years old.

Concrete is a durable construction material and, if designed and placed properly, will give long service under normal conditions. However, many concrete structures are deteriorating, often prematurely, and require remedial measures to reinstate their safety and/or serviceability. Consequently, the need for repair and protection has grown considerably in recent years.

Following the condition assessment performed, there are no serious defects discovered on the concrete walls. However, the top rim refractory brick walls exhibit serious cracks which are a cause for concern.

Therefore, this document provides the scope of works relating to the refractory bricks repair work, which will be performed by the *Contractor*. Refer to figure 1 below illustrating a cross-section of the bricks.

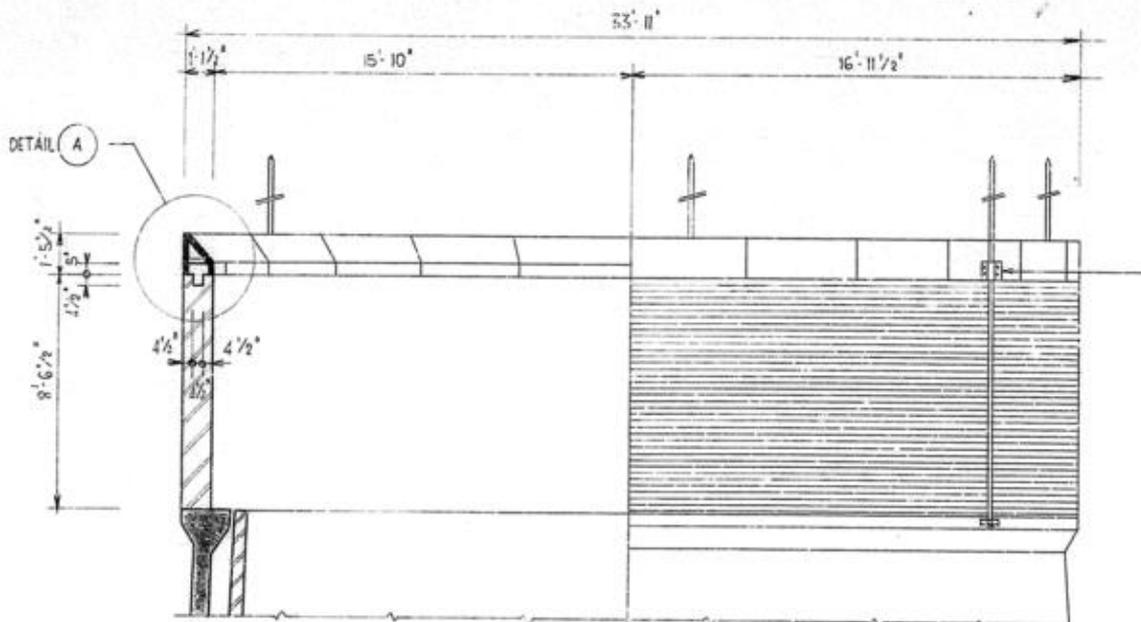


Figure 1: Top Rim Wall Refractory Bricks

b. Employer's objectives and purpose of the works

The project objective is the Regain the overall structural integrity of the chimney stacks top rim so that operation of the plant can continue until the refurbishment project can commence/be executed. and also prevent collapse and falling of refractory bricks.

(Refer to appendix for the nature of defects)

c. Interpretation and terminology

The following abbreviations are used in this Works Information:

Abbreviation	Meaning given to the abbreviation
AFC	Approved for construction
OBL	Outside battery limits
CIDB	Construction Industry Development Board
ECSA	Engineering Council of South Africa
CE	Compensation Event
UIF	Unemployment Insurance Fund

b) Management and start up.

a. Management meetings

Regular meetings of a general nature may be convened and chaired by the *Project Manager* as follows:

Title and purpose	Approximate time & interval	Location	Attendance by:
Kick off meeting	Immediately after contract award	Grootvlei Power Station or virtual	<i>Employer, Contractor</i>
Risk register and compensation events	Monthly or anytime when a risk arises or when CE is raised	Grootvlei Power Station or virtual	<i>Employer, Contractor</i>
Overall contract progress and feedback	Weekly	Grootvlei Power Station or virtual	<i>Employer, Contractor</i>
Contractor SHE Forum and all station SHEQ related meetings	Monthly or when the need arises	Grootvlei Power Station or virtual	<i>Contractor</i>

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

All meetings shall be recorded using minutes or a register prepared and circulated by the person who convened the meeting. Such minutes or register shall not be used for the purpose of confirming actions or

instructions under the contract as these shall be done separately by the person identified in the *conditions of contract* to carry out such actions or instructions.

b. Documentation control

All communication between the Employer and the Contractor shall be via formal letters sent on Email.

Upon completion of the works, the Contractor shall submit to the Employer As built drawings in a format indicated by the *Employer*. The drawings shall be submitted with a transmittal numbering each drawing as per number sequence provided by the Employer. This number sequence will be provided to the Contractor once the number of drawings to be submitted has been confirmed. 3 soft copies and 3 filed hard copies of the data book must be submitted.

c. Health and safety risk management

The Contractor shall adhere to all OHS Legal requirements, OHS corporate policies, standards and procedures to which Eskom subscribes and as indicated on the issued SHE specification.

The Contractor shall, when coming on site (Grootvlei Power Station), abide by the Life Saving Rules. These will be provided by the Employer on the start of the contract.

The Contractor shall also abide by the Grootvlei High risk Safety, Health, and Environmental Specifications 240-73418055, which will also be provided by the Employer.

The Contractor shall, when coming on site (Grootvlei Power Station), make use of approved personal protective clothing such as overalls, safety shoes, safety hat, safety goggles, dust mask and gloves when necessary.

The Employer follows an Incident management procedure (32-95) that includes the investigation of all accidents involving personnel and property. This is done with the intention of introducing control measures to prevent a recurrence of the same incidents. The Contractor is expected to fully co-operate to achieve this objective. The Contractor will report any incident and accidents to Grootvlei Power Station within 24 hours. This report does not relieve the Consultant of his legal obligation to report certain incidents to the Department of Labour, or to keep records in terms of the Occupational Health and Safety Act, and Compensation for Occupational Injuries and Diseases Act.

The Contractor implements a safety plan and maintains the safety system until the completion of the whole of the works. The plan, will as a minimum, contain PPE information, written safe work procedures, job specific risk assessments, safety meetings, etc. The plan will be to the Employer's satisfaction and will be accepted prior to the commencement of any work.

The Contractor will be subject to periodic audits by the Employer to ensure compliance with the plan. Any deviations will be corrected to the Employer's satisfaction.

The Contractor shall ensure that his employees are fully trained on fall protection and working at heights and shall adhere to working at heights procedure (32418).

The Project Manager has the right to stop the Contractor's work activities which, in the opinion of Project Manager, is un-safe. The Contractor may only continue with work activities when all safety deficiencies have been corrected to the Project Manager's satisfaction. The Contractor shall have no claim against the Employer in respect of delay due to the above.

d. Environmental constraints and management

The Contractor must familiarise themselves with the waste management policies and procedures (240-28981069 and 240-29828394 respectively) within 14 days from date of contract awards, and must comply with the environmental criteria and constraints stated in the policy document. The requirements include the identification, collection, storage, transportation and disposal of waste. Hazardous waste shall be disposed off in line with the applicable environmental legislation. It is important to note that all spillages must be cleaned immediately and reported to the Project Manager as soon as possible. It is the responsibility of the polluter to clean all spillages and for the rehabilitation of the polluted land and the cost associated with that.

e. Quality assurance requirements

- The Contractor implements a quality system and maintains the quality system until the completion of the whole of the Works. The system, will as a minimum, comply with the provisions of the ISO 9001 and the Supplier Contract Quality Requirements Specification 240-105658000/ QM-58. The system will be to the Employer's satisfaction and will be accepted prior to the commencement of any work on site.
- The Contractor is responsible for defining the level of Quality Control Plan (QCP) or inspections to be imposed. The level should be based on criticality of plant and material and must be submitted to the Service Manager for acceptance prior to the commencement of any work activities.
- The Contractor compiles a data package of relevant drawings, test certificates, design checks and other technical information for each section of work or Task Order which is to be reviewed and signed off by the Supervisor or Employer Representative.
- The Contractor will be subject to periodic audits by the Employer in order to ensure compliance with the system. Any deviations will be corrected to the Employer's satisfaction.
- The Service Manager has the right to stop the Contractor's work activities which, in the opinion of Service Manager, does not meet the requirements of the system and will have a detrimental effect on plant performance.
- The Contractor may only continue with work activities when all deficiencies have been corrected to the Employer's satisfaction. The Contractor shall have no claim against the Employer in respect of delay due to the above.
- The Contractor ensures that all plant and materials for the Works are to the standard and quality accepted by the Employer and ensures that they are suitable for the purpose intended by the manufacturer.
- The Contractor will work according to the Employer's standards, specifications, guidelines and procedures. Where no standards, specifications, guidelines and procedures are available, the Contractor will work according to the Generation Quality Manual. Where possible, standards will be reflected in the Task Order.
- The contractor will ensure that they facilitate effective and efficient management of incident from the moment it occurs, until it can be audited and mitigated.
- In case the contractor damages the plant whilst executing the scope, the contractor shall rectify the plant and the contract can be terminated thereafter.

f. 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 Price List;
Total amount invoiced excluding VAT, the VAT and the invoiced amount including VAT;
(add other as required)

Add procedures for invoice submission and payment (e. g. electronic payment instructions)

g. Insurance provided by the Employer

As stated for “Format A” available on

http://www.eskom.co.za/Tenders/InsurancePoliciesProcedures/Pages/EIMS_Policies_From_1_April_2014_To_31_March_2015.aspx

c) Introduction-Employer’s design

Grootvlei Power Station is situated close to the town of Balfour in Mpumalanga province. The Power Station consists of six units with a capacity of 200 MW each and the total installed capacity is 1200 MW. The first of six units was commissioned in 1969. Three of the units were mothballed in 1989 and the rest in 1990. Grootvlei was one of the power stations being recommissioned. The return to service of the first unit occurred during 2007 and all six units were recommissioned during 2010. The power station is currently 51 years old.

Concrete is a durable construction material and, if designed and placed properly, will give long service under normal conditions. However, many concrete structures are deteriorating, often prematurely, and require remedial measures to reinstate their safety and/or serviceability. Consequently, the need for repair and protection has grown considerably in recent years.

Following the condition assessment performed, there are no serious defects discovered on the concrete walls. However, the top rim refractory brick walls exhibit serious cracks which are a cause for concern.

Therefore, this document provides the scope of works relating to the refractory bricks repair work, which will be performed by the Contractor. Refer to figure 1 below illustrating a cross-section of the bricks.

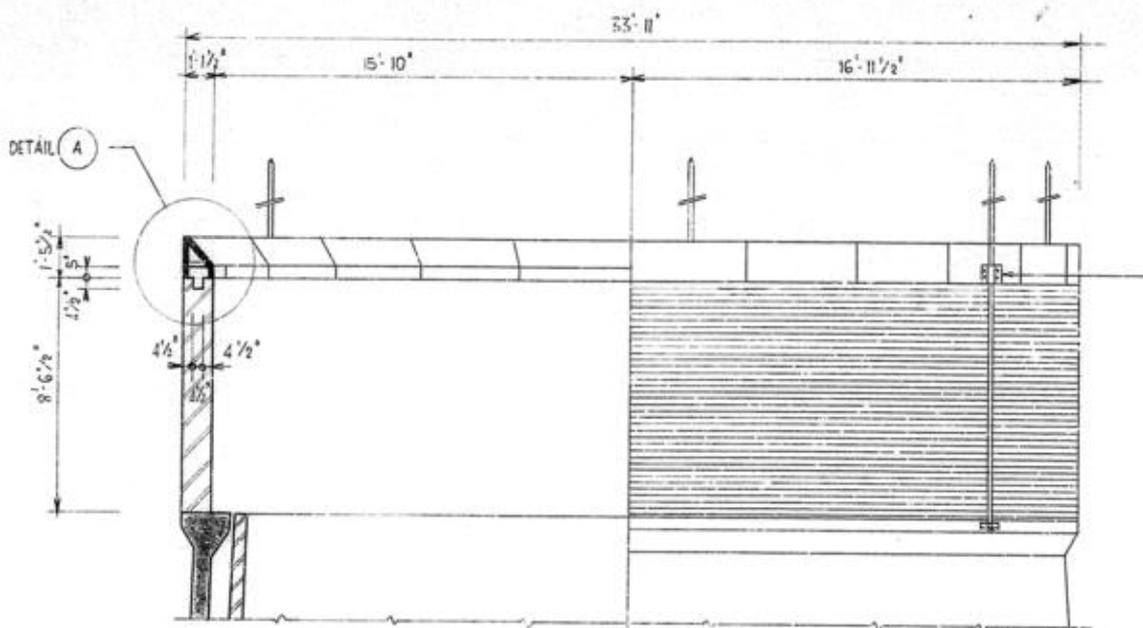


Figure 1: Top Rim Wall Refractory Bricks

d) Supporting Clauses

a. Scope

This document covers the scope of works relating to refractory bricks repairs on the chimney stacks, where the works are to be performed by the *Contractor*. This document outlines all the requirements required to complete the repair works.

4.1.1 Purpose

The purpose of this document is to outline the minimum requirements and the scope of activities required from the *Contractor* for the execution of the works.

4.1.2 Applicability

This document applies to Grootvlei Power Station and all other stakeholders involved in the project.

4.1.3 Normative/Informative References

Parties using this document shall apply the most recent edition of the documents listed in the following paragraphs.

1.1.4 Normative

Eskom Health, Environment and Quality (SHEQ) Policy 32-727

ISO 9001 Quality Management Systems

National Environmental Management Act (NEMA) 107 of 1998

Construction Regulations, 2014

Occupational Health and Safety Act No. 85 of 1993

240-99527377: Inspection Manual for Civil Works at Eskom's Power Station

SANS 10400: The application of the National Building Regulation

240-56364545: Structural Design and Engineering Standard

Condition Assessment Report

1.1.5 Informative

b. Definitions

N/A

i. Disclosure Classification

Controlled disclosure: **controlled disclosure to external parties (either enforced by law, or discretionary).**

c. Abbreviations

Abbreviation	Description
QA	Quality Assurance
QC	Quality Control
QCP	Quality Control Plan
MPa	Megapascal
ITP	Inspection Test Plan
SANS	South African National Standards
WTP	South Smoke Stack
BOQ	Bill of Quantity

d. Roles and Responsibilities

Grootvlei Power Station will be responsible for appointing an appropriate *Contractor* to perform the repairs as indicated in this document.

The *Contractor* shall be responsible to deliver work according to specification

The Engineer shall monitor construction quality during construction

e. Process for monitoring

The *Contractor* submits a quality control plan for approval by *Employer*.

f. Related/Supporting Documents

Condition Assessment Report

e) EMPLOYER'S OBJECTIVES AND PURPOSE OF THE WORKS

The objective and purpose of the works is to:

- a. Regain the overall structural integrity of the chimney stacks top rim so that operation of the plant can continue until the refurbishment project can commence/be executed.
- b. Prevent collapse and falling of refractory bricks.

(Refer to appendix for the nature of defects)

f) Scope of Works to be carried out in the South Smoke Stack

a. Description of the works

The *Contractor* shall adhere to the South African Environment Protection Act, the Waste Management code of practice and the South African Occupational Health and Safety Act No. 85 (OHS Act), the regulations promulgated thereunder and Eskom Health, Environment and Quality (SHEQ) Policy 32-727 for demolition, removal, separation and disposal of scrap, waste and hazardous materials.

Each of the two Chimney Stacks is founded on piled foundations with shells constructed using a ring formwork and the pouring was done in multiple lifts of approximately 9 meters, with internal and external reinforcement, adding to a total of approximately 150 meters of height.

The shell concrete cover to the reinforcement according to the design drawings is of 50 mm. Shell internals are clad with Refractory Dusty Bricks which are supported by reinforced concrete corbels. The Chimney Stack top ring wall is designed and constructed with Refractory Bricks. During the assessment walkdown, it was observed that severe cracks have occurred around the periphery of the top rim.

The work shall consist of:

- a. Removal and disposal of loose debris.
- b. Repairing of refractory brick wall.
- c. Repairing of access cat ladder to a usable condition.
- d. Procurement of all materials required to complete the works.
- e. Provide all necessary equipment, including safety equipment, tools and materials required for the works.
- f. Ensure that surrounding equipment and structures are not damaged during execution.
- g. Supplying material and the mixing and placing of the chosen repair product as described on the product manufacturer's application manual and this specification.
- h. Supplying, fabricating, constructing, maintaining and removing temporary works, including false work and formwork.
- i. The quality control (QC) and testing of all material.

b. Employers design

The Employer has conducted a visual assessment of the chimney stacks to assess the extent of the deteriorated of the structures. The following was observed:

- a. Heat resistance refractory bricks have severely cracked.
- b. Steel cat ladders are unsafe for use, with evidence of corrosion.
- c. Delamination of the top ring grout.

c. Contractor's requirements

1. The *Contractor* takes full accountability and liability for the works as described in the scope of works.
2. The *Contractor* is required to confirm and verify all information supplied by the Employer prior to being used in the works.
3. The *Contractor* adheres to all design requirements, codes of standards and regulations stated in this scope of works and any other requirements applicable for the successful completion of works.
4. Any discrepancy or ambiguity between the *Employer's* Specifications or requirements is to be immediately brought to the attention of the Project Manager for clarification.

5. Where the *Contractor* requires additional information to design or install certain components of the Plant, the *Contractor* notifies the Project Manager of the *Contractor's* requirements a minimum of one (1) week before continuing with the works.
6. Any damages to existing infrastructure and services resulting from the works is repaired/ made good by the *Contractor* at his own expense. This is subject to the Contractor supplying a method statement for the repair works to the Project Manager for review and acceptance prior to conducting the repair works.
7. The *Contractor* quantifies the limitations and risks in the form of a detailed risk assessment, which is reviewed and accepted by the Project Manager prior to commencing with construction work.

d. CONSTRUCTION

i. General

The *Contractor*:

1. Adheres to the South African Environment Protection Act, the waste management code of practice and the South African Occupational Health and Safety Act No. 85 of 1993, the regulations promulgated thereunder and Eskom Safety, Health, Environment and Quality (SHEQ) Policy 32- 727 and Waste Management Procedure, as well as the National Building Regulations and SANS 10400 for all works.
2. Submits a comprehensive method statement (including a comprehensive risk assessment) detailing the proposed methods for the entire works to the *Project Manager* for acceptance prior to the start of the works. Refer to Section 4.4.5 for method statement requirements.
3. Submits a project specific safety file to the *Project Manager* for comments / acceptance.
4. Submits a detailed level 3 schedule for the *works* to the *Project Manager* for acceptance after contract award.
5. Takes all necessary precautions to ensure that none of the existing structures / facilities not forming part of the *works* is damaged during construction. The *Contractor* is liable for all damages that may occur and repairs are to be done at no additional cost to the *Employer*.
6. The *Contractor* disposes of all waste material at a waste disposal site to be approved by the *Project Manager*. The waste disposal site is selected to suit the classification of the materials to be disposed of. Certificates of disposal are required to be submitted to the *Project Manager*.
7. Continuously monitors the conditions within the working and surrounding areas for any hazardous substances or situations, and in such case, the *Contractor* is required to take necessary precautionary measures.
8. Manages access to the working areas and the Site.
9. Manages activities on Site to ensure that no interference takes place between the *works* and that of others.
10. The *Contractor* is responsible for the design and erection of all the temporary supports required for the *works*. In addition to the aforementioned, the *Contractor* adheres to the following:
 - a. The *Contractor* is restricted to the designated working areas.
 - b. The *Contractor* is not to enter any other areas and ensures that his employees abide by the applicable regulations.
 - c. The *Contractor* performs all hoisting and lifting by qualified riggers.
 - d. The *Contractor's* Equipment does not impair the operation or access to the plant/building
 - e. The *Contractor* provides any temporary or expendable materials required for the storage of materials.
 - f. The *Contractor* safeguards and secures all items whilst in the *Contractor's* custody and control, until completion of the works.

g. Plant and equipment not forming part of the *works* are not to be modified without written permission from the *Project Manager*. Modification in this sense includes, but is not limited to the following:

- i. Welding onto existing plant,
- ii. Drilling into structural steel or concrete,
- iii. Cutting or removing
- iv. Loading adjacent structures.

11. The Contractor ensures that a complete QCP, risk assessment, method statement and ITP's, where applicable are submitted to the *Project Manager* for review and acceptance before the works can commence. During reviews of the ITP's, the *Project Manager* provides the necessary intervention points.

12. All items that are assembled and constructed off site are listed and provided to the *Project Manager*. From this, an ITP is developed between the *Project Manager* and the *Contractor* to determine the intervention points.

ii. Construction, Erection and Monitoring

1. The *Contractor* is responsible for the construction of all *works* in accordance with the accepted designs, drawings, and specifications.
2. The *Contractor* is responsible for the safety of all personnel involved in the *works* as well as the safety of all personnel at Grootvlei Power Station affected by the construction of the *works*.
3. The *Contractor* is required to confirm all site dimensions, levels and cast-in items positions on site prior to any fabrication of steel members.
4. The *Contractor* notifies the *Project Manager* of any defects that have occurred or are foreseen in order to reduce further damages that may occur.
5. The *Contractor* is responsible for the design, erection, maintenance, and removal of all temporary works required for the execution of the *works*. Refer to Section 4.4.1 for requirements for temporary works.
6. The *Contractor* takes full professional accountability and liability for all temporary items required for the execution of the works.

iii. Plant and Material Supply

1. The *Contractor* provides all tools and equipment for the handling of material and the proper execution of the works.
2. The *Contractor* takes reasonable care to ensure that equipment used does not cause damage to any existing infrastructure. In the event that such damages do occur to the surrounding infrastructures, the *Contractor* is responsible for repairing such damages and is liable for all costs associated with the repairs.
3. The *Contractor* is to supply, deliver, offload and temporarily store (as may be required) all materials needed to carry out the works.

iv. Storage Facilities

1. The *Contractor* is to make his own arrangements with regard to storage facilities and laydown areas that are required to complete the works. All laydown areas on Site are as per agreement with the *Project Manager*.
2. All storage facilities (Plant, Material and Equipment) will be within the boundaries of the Site in order not to affect the operations of Others.

v. Method Statement

1. As a tender returnable, the *Contractor* submits a general Construction Work Method Statement taking into consideration the various phases of the project.
2. This Method Statement clearly illustrates how the Contractor accounts for the risks of this project and is tailored to address the specified project objectives and requirements.
3. The Method Statement includes, as a minimum and where applicable, the following:
 - a. Constraints identified and considered by the *Contractor*.
 - b. Interfacing with Others; the Contractor illustrates an understanding of the work that is to be completed by Others and accommodates for the completion of such work in his methodology.
 - c. Description and illustrations of a construction traffic plan, use of laydown areas and plot plan.
 - d. Shifts and hand overs for the various sections of the works, this information is to enable the *Employer* to integrate the programmes of the various contractors.
 - e. Design tools and systems that the *Contractor* plans to use.
 - f. Construction methodology and sequence of construction taking into consideration access restrictions and safety requirements.
 - g. Detailed risk assessment which lists risks specific to the works and is accompanied with associated proposed mitigations.
 - h. List and description of plant and machinery required to carry out the civil and structural components of the works.
 - i. Inspection and quality control plan.
 - j. A clear description of the responsibilities of the Contractor's personnel involved with the works, including (where applicable) his Project Manager, Site Quality Manager, Site Engineer, Health and Safety Manager, Technical Office Manager, Production Manager, Supervisor, Environmental Officer, Fabricator, Erection Engineer, Shop detailer, Transporter and other personnel required for the civil and structural works.
 - k. Construction sequencing considerations, which take into account any constraints.
 - l. Health, safety and quality control for the activity.
 - m. All plant, equipment and machinery required to complete activity.
 - n. Manufacturer's literature/ Technical Data Sheets for all materials used including product description, composition, material and performance properties, installation and application procedures, use limitations and recommendations.
 - o. Plan for confining, collecting and disposing of waste materials as a result of removal operations, where applicable.
 - p. Works required to safeguard existing infrastructure and services.
 - q. A Steelworks Method Statement which describes the following as a minimum:
 - r. Method of fabrication and erection;
 - I. The physical location of manufacturing and fabrication;
 - II. Erection procedures which includes considerations for modularisation and construction sequencing, including a lifting and rigging plan;
 - III. Transportation;

4. All Method Statements are reviewed and accepted by *Project Manager* prior to commencing any work.
5. The *Contractor* submits a new Construction Work Method Statement, a month prior to commencing with any construction activities and after Contract Award, which covers all the aspects listed above, and any additional requirements or changes arising from negotiations or clarifications, for acceptance by the Project Manager. This Method Statement is to include interfaces with Others. This new method statement includes a sequential erection procedure which clearly shows detailed consideration for stability requirements of the structure (if applicable) at all stages during erection.

vi. Constructability Analysis

1. The *Contractor* uses the *Employer's* standard: 240-107981296, Constructability Assessment Guideline to perform the constructability analysis.
2. The *Contractor* has a structured process in place for constructability analysis, for the optimum use of construction knowledge and experience in planning, design, procurement, and field operations to achieve the *Employer's* objectives.
3. Qualified people with adequate skills in construction knowledge and experience are involved from the beginning of the project, to maximize the benefits of the constructability analysis. This process includes examining design options, where applicable, that minimize construction costs while maintaining standards of safety, security, quality, cost and schedule, and is initiated in the front end planning process. The Contractor considers various phases of the project and demolition activities, where applicable, that includes manpower plans, organization, construction equipment usage, material storage and handling and preparation of construction facilities.
4. The *Contractor* submits a Constructability Analysis Report based on the Method Statement to the *Project Manager*, for his review and acceptance. The (first) submission of the report is submitted as part of the tender documents and clearly indicates how the Tenderer takes into account interfaces with other contractors where applicable, together with the Site and time constraints and rigging studies. This report clearly illustrates how the construction would be completed within the allowable timeframes and highlights the risks of meeting this requirement. The *Contractor* is required to plan his activities to avoid the following interface risks and any other risks relevant to the works:
 - a. Interface issues arising from working in close proximity to Others;
 - b. Access to Site;
 - c. Material storage;
 - d. Delivery;
 - e. Other Works related risks;
5. This report clearly illustrates the construction sequencing and durations for the completion of the works within the contract period. The Contractor submits a risk assessment as part of the Work Method Statement, which is informed by the Constructability Analysis Report that advises on a proposed approach and methodology to mitigate risks described above and any other risks, which may impede successful execution of the works.
6. The second submission of the Constructability Analysis further elaborates on the first submission and is submitted one week after design completion of the works. This report is a revision on the first submission to take into account the Contractor's final design/proposal and includes consideration for modularised construction for faster construction durations.

vii. Construction Programme

1. As part of the Method Statement and as a tender returnable, the *Contractor* submits a Level 3 construction programme considering all the interfaces and time constraints.
2. This programme does not omit key activities. Timing of the activities is consistent with the Construction Work Method Statement.
3. The programme is to show that the *Contractor* has a clear understanding of the full scope of works, including the accompanying risks. The programme is to be logical and realistic.
4. The Contractor submits a Programme for all the phases of the *works* to the *Project Manager* for his acceptance.
5. This programme is accompanied with the following:

- a. A comprehensive narrative which describes the basis of the programme;
- b. A list of assumptions that the programme was based on;
6. The programme clearly indicates the following:
 - a. Activities of all the project work to be done by the *Contractor* and the other work covered by the contract that is being done by the sub-contractors;
 - b. Logical links/ sequence/ relationships that connect the various activities together (showing all hold points).
 - c. Master schedule is to show Links/logic, the CPM (Critical Path Method) technique is used for programme and planning. The critical path is clearly illustrated.
 - d. The works is completed within accepted durations that are in consistence with key dates provided in the Contract Data. Milestone dates in line with Key Date/Contract Data shown on the schedule.
 - e. Schedule Work Package Classifications (Deliverable, Engineering, Procurement, Manufacturing, Supply, Construction and Installation Work Packages)
 - f. The amount of shifts planned per day for each section of the works.
 - g. The way in which the *Contractor* plans to interface with Others. Interface points with Others are identified in the programme;
 - h. A comprehensive description of each activity, including the name and designation of the responsible person;
 - i. Full details of all terminal point release requirements;
 - j. Any erection or commissioning activities that may affect other maintenance and construction activities on Site;
 - k. Identifies when services are required for commissioning purposes;
 - l. Sufficient information with regard to the activity duration and a description to enable measurement of the progress of the activity within the required update period
 - m. Each description in the programme explains and represents the performance of the activity, including tangible deliverables or products;
 - n. Resources required to perform an activity for each activity that requires resource assignment;
 - o. Single source of responsibility or ownership per activity.

viii. DELIVERABLES

The *Contractor* provides the following document deliverables as part of the *works*.

6.4.9 Tender Phase

The tenderer submits the following as a minimum in the tender submission:

1. Method Statement (including Constructability Analysis, QCP and Risk Assessment) for the entire works clearly demonstrating understanding of and compliance with the full scope as detailed in the Scope of Works.
2. Relevant experience in installation and construction of similar projects. List of verifiable relevant references (minimum of 3 projects) must be provided for works completed within the last 5 years. References to include contact numbers and name of client, description of scope in the project and the cost of the project as a minimum.

3. CV's of the proposed key resources each having a minimum of 5 years' relevant experience (construction manager, site engineer/agent). Construction manager to be professionally registered with SACPCMP or similar professional body. Engineer/technician to be professional registered with the Engineer Council of South Africa. Copy of valid certificate to be provided. Organogram of site team to also be provided clearly indicating the roles that the resources will fulfil in the project.
4. CIDB Grading 7GB

6.4.10 Planning phase

1. A Level 3 schedule (schedule with defined activities) for the design scope clearly highlighting all activities involved, major milestones and provision.
2. Detailed Method Statement (including constructability analysis) for the execution of the works.
3. Risk Assessments.
4. Project specific safety file.
5. Project Quality Control Plan.

6.4.11 Pre-Construction/Installation

1. Detailed method statements for the construction of the works
2. Inspection and Test Plans (ITP's) indicating all intervention points
3. Quality Control Plans (QCP's)
4. Construction Programme
5. Project Specific Safety File (updated)
6. Any temporary works required as part of construction signed by a professionally registered Structural Engineer/Technician
7. Detailed Risk Assessments (updated)
8. Visual Assessment Report

6.4.12 Post Construction/Installation

1. QA returnables (monthly)
2. As-Built drawings
3. Safety File

7. Materials

The *Contractor* is required to supply all materials necessary for the repair and restoration of deteriorated wall areas as follows:

- a. The *Contractor* is required to supply the recommended wall repair products or similar approved.
- b. The *Contractor* is required to supply and install all temporary and access related works required.
- c. The *Contractor* is required to obtain approval from the *Employer* for the products and material intended to use for wall repair.

8. Construction methods

8.1 Surface preparation

Prior to any repairs, the *Contractor* is required to remove all dust, dirt, water and debris from the surface of the walls to be repaired.

The *Contractor* is required to supply and erect appropriate protection barriers/shrouding or other approved means as required on the chimney stacks so as to completely contain all loose or flying debris from the surface preparations. The means of containment shall be subject to the approval of the *Employer*.

The *Contractor* is required to remove all areas of unsound mortar and grout by chipping or other approved methods. The *Contractor* shall exercise caution and take care not to damage any existing wall and capping.

The *Contractor* ensures that all equipment that may be on the way of the repair is temporarily removed and will be reinstalled after the repairs have been completed.

8.2 Repair of bricks

- a. Ceiling of mortar between the cracks
- b. Grout replacement around the capping
- c. Application of a SikaWrap-230 C around the top rim wall periphery as per attached product data sheet (refer to figure 2 below). Three horizontal lines of 300mm width all around



Figure 2: Sika Wrap Application

[A detailed repair method should be provided by the contractor]

9. Method of measurement

Repairs will be measured on an area basis. The area to be paid for will be the total number of square metres of wall repaired in accordance with this specification as computed from measurements made by the Engineer.

10. Basis of payment

Repairs will be paid for at the Contract Unit Price per square meter for repairs measured as specified herein, which price will be payment in full for performing all operations herein described and all other items incidental to the Work. Refer to appendix B for a guideline for cost breakdown per item.

11. INFORMATION ISSUED BY THE EMPLOYER

The following drawings and standards are issued to the *Contractor* for information.

Document number	Document Title	Revision
240-107981296	Constructability Assessment Guideline	1

12. Appendix A: TYPICAL Defects

Diagonal brick wall cracks: Southern Chimney





13. Procurement

13.1 People

13.1.2 Minimum requirements of people employed on the Site

- a. The *Contractor* shall provide suitable and qualified resources and shall prioritize candidates around Dipaleseng Community through the local forum where they meet the requirements for the job. The *Contractor* shall not employ previously dismissed Eskom employees.
- b. Verifications of skills, qualifications and a police clearance will be conducted on all Contractor Employees.
- c. The Contractor provides competent personnel with the relevant post qualification experience for the implementation of all of the works. All CV's with relevant qualifications and detailed experience are submitted to the Project Manager within four weeks of the start date. All foreign qualifications to be certified by SAQA and proof of certification to be supplied. Foreign ID or passport holders also require a valid work permit to perform work.
- d. The Contractor appoints either a Contract Manager or a Project Manager who possesses documented competencies to manage the duties related to the NEC contract and project management. This person serves as the direct liaison for the Employer's Project Manager and also has the authority to make decisions and instruct all other Contractor's personnel, as and when required.
- e. All Contractor employees shall undergo police clearance verification before being inducted onsite.
- f. The Contractor shall adhere to minimum wage remuneration as per labour regulation
- g. Contractor employees shall be registered for UIF as per labour regulation

13.1.3 BBBEE and preferencing scheme

BBBEE requirements are specified in the Supplier Development Localisation and Industrialisation (SDL&I) target setting document provided. SD&L to comment

13.2 Subcontracting

13.3.1 Preferred subcontractors

Where subcontracting of certain activities is required, the *Contractor* shall notify the *Employer* and an agreement shall be obtained with the *Employer* to ensure compliance. Refer to the SDL&I Target Setting document.

13.3.2 Subcontract documentation, and assessment of subcontract tenders

- a. If the Contractor subcontracts work, he is responsible for providing the Works as if he had not subcontracted. This contract applies as if a Subcontractor's employees and equipment was the Contractor's.
- b. The Contractor supports local Small, Micro and Medium Enterprises (SMME) by purchasing equipment, tools and materials locally where such equipment, tools and materials are available.
- c. All Subcontractors need to be approved by the Project Manager before the Subcontractor may be allocated work by the Contractor or be brought to the Site.
- d. Subcontract documentation and assessment of subcontract tenders shall be done by the Contractor.
- e. The Contractor must inform the Project Manager when intending to subcontract some of the works from the contract Scope of Work.
- f. The Contractor may subcontract according to NEC contract or other types of contracts.
- g. The Contractor submits the proposed contract data for each Subcontractor for acceptance to the Project Manager.
- h. The Contractor only employs competent Subcontractors.
- i. The Contractor indicates on a list as shown below, the names of any Subcontractors (when known) whose services may be used to provide the works. The Contractor provides a short description of the work it is proposed to sub-contract to each, together with an approximate value of the work to be executed by each. Where the Subcontractor is required to do physical work on Site, the Contractor provides details of the experiences of the mentioned Subcontractor as well as a list of references involving work of a similar nature.
- j. Notwithstanding the inclusion of a Subcontractor name below, the Contractor obtains the written acceptance of the Project Manager prior to the employment of such Subcontractor.

Subcontractor	Description of work	Approximate value
1.		
2.		
3.		

13.2.3 Limitations on subcontracting

Where the *Contractor* encounters scenarios where specialised work is required, subcontracting of such services is to be obtained in agreement with the *Employer*. Refer to the SDL&I Target Setting document.

13.2.4 Attendance on subcontractors

- a. Subcontractors shall remain the responsibility of the main *Contractor*. They shall adhere to the Employers code of ethics and comply with all the Employers requirements.
- b. It is the Contractor's responsibility to ensure that the Subcontractor(s) completes and supplies a daily Site diary, which includes details such as the labour resources available, starting time, ending time, equipment and materials used, weather conditions, interruptions etc.
- c. The Contractor ensures that the diary is submitted by the Subcontractor to the Project Manager daily for checking, commenting and signing-off and a copy is supplied. If the daily diary is not signed off by each worker then a separate daily attendance register is supplied.

13.3 Plant and Materials

13.3.1 Quality

- a. The Contractor ensures that all equipment, tools and material that the Contractor / Subcontractor uses to execute the works, complies with the SABS and other stated standards.
- b. All plant and materials sourced and supplied for the installation are new and all are free from defects. Reconditioned/refurbished plant and/or materials are NOT regarded as new under any circumstances and may NOT be utilised.
- c. The Contractor does not use plant and materials, which are generally recognised as being unsuitable or otherwise unsuitable for the purpose for which they are intended.
- d. Only components of high reliability are utilised, with a proven operating history, to enable the plant to achieve the required reliability and availability. Plant and material design, engineering and manufacture is in accordance with the best practice applicable to high-grade products of the type to be furnished, to ensure the efficiency and reliability of the works and the strength and suitability of the various parts for the works.
- e. Plant and materials withstand ambient conditions and the variations of temperature arising under working conditions without distortion, deterioration or undue strains in any part.
- f. No repair of defective plant and materials may be permitted without the Project Manager's approval and any such repair, if approved, is carried out to the satisfaction of the Employer.

13.3.2 Plant & Materials provided "free issue" by the *Employer*

All plant and material shall be provided by the *Contractor*. Where the scaffolding is required, the *Employer* shall provide.

13.3.3 *Contractor's* procurement of Plant and Materials

- g) Absolutely no changes to the current plant configuration will be allowed unless authorised by the Employer.
- h) It is mandatory that plant, equipment and materials be procured in accordance with the specifications listed in the Works Information.
- i) Should any equipment not be available on the market due to obsolescence, the Contractor recommends a suitable alternative. All alternative equipment to be approved by the Employer before procurement.
- j) The Contractor only procures plant and materials as specified in the Works Information. Any change of specifications is notified in writing by the Project Manager as an instruction.
- k) The procurement schedule is clearly shown and integrated into the Contractor's accepted project programme ensuring delivery of equipment to site in advance to the installation activity
- l) All items procured and stored at the Contractor's premises or the Employer's premises are stored in accordance with the manufacturer's or material's specifications.
- m) The Contractor ensures that plant and materials procured carry a minimum of 52 weeks warranty or guarantee period due to defect or malfunction.
- n) Plant and materials used for the works are to bear no labelling other than the plant coding specified by the Employer.
- o) The Contractor procures and stores all materials as per the recommendations stipulated in the materials data sheet.

13.3.4 Spares and consumables

- a) The Contractor shall provide required spares and consumables that may be needed at or just after take over to ensure continuity.
- b) The Contractor shall provide consumables for all Contractor employees, ie. Gloves, dust masks, earplugs.

13.4 Tests and inspections before delivery

- a. The Project Manager reserves the right to appoint a representative or representatives to inspect all parts during manufacturing and testing and to be present at any of the tests specified in this *works*.
- b. The *Employer's* representative/s and/or third-party/independent inspection authority must have unhindered access to witnessing all manufacturing and testing processes at the manufacturing facility.
- c. Where holding points exist on the manufacturing QCP's, no manufacturing activity shall proceed if the preceding activity on the manufacturing QCP was not approved by both the *Contractor* and *Employer's* representatives.
- d. The *Employer* carries out quality inspections at his discretion and as per the pre-approved Quality Control Plan (QCP).
- e. Such tests as may be required by the *Project Manager* are carried out by the *Contractor* during or after manufacturing to prove compliance with the specification independently of any test which may have been carried out at the manufacturer's facility.
- f. The *Contractor* is not relieved of his responsibilities if the *Project Manager* and other *Employer* representatives choose to waive the witnessing of any manufacturing and testing processes.
- g. The *Contractor* provides a test certificate for each test required.
- h. The *Contractor* provides current calibration certificates for all equipment used during manufacturing and testing when required to do so by the *Project Manager*.
- i. The *Contractor* is responsible for quality assurance and control during manufacturing and testing. Any approval, check, certificate, consent, examination, inspection, instruction, notice, proposal, request, test, or similar act by the *Employer* (including the absence of disapproval) shall not relieve the *Contractor* from any responsibility under the *Contract*, including responsibility for errors, omissions, discrepancies and non-compliances.
- j. The *Contractor* takes note of and responds to any comments made by the *Employer* on the *Contractor's* manufacturing documents. However, the *Employer* is not bound to check the *Contractor's* manufacturing documents for any errors, omissions, ambiguities or discrepancies or compliance with the requirements of the Works Information. The *Employer's* receipt of, or review of, or comment on, the *Contractor's* manufacturing documents does not relieve the *Contractor* from responsibility for the *Contractor's* errors or omissions or departure from the requirements of the standard.
- k. The Contractor shall test, inspect and certify that the system is reliable and safe to use before takeover.
- l. The Contractor shall provide all test certificates of compliance (CoC).

13.5 Marking Plant and Materials outside the Working Areas

All equipment shall be properly marked for identification.

13.6 Contractor's Equipment (including temporary works).

- a. The *Contractor* shall use inspected and tested equipment, equipment compliance documents shall be made available on request by the *Employer*
- b. All temporary works shall be removed after completion

13.7 Cataloguing requirements by the Contractor

The Contractor shall provide all the information (specification) required by the Employer to catalogue the spares for this system.

14 Construction

14.1 Temporary works, Site services & construction constraints

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

The Contractor shall gain site entry once:

- a) The Medicals have been confirmed valid for all the Contractors Employees
- b) All the Contractors employees have completed the Site Inductions (Held on Mondays and Wednesdays)
- c) All the Contractors Employees provide a Security Clearance

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

Access to Site

The *Contractor* makes his/her own assessment of and allows in his/her rates for those access problems that may be encountered. No extra payment or claim of any kind is allowed on account of difficulties of access to the works, or for the requirement of working adjacent to or in the same area as others.

Access to site shall be in line with the Grootvlei Power Station's access procedure. The *Contractor* shall be required to make an application to enter site for the duration of the contract, including the warranty and defect period where applicable. A permit shall only be issued once the *Contractor* and his or her employees have attended the safety induction and has undergone medical checks.

All the assets must be declared and registered with security upon entering site. This includes portable assets such as laptops. The record must be kept on the OV18 form. No asset shall be removed from site if the OV18 form is not attached.

The *Contractor* shall have no claim against the *Employer* in respect of delay at the security main gate.

All *Contractor* permits shall be returned to Protective Services on completion of the works.

Equipment

Any equipment, or appliances, used by the *Contractor* conforms to the applicable OHS Act safety standards and is maintained in a safe and proper working condition. The *Employer* has the right to stop the *Contractor* use of any equipment which, in the opinion of *Employer*, does not conform to the foregoing.

Off-loading and material handling equipment is not available on site and if required, is to be provided by the *Contractor*.

Site Regulations

Note that the speed limit on the site is 40 km/h. The vehicle permit of any persons contravening any traffic act on site shall be cancelled.

The *Contractor* complies with the Grootvlei Site Regulations, a copy of which is available for perusal at the *Employer's* offices.

Any subject within the authority of the *Employer* may be addressed by a Site Regulation. Before work starts on site, an inaugural meeting is held with the *Contractor* to explain all requirements of the Site Regulations.

The *Contractor* is issued with a file of current Site Regulations on arrival. The file remains the property of the *Employer* and the *Contractor* is responsible for its maintenance and updating as revised regulations are issued by the *Employer*.

Permits

No work commences without the acceptance of the permit to work or LAR by the *Contractor*. The plant safety regulations course can be done at any Eskom Power Station but the practical course is Grootvlei specific.

Accommodation and Transportation

At his own cost the *Contractor* provides his/her own accommodation and transport for all his/her employees engaged in the execution of the works. This includes the needs of his/her sub-Contractor. No accommodation is available at Grootvlei Power Station.

Security

The *Contractor* provides security necessary for the protection of the works at all times until the completion of the whole of the works.

The *Contractor* is informed of the access procedures through Site Regulations and note that such procedures may change depending on the prevailing security situation.

All persons entering the Grootvlei site pass through the control points at the main access gate and are required to have temporary permits that are issued to *Contractor* staff on request. All persons submit ID documents with the application for temporary permits. If it is necessary to bring equipment onto site a list is submitted which is verified by security staff prior to equipment entering the security area.

If any *Contractor* staffs are transferred from Grootvlei or leave site, the person's permit is handed over to the Supervisor. The *Contractor* ensures that personnel leaving site are transported out of the security area and that the permit is returned.

No firearms, weapons, alcohol, illegal substances and cameras are permitted on site. Any person suspected of being under the influence of alcohol is tested and if proved positive, is refused entry to the security area.

No "private work" is carried out for or on behalf of any Eskom employee.

Safety

The *Contractor* implements a safety plan and maintains the safety system until the completion of the whole of the works. The plan, will as a minimum, contain PPE information, written safe working procedures, job specific risk assessments, safety meetings, etc. The plan will be to the *Employer's* satisfaction and will be accepted prior to the commencement of any work.

The *Contractor* will be subject to periodic audits by the *Employer* in order to ensure compliance with the plan. Any deviations will be corrected to the *Employer's* satisfaction.

The *Employer* has the right to stop the *Contractor* work activities which, in the opinion of *Employer*, is unsafe. The *Contractor* may only continue with work activities when all safety deficiencies have been corrected to the *Employer* satisfaction. The *Contractor* shall have no claim against the *Employer* in respect of delay due to the above.

Site	:	Grootvlei Power Station
Regional Authority	:	Dipaliseng Town Council, Mpumalanga Province
Nearest Towns	:	Balfour – 18km north east of power station Villiers – 30km south of power station Heidelberg – 40km north of power station There are informal settlements within a 10 km radius of the power station.
Infrastructure	:	Grootvlei Power Station is situated approximately 3km from the N3 highway and is connected to it by means of a tarred road. There is also a secondary tarred road connecting the site with the R51 and R53. Water is supplied to the adjoining township, and sewage is returned to the sewerage <i>Works</i> of the power station. The railway line from Balfour to Bethlehem passes the station. 400kV and 88kV power lines cross the existing road network in the area.
Latitude & longitude	:	26° 46' S & 28° 29' E
Landowner	:	The power station is situated on the farm Grootvlei Power Station, ERF 458 IR, Title deed number CCT50784/1983. Eskom is the landowner.
River catchment	:	Mid-Vaal
Regional Climate	:	Grootvlei Power Station is situated on the Highveld in the western part of Mpumalanga province on the escarpment, at an average height of 1551 m above sea level. The winters are generally dry and cold with regular frost and temperatures varying between -7°C and 23°C. The summers are mild with most of the rainfall occurring during this season. Temperatures vary between 12° & 32° C.
Wind direction	:	Data from the Heidelberg weather station shows that Grootvlei Power Station is sited in such a way that for most of the year (291 days) the wind direction is from the power station in a direction that is North West.
Rainfall	:	Based on information recorded at the Heidelberg weather station, the average annual rainfall for the Heidelberg area is approximately 691 mm. (Weather Bureau, Pretoria).

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

The Contractor records information of all those that enter the *Employers* site on each site. This information is to be presented to the *Employer* on the day of the site visit and as and when requested by the Employer..

Working hours at Grootvlei Power Station are as follows:

Monday – Thursday : 07:15 to 16:30
 Friday : 07:15 to 12:15
 Saturday, Sunday and Public Holidays : Off

14.1.4 Site services and facilities

The Contractor shall make provision for onsite power (At the ash dam) in the form of a generator shall a need arise for the execution of the works. Power for the site offices shall be provided by the Employer at a location less than 50m away from the established offices. Ablution facilities shall be availed by the Employer at a distance less than 50m from the established site.

14.1.5 Facilities provided by the Contractor

The contractor provides all facilities and equipment as quoted for in his site establishment for the successful and efficient execution of the works. The employer shall allocate a site for the Contractor to establish. Upon completion of the works, the Contractor shall de-establish site and remove all the facilities and equipment previously brought to site.

14.1.6 Survey control and setting out of the works

Refer to the technical specification for all benchmarks.

14.2 Completion, testing, commissioning and correction of Defects

14.2.1 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 except for the work listed below which may be done after the Completion Date but in any case before the dates stated. The *Project Manager* cannot certify Completion until all the work except that listed below has been done and is also free of Defects which would have, in his opinion, prevented the *Employer* from using the *works* and Others from doing their work.

	Item of work	To be completed by
	As built drawings of	Within days after Completion
	Performance testing of the <i>works</i> in use as specified in paragraph of this Works Information.	See performance testing requirements.

PART 4: SITE INFORMATION

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

PART 4: SITE INFORMATION

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