



NEC3 Professional Services Contract (PSC3)

**Contract between Eskom Holdings SOC Ltd
(Reg No. 2002/015527/30)**

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

**for Flue Stacks 1&2 Structural Inspections at Tutuka
Power Station**

Contents:	No of pages
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Part C3 Scope of Work: The Scope	

CONTRACT No. [Insert at award stage]

PART C1: AGREEMENTS & CONTRACT DATA

Document reference	Title	No of pages
C1.1	Form of Offer & Acceptance	
C1.2a	Contract Data provided by the <i>Employer</i>	
C1.2b	Contract Data provided by the <i>Consultant</i>	
C1.3	Securities proforma	

ESKOM HOLDINGS SOC Ltd
FLUE STACKS 1&2 STRUCTURAL INSPECTIONS AT TUTUKA POWER STATION

CONTRACT NO _____

CONTRACT

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PSC3 COVER PAGES

C1.1 Form of Offer & Acceptance

Offer

The Employer, identified in the Acceptance signature block, has solicited offers to enter into a contract for the procurement of:

Flue Stacks 1 &2 Structural Inspections at Tutuka Power Station

The tenderer, identified in the Offer signature block, has

<i>either</i>	examined the documents listed in the Tender Data and addenda thereto as listed in the Returnable Schedules, and by submitting this Offer has accepted the Conditions of Tender.
<i>or</i>	examined the draft contract as listed in the Acceptance section and agreed to provide this Offer.

By the representative of the tenderer, deemed to be duly authorised, signing this part of this Form of Offer and Acceptance the tenderer offers to perform all of the obligations and liabilities of the *Consultant* under the contract including compliance with all its terms and conditions according to their true intent and meaning for an amount to be determined in accordance with the *conditions of contract* identified in the Contract Data.

The offered total of the Prices exclusive of VAT is	R
Value Added Tax @ 15% is	R
The offered total of the Prices inclusive of VAT is	R
(in words)	

If Option E or G apply, for each offered total insert in brackets, "(Not Applicable – Cost reimbursable)"

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 *Consultant* 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 Date witness

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 Consultant 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: The Scope

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 and signed original copy of this document, including the Schedule of Deviations (if any).

Signature(s)

Name(s)

Capacity

**for the
Employer**

(Insert name and address of organisation)

Name &
signature of Date witness

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

Schedule of Deviations

Note:

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

No.	Subject	Details
1		
2		
3		
4		
5		
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 _____

BRUCE MOYO
 GENERAL MANAGER-TUTUKA POWER STATION

On behalf _____
(Insert name and address of organisation)

Of _____

ESKOM HOLDINGS SOC LIMITED
 TUTUKA POWER STATION
 BETHAL/STANDERTON ROAD
 STANDERTON

Name & signature of witness _____

Date _____

C1.2 PSC3 Contract Data

Part one - Data provided by the *Employer*

[Instructions to the contract compiler: (delete these two notes in the final draft of a contract)]

1. Please read the relevant clauses in the conditions of contract before you enter data. The number of the clause which requires the data is shown in the left hand column for each statement however other clauses may also use the same data.
2. The NEC3 PSC options are identified by shading in the left hand column. In the event that the option is not required select and delete the whole row.
3. Where the symbol “[●]” is used data is required to be inserted relevant to the clause and statement which requires it.]

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

Clause	Statement	Data
1	General	
	The <i>conditions of contract</i> are the core clauses and the clauses for main Option <div style="background-color: #cccccc; width: 100px; height: 20px; margin-bottom: 5px;"></div> dispute resolution Option and secondary Options <div style="background-color: #cccccc; width: 100%; height: 200px; margin-bottom: 5px;"></div> of the NEC3 Professional Services Contract (April 2013) ¹	A: Priced contract with activity schedule W1: Dispute resolution procedure X1: Price adjustment for inflation X2 Changes in the law X5: Sectional Completion X7: Delay damages X9: Transfer of rights X10 <i>Employer’s Agent</i> X11: Termination by the <i>Employer</i> X 18: Limitation of liability X20: Key Performance Indicators Z: <i>Additional conditions of contract</i>

10.1	The <i>Employer</i> is (Name):	Eskom Holdings SOC Ltd (reg no: 2002/015527/30), a state owned company incorporated in terms of the company laws of the Republic of South Africa
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Address	Registered office at Megawatt Park, Maxwell Drive, Sandton, Johannesburg
Tel No.	[•]
Fax No.	[•]
11.2(9) The <i>services</i> are	Inspection of Tutuka Power Station flue gas stacks 1 and 2 internally and externally and submit detailed report of the findings.
11.2(10) The following matters will be included in the Risk Register	
11.2(11) The Scope is in	Part 3: Scope of Work
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 (One) weeks
13.6 The <i>period for retention</i> is	52 weeks

2 The Parties' main responsibilities

25.2	The <i>Employer</i> provides access to the following persons, places and things	access to	access date
		1	Flue Stack 1 at Tutuka As per the agreed programme
		2	Flue Stack 2 at Tutuka As per the agreed programme

3 Time

31.2	The <i>starting date</i> is.	TBC	
11.2(3)	The <i>completion date</i> for the whole of the <i>services</i> is	TBC	
11.2(6)	The <i>key dates</i> and the <i>conditions</i> to be met are:	Condition to be met	key date
		1	Internal and external inspection of flue stack 1 As per agreed programme
		2	Internal and external inspection of flue stack 2 As per agreed programme
31.1	The <i>Consultant</i> is to submit a first programme for acceptance within	One week of the Contract Date.	
32.2	The <i>Consultant</i> submits revised programmes at intervals no longer than	One week.	

4 Quality

40.2	The quality policy statement and quality plan are provided within	One week of the Contract Date.
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42.2 The *defects date* is **52 weeks after Completion of the whole of the services.**

5 Payment

50.1 The *assessment interval* is **25th to 26th of each month**

50.3	The <i>expenses</i> stated by the <i>Employer</i> are	Item	Amount
		As per price List	As per price List

51.1 The period within which payments are made is **30 Days after Invoicing.**

51.2 The *currency of this contract* is the **South African Rand.**

51.5 The *interest rate* is **The publicly quoted prime rate of interest charged by Standard Bank of South Africa Limited at the time an amount payable in SA Rand was due,**

and

the LIBOR rate applicable at the time for amounts due in other currencies. LIBOR is the 6 month London Interbank Offered Rate quoted under the caption “Money Rates” in The Wall Street Journal for the applicable currency or if no rate is quoted for the currency in question then the rate for United States Dollars, and if no such rate appears in The Wall Street Journal then the rate as quoted by the Reuters Monitor Money Rates Service (or such service as may replace the Reuters Monitor Money Rates Service) on the due date for the payment in question, adjusted *mutatis mutandis* every 6 months thereafter and as certified, in the event of any dispute, by any manager employed in the foreign exchange department of The Standard Bank of South Africa Limited, whose appointment it shall not be necessary to prove

6 Compensation events **The compensation event will apply as per NEC 3 PSC conditions of contract.**

7 Rights to material **There is no reference to Contract Data in this section of the core clauses and terms in italics used in this section are identified elsewhere in this Contract Data.**

8 Indemnity, insurance and liability

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**.

81.1 The amounts of insurance and the periods for which the *Consultant* maintains insurance are

Event	Cover	Period
Liability for failure by the consultant to use the skill and care normally used by professionals providing services similar to the services.	30% of the contract value	During execution, completion of the whole of the services or earlier termination
death of or bodily injury to a person (not an employee of the Consultant) or loss of or damage to property arising from or in connection with the Consultant's Providing the Services.	Whatever the <i>Consultant</i> deems necessary for any occurrence or series of occurrences arising out of one event without limit to the number of claims.	See Notes to Consultants in Annexure A
death of or bodily injury to employees of the <i>Consultant</i> arising out of and in the course of their employment in connection with this contract	As prescribed by the Compensation for Occupational Injuries and Diseases Act No. 130 of 1993 and the <i>Consultant's</i> common law liability for people falling outside the scope of the Act with a limit of indemnity of not less than R500 000-00 (five hundred thousand) in respect of each claim, without limit to the number of claims	As <i>Consultant</i> deems necessary

82.1 The *Consultant's* total liability to the *Employer* for all matters arising under or in connection with this contract, other than the excluded matters, is limited to **The 15% of the contract value**

9 Termination **Termination will be referred to NEC 3 PSC conditions.**

10 Data for main Option clause

A Priced contract with activity schedule

21.3 The *Consultant* prepares forecasts of the total expenses at intervals of no longer than **4 weeks**

11 Data for Option W1

W1.1 The *Adjudicator* is **the person selected from the ICE-SA Division (or its successor body) of the South African Institution of Civil Engineering Panel of Adjudicators by the Party intending to refer a dispute to him. (see www.ice-sa.org.za). If the Parties do not agree on an Adjudicator the Adjudicator will be appointed by the Arbitration Foundation of Southern Africa (AFSA).**

Address **[•]**

Tel No. **[•]**

Fax No. **[•]**

e-mail **[•]**

W1.2(3) The *adjudicator nominating body* is: **the Chairman of the ICE-SA Division (or its successor body) of the South African Institution of Civil Engineering. (See www.ice-sa.org.za).**

W1.4(2) The *tribunal* is: **arbitration**

W1.4(5) The *arbitration procedure* is **the latest edition of Rules for the Conduct of Arbitrations published by The Association of Arbitrators (Southern Africa) or its successor body.**

12 Data for secondary Option clauses

X1 Price adjustment for inflation

X1 .1 The Index Is ;

The base date for indices is Month prior the closing date of this enquiry

proportion	linked to index for	Index prepared By
0.	[•]	[•]
0.	[•]	[•]
0.	[•]	[•]
0.	[•]	[•]
15	non-adjustable	
100		

X2 Changes in the law

X2.1 The law of the project is **The law of the Republic of South Africa which applies to the *Consultant's* Providing the Services**

X5 Sectional Completion

X5 & X7	Sectional Completion and delay damages used together		
X7.1	Delay damages for late Completion of each		
X5.1	<i>section of the services are:</i>	section	description
		1	Activities on Flue Stack 1
		2	Activities on Flue Stack 2
			1% per day to a maximum of 10% of the contract value
			1% per day to a maximum of 10% of the contract value
X7	Delay damages		
X7.1	Delay damages for late Completion of the whole of the <i>services</i> are	1% per day to a maximum of 10% of contract value	
X10	The <i>Employer's Agent</i>		
X10.1	The <i>Employer's Agent</i> is		
	Name:		
	Address		
	The authority of the <i>Employer's Agent</i> is	to carry out all the actions of the <i>Employer</i> in this contract	
X11	Termination by the <i>Employer</i>	Termination will apply As per NEC3 PSC clauses.	
X18	Limitation of liability		
X18.1	The <i>Consultant's</i> liability to the <i>Employer</i> for	R0.00 (Zero Rand)	

Z1 Cession delegation and assignment

- Z1.1 The *Consultant* does not cede, delegate or assign any of its rights or obligations to any person without the written consent of the *Employer*.
- Z1.2 Notwithstanding the above, the *Employer* may on written notice to the *Consultant* 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 *Consultant* constitutes a joint venture, consortium or other unincorporated grouping of two or more persons or organisations then these persons or organisations are deemed to be jointly and severally liable to the *Employer* for the performance of this contract.
- Z2.2 Unless already notified to the *Employer*, the persons or organisations notify the *Employer* within two weeks of the Contract Date of the key person who has the authority to bind the *Consultant* on their behalf.
- Z2.3 The *Consultant* does not alter the composition of the joint venture, consortium or other unincorporated grouping of two or more persons without the consent of the *Employer* having been given to the *Consultant* in writing.

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

- Z3.1 Where a change in the *Consultant's* legal status, ownership or any other change to his business composition or business dealings results in a change to the *Consultant's* B-BBEE status, the *Consultant* notifies the *Employer* within seven days of the change.
- Z3.2 The *Consultant* is required to submit an updated verification certificate and necessary supporting documentation confirming the change in his B-BBEE status to the *Employer* within thirty days of the notification or as otherwise instructed by the *Employer*.
- Z3.3 Where, as a result, the *Consultant's* B-BBEE status has decreased since the Contract Date the *Employer* may either re-negotiate this contract or alternatively, terminate the *Consultant's* obligation to Provide the Services.
- Z3.4 Failure by the *Consultant* 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 those stated in core clause 91. The payment on termination includes a deduction of the forecast of the additional cost to the *Employer* of completing the whole of the *services* in addition to the amounts due in terms of core clause 92.1.

Z4 Confidentiality

- Z4.1 The *Consultant* 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 *Consultant*, enters the public domain or to information which was already in the possession of the *Consultant* at the time of disclosure (evidenced by written records in existence at that time). Should the *Consultant* disclose information to Others in terms of clause 23.1, the *Consultant* ensures that the provisions of this clause are complied with by the recipient.
- Z4.2 If the *Consultant* is uncertain about whether any such information is confidential, it is to be regarded as such until notified otherwise by the *Employer*.

Z4.3 In the event that the *Consultant* is, at any time, required by law to disclose any such information which is required to be kept confidential, the *Consultant*, 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 *Consultant* 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 *Employer's* project works or any portion thereof, in the course of Providing the Services and after Completion, requires the prior written consent of the *Employer*. All rights in and to all such images vests exclusively in the *Employer*.

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, 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 Provision of a Tax Invoice. Add to core clause 51

Z6.1 The *Consultant* (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.

Z7 Notifying compensation events

Z7.1 Delete from the last sentence in core clause 61.3, "unless the *Employer* should have notified the event to the *Consultant* but did not".

Z8 *Employer's* limitation of liability

Z8.1 The *Employer's* liability to the *Consultant* for the *Consultant's* indirect or consequential loss is limited to R0.00 (zero Rand)

Z9 Termination: Add to core clause 90.1, at the second main bullet point, fourth sub-bullet point, after the words "against it":

Z9.1 or had a business rescue order granted against it.

Z10 Delay damages: Addition to secondary Option X7 Delay damages (if applicable in this contract)

Z10.1 If the *Consultant'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 *Consultant's* obligation to Provide the Services.

Z10.2 If the *Employer* terminates in terms of this clause, the procedures on termination are those stated in core clause 91. The payment on termination includes a deduction of the forecast of the additional cost to the *Employer* of completing the whole of the *services* in addition to the amounts due in terms of core clause 92.1.

Z11 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 *Consultant* or a third party, such party's employees, agents, or Subconsultants or Subconsultant'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 *Consultant*, or any member thereof in the case of a joint venture, or its employees, agents, or Subconsultants or the Subconsultant'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.

- Z11.1 A Committing Party may not take any Prohibited Action during the course of the procurement of this contract or in execution thereof.
- Z11.2 The *Employer* may terminate the *Consultant's* obligation to Provide the Services if a Committing Party has taken such Prohibited Action and the *Consultant* 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 *Consultant's* obligation to Provide the Services for this reason.
- Z11.3 If the *Employer* terminates the *Consultant'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.
- Z11.4 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 *Consultant* ensures that the Committing Party co-operates fully with an investigation.

Z13 Nuclear Liability

- Z13.1 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.
- Z13.2 The *Employer* is solely responsible for and indemnifies the *Consultant* or any other person against any and all liabilities which the *Consultant* 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 *Consultant* or any other person or the presence of the *Consultant* or that person or any property of the *Consultant* 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*.

Z13.3 Subject to clause Z13.4 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 *Consultant* or any other person, or the presence of the *Consultant* or that person or any property of the *Consultant* 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*.

Z13.4 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.

Z13.5 The protection afforded by the provisions hereof shall be in effect until the KNPS is decommissioned.

Z14 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.

Z14.1 The *Employer* ensures that the Ambient Air in the area where the *Consultant* 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.

- Z14.2 Upon written request by the *Consultant*, 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 *Consultant* may perform Parallel Measurements and related control measures at the *Consultant'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 Z14.1. Control measures conform to the requirements stipulated in the AAIA-approved asbestos work plan.
- Z14.3 The *Employer* manages asbestos and ACM according to the Standard.
- Z14.4 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.
- Z14.5 The *Consultant'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.
- Z14.6 The *Consultant* 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.
- Z14.7 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 *Consultant*

Clause	Statement	Data	
10.1	The <i>Consultant</i> is (Name): Address Tel No. Fax No.		
22.1	The <i>key people</i> are: 1 Name: Job: Responsibilities: Qualifications: Experience: 2 Name: Job Responsibilities: Qualifications: Experience:	CV's (and further <i>key persons</i> data including CVs) are appended to Tender Schedule entitled .	
Only if required			
11.2(3)	The <i>completion date</i> for the whole of the <i>services</i> is		
11.2(10)	The following matters will be included in the Risk Register		
11.2(13)	The <i>staff rates</i> are: Either complete here or cross refer to a schedule in Part C2.2	name/designation	rate
25.2	The <i>Employer</i> provides access to the following persons, places and things	access to	access date
		1	
		2	
		3	

31.1	The programme identified in the Contract Data is		
50.3	The <i>expenses</i> stated by the <i>Consultant</i> are	item	amount
A	Priced contract with activity schedule		
11.2(14)	The <i>activity schedule</i> is in		
11.2(18)	The tendered total of the Prices is	R (in figures) (in words), excluding VAT	

PART 2: PRICING DATA

NEC3 PSC 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

Option A is a lump sum form of contract where the work to be done is broken down into well defined activities each listed in the *activity schedule* and priced by the tendering consultant as a lump sum. (See clause 11.2(18)).

Only completed activities which are without Defects are assessed for payment at each assessment date; no part payment is made if the activity is not completed by the assessment date. (See clause 11.2(15)).

The *activity schedule* may change after the Contract Date as a result of compensation events. (See clause 11.2(14)).

2. Function of the Activity Schedule

The Activity Schedule is only a pricing document. Clause 53.1 in Option A states: "Information in the Activity Schedule is not Scope". Specifications and descriptions of the service or any constraints on how it is to be done are included in the Scope and per Clause 21.1, "The *Consultant* Provides the Services in accordance with the Scope" and therefore not in accordance with the Activity Schedule.

C2.2 Staff rates, expenses & the task schedule

Item	Description	Unit	Quantity	Rate	Price
1	Contractor P&G's				
1.1	Fixed Obligations				
1.1.1	Site Establishment	Lump Sum	1		
1.1.2	Safety File, Medicals, induction	Lump Sum	1		
1.1.3	Site De-establishment	Lump Sum	1		
1.1.4	Tools and Equipment	Lump Sum	1		
1.1.5	Other fixed charge obligations (Details to be provided)	Lump Sum	1		
1.2	Time Related Obligations				
1.2.1	Accommodation	Lump Sum	1		
1.2.2	Travelling	Lump Sum	1		
1.2.3	Office and Storage Shed	Lump Sum	1		
1.2.4	Ablution and Latrine Facilities	Lump Sum	1		
1.2.5	Other time related charge obligations (Details to be provided)	Lump Sum	1		
2	Inspection, Design and Documentation				
2.1	Project Management	Lump Sum	1		

2.2	Inspection and Testing of 6 Flue Ducts and 2 Wind shields as per the scope of works (15ENG GEN700)	Lump Sum	1		
2.3	Design	Lump Sum	1		
2.4	Documentation as per the scope of work (15ENG GEN700)	Lump Sum	1		
2.5	Maintenance Phylosophy as per scope of work (15ENG GEN700)	Lump Sum	1		
Project Total Excluding VAT					

C3.1: EMPLOYER'S SCOPE

Contents

1.1 1. Employers Scope

1.1 Executive overview

The *Consultant* shall appoint an experienced professional civil engineer or civil technologist (ECSA Pr Eng / Pr Tech registered) specialising in reinforced concrete structures to perform detailed inspections, investigations and full structural assessment and design works where necessary, development of contract documentation inclusive for repair and maintenance methodologies, for the two windshield chimney structures and six flue ducts at Tutuka Power Station all in order to ensure the safe use of the windshield chimneys and flue ducts. All inspections and investigations shall be performed in accordance with: 240-99527377, *Inspection Manual for Civil Works at Eskom's Power Stations* for chimneys.

The *Consultant* shall refer to: 15ENG GEN-700 *Scope of Works for Tutuka Flue Stack Structural Inspections* for details of all the works required.

The chimney and flue ducts structural elements in its entirety shall be inspected in detail and subjected to full detailed structural assessments. Structural elements include of the chimney and flue ducts include but are not limited to:-

- Concrete windshield internal and external,
- Brick flues or lining internal and external,
- Concrete support slabs,
- Bearing pads,
- Lightning protection and other fixtures at the chimney top,
- Waterproofing at the top slab,
- Chimney lift structure,
- Steel staircase,
- Thermal insulation,
- Flue insulation,
- Condition and visibility of windshield paint.

The *Consultant* shall provide all temporary works, access, plant, materials, equipment and tools required to perform all inspections and investigations necessary. The *Consultant* shall inform the *Employer* in advance of all access limitations and obstructions preventing execution of the services. The *Employer* is aware that access to inspect the flue ducts and brick lining is limited and will only be provided during outage of specific Unit.

All civil and structural work is carried out by a professional engineer or technologist, registered with the Engineering Council of South Africa (ECSA). The *Consultant* shall provide a method statement to the *Employer* for review and acceptance prior to the commencement of any works by the *Consultant*. The method statement includes the following as a minimum:-

- a) The detailed investigation approach, methodology and sequencing of works including a description of all investigative works necessary, all types of testing required, and all tools, equipment, materials, temporary works necessary to perform the works;
- b) Detailed description of any speculated structural assessments, analyses and design deemed necessary which is to be confirmed as required following completion of point (a) above.

The *Consultant* takes note that the *Employer* also performed a conditional visual inspection in May 2019 and has identified several defects at the chimneys. These were consolidated into a report together with photographic evidence and which forms the starting point of the *Consultant's services*: 360-TUT-ADD-B-D00180-8, *Tutuka Power Station, Structures and Buildings Visual Inspection Report* **Error! Reference source not found.**

The Technical Specification: 360-TUT-AABB-D00139-83, *Tutuka Power Station, Technical Specification for Remedial Works on Existing Infrastructure* also developed by the *Employer*, for the remedying of certain identified defects is also utilised by the *Consultant* as a starting point in developing the Works Information for repair works (See PHASE C)

The reports provided by the *Employer* serve only as a guide to the *Consultant* and are provided for information purposes to assist the *Consultant* in execution of the services.

The creation, issuing and control of all drawings is in accordance with: 240-86973501, Engineering Drawing Standard– Common Requirements.

Drawings issued to the *Employer* will be a minimum of 2 hard copies signed by the responsible professional registered structural engineer or technologist and in electronic format. The *Consultant* submits electronic drawings that can be opened with or compatible to Micro Station (DGN) format, and scanned drawings in pdf format. Drawings issued to *Employer* may not be “Right Protected” or encrypted.

The *Consultant* takes note that review and acceptance of any document or drawing by the *Employer* in no way relieves the *Consultant* of his liability for the works. He remains liable for all works conducted as per this Contract.

The *Employer* owns the *Consultant's* right over material prepared for this Contract by the *Consultant*. The *Consultant* shall submit their assignments, drawings and or reports and, if applicable, interim assignments or progress reports, in accordance with the dates specified in the Contract.

All original documents furnished/supplied by *Consultant* to the *Employer* and all documents, plans, computer programmes and other data prepared by the *Consultant* in connection with this Contract shall be lodged with the *Employer* and shall become the property of Eskom.

The copyright and Intellectual Property in all documents prepared by the *Consultant* in terms of this Agreement and the Letters of Appointment shall be vested in Eskom, which shall have the right to adapt them for other projects or otherwise apply or dispose of at its sole discretion.

The *Consultant* provides documents which transfer these rights to the *Employer*. The *Employer* has the right to reuse that information without copyright limitations or without requiring authorisation from the *Consultant* for the reuse thereof.

1.2 Interpretation and terminology

The following abbreviations are used in this Scope:

Abbreviation	Description
AKZ	Plant labelling code
DT	Destructive Testing
ECSA	Engineering Council of South Africa
ISO	International Standards Organisation
ITP	Inspection and Testing Program
NDT	Non-destructive Testing
NOx	Nitrogen Oxides
Pr. Eng	Professional Engineer
Pr. Tech	Professional Technologist
QCP	Quality Control Plan
SANS	South African National Standards
SOx	Sulphur Oxides

2 Specification and description of the services

2.1 Scope overview

- *Consultant* to perform detailed assessment and visual inspection.
- Identify and quantify defects such as spalled areas etc,
- Identify and quantify area of structural distress where cracks are larger than 0.4mm and observed large deflection,
- Determine depth of carbonation for all structural surfaces exposed to the weather (Phenolphthalein test)
- Determine the life of passivating layer,
- Produce a detailed report with a photographic record and repair methodologies that must be implemented,
- A quality control plan must be supplied by the *Consultant* for *Employer's* approval,
- Perform visual inspections assessing for signs of structural distress and degradation on each chimney (internal and external) and windshield,
- Concrete cores will be taken from each windshield over the height of the windshield. A reinforcement detector will be used to determine the position of the reinforcement in order to prevent coring through reinforcement. These cores will be chemically tested in an accredited laboratory to assess the sulphur content, carbonation and chloride content in the concrete due to the down-wash of the flue gases. The areas where cores were removed must be repaired by the *Consultant*. Sampling will be in accordance SANS 5865 Method to be detailed in the method statement.
- Structural measurements and non-destructive testing will be performed on the concrete structure (windshields, slabs etc) to assess the life expectancy of the structures. Necessary remedial actions will then be recommended to ensure the integrity of the structures over the remaining life of the Power Station (2050). This will consist of measurements and tests such as concrete surface hardness, depth of concrete cover to reinforcement, sulphur and chlorides content, and carbonation depths. Testing will be in accordance with the relevant SANS 5863 Method to be detailed in the method statement.
- An electromagnetic cover-meter will be used to determine the concrete cover depths to the reinforcement.
- Concrete surface hardness and compressive strength will be tested by using a Schmidt impact hammer.
- An important parameter indicating the potential for corrosion and consequent deterioration of reinforced concrete is the depth of carbonation. The depth of carbonation will be measured on the concrete structures at various locations using the phenolphthalein indicator test.
- An internal inspection of the brick flues with the assistance of a specialist *Contractor*, which will provide the platform or cage and winches. This specialist *Contractor* must be provided by the *Consultant*.
- Measurement of flue expansion gaps to assess whether remaining gaps are greater than 30mm.
- The windshield on the outer face will be inspected by means of a theodolite or similar equipment to determine and graphically plot any defects visible such as cracks, honeycombing, degradation, etc

- Inspect the acid resistant protective cover at the top 25m of the windshield for any degradation (provide paint specification).
- Compile a structural assessment report based on the non-destructive test results and inspection that includes images, remedial actions/recommendations (including method of repair), maintenance strategy, bill of quantities with price estimates, life expectancy. The report must be as per 240-99527377.
- The *Consultant* must compile a scope of work for repair (NEC). The *Consultant* will remain responsible for ensuring the scope is executed as per design/specification.
- *Consultant* to supply as built drawings:
 - These drawings will be overlaid with a grid system to identify location of defects.
 - The *Consultant* will transfer and assign copyright to the *Employer* allowing the *Employer* to reproduce and distribute the drawings as they so wish.
 - The owner of the copyright must be displayed on the drawing (s)

The *Consultant* will inspect and assess the following elements in the chimneys:

- Windshield-internal and external (including paint condition and visibility),
- Brick Flues-Internal and gaps,
- Steel inlet duct into the chimney,
- Ash build up inside the chimney,
- Intermediate support slab-spaced approximately 25m apart,
- Steel stairway,
- Insulation to the Brick Flues,
- Lift structure and connections,
- Lightning Conductor,
- Flue insulation,
- Acid resistant protective cover on the top 25m of the windshield.

2.1.1 Obligation

The *Consultant* is responsible for ensuring the inspection and subsequent report is a true reflection of the status of the structure. The *Consultant* is responsible for supplying a detailed repair strategy including bill of quantities for any remedial actions that are required to ensure structural integrity is maintained. The *Consultant* will remain responsible for ensuring the repair scope is executed as per design/specification.

2.2 Detailed Scope of Works

The *Consultant* shall refer to: 15ENG GEN-700 *Scope of Works for Tutuka Flue Stack Structural Inspections* for details of all the works required.

2.1.2 Phase A: Detailed Visual Inspections and Assessments

The detailed visual inspections of the chimneys must be done during the outage of the flue duct or arranged and agreed with *Employer* and includes the following key focus inspection points, as a minimum:-

- a) Inspect for major geometrical imperfections of the windshell and flue ducts;
- b) Inspect for signs of cracks in the windshell;
- c) Inspect for water seeping through the windshell;
- d) Inspect for any signs of localised windshell spalling;
- e) Inspect the annular foundations at windshell for visible signs of differential settlement;

- f) Inspect the nature and extent of chemical attack on the brick material and on the mortar
- g) Inspect the condition of the chimney lift support structure;
- h) Inspect for cracks in the connections of bracing components; and
- i) Inspect safety of walkways, handrails, cat ladder etc

During the detailed inspections and investigations, the *Consultant* is expected to perform the necessary tests on the concrete elements in order to ensure the safe use of the smoke stacks. The assessments and test will include but not limited to:

- a) Readings of surface hardness (Schmidt hammer);
- b) Depth of carbonation, tested at critical / key points;
- c) Concrete strength by taking core samples;
- d) Concrete cover, tested at critical/ key points;
- e) Potential half-cell method for corrosion testing;
- f) Sulphate/ Chloride/Nitrate attack;
- g) Environmental factors, as detailed below;
 - Analysis of concrete, brick and mortar samples (chemical analysis);
- h) Windshield and flue ducts Life expectancy under normal and abnormal conditions; and
- i) 3D laser scan survey and model to measure the deformations and possible settlement and loading patterns of the as-built windshell structures and report on the deformations found
Excessive deformations will be highlighted for further investigation.

The *Consultant* shall inspect for signs of structural distress and / or indication of deterioration. Photographic records shall be compiled to assist and document findings of inspections and investigations executed by the *Consultant*. Observations shall be referenced to the photographs The *Consultant* to submit the findings report for *Employer's* approval.

The *Consultant* shall make provision for secondment of one Tutuka Civil Engineer to the designer's offices to complete designs as part of their professional development and skills transfer.

2.1.3 PHASE B: Design Works

Structural assessment and design works comprises of the following:

- a) Life expectancy of the windshield and flue ducts under abnormal conditions:

The *Consultant* performs a design analysis which includes calculation of loading and the applicable design checks to ensure the safety and structural integrity of the windshield and flue ducts and in order to determine the residual life of the chimney. The structural analyses includes but not limited to:-

- Linear-elastic analysis;
- Failure analysis for cracked structures using finite element analysis technique.

Structural assessment analyses and designs (where required) for repair of the defects identified based on the root cause, in order to prevent recurrence of the defects. All designs are carried out in accordance with the *Employer's* design standard: 240-56364545, *Structural Design and Engineering* and 240-144332407, *Guideline for Eskom Power Stations Concrete Remedial Work*.

The *Consultant* shall make provision for secondment of one Tutuka Civil Engineer to the designer's offices to complete designs as part of their professional development and skills transfer.

2.1.4 PHASE C: Development of Contract Documentation

Development of a comprehensive Works Information compiled in accordance with the NEC 3 form of contract for the repair works to be constructed by a *Contractor*, including all supporting documentation i.e. reports, construction drawings, bill of quantities, technical specifications and procedures. The SANS 2001 series of standardised specifications are used with necessary amendments. The Works Information is submitted to the *Employer* for review and acceptance. The construction of all repair work will be done by others in accordance with the accepted Works Information.

The *Consultant* will compile a detailed bill of quantities with price estimates.

2.2.4. PHASE D: Technical Supervision

The technical supervision (As per construction regulations) should be priced separately and not form part of scope of work in this *Contract*, as the execution of such works is dependent on when the *Employer* appoint others to conduct the repair works.

Technical supervision of the *works* which includes the following tasks as a minimum:

- a) Technical quality assurance during execution to ensure that such is executed as per the approved scope of work, technical specifications and procedures;
- b) Reviewing, witnessing and approving (by signature) intervention points captured in the *Contractor's* Quality Control Plan, where applicable to Engineering;
- c) Raising Notice of Defects/ Non-Conformance Reports, where work performed by the *Contractor* is not in compliance with the approved scope of work, technical specifications and procedures;
- d) Review and acceptance by signature of *Contractor's* method statements, rigging studies (where applicable) construction data books and other related documents developed by the *Contractor*;
- e) Review of *Contractor's* design calculations where rigging is from existing infrastructure;
- f) Responding to technical queries and clarifications from the *Contractor*;

2.1.5 PHASE E: Civil Maintenance Philosophy for Smoke Stacks

The *Consultant* to compile and submit customised maintenance and inspection strategy for the *Employer's* chimney and flue stacks. The maintenance and inspection strategy include but not limited to the inspection and maintenance tasks, frequency duration, skills, and machine/equipment required for implementing maintenance on chimney structure until the end of Tutuka lifespan i.e. 2050

2.3 Deliverables

2.1.6 Phase A: Preparation

- a) The *Consultant must* produce a detailed report indicating all findings with photographic evidence from the investigative works, for review and acceptance by the *Employer*. The report also indicates all necessary structural assessments and design works to be conducted in PHASE B. The report is signed by a professional engineer or technologist registered with ECSA and includes the following as a minimum:
 - The detailed investigation approach;
 - Results of visual inspections;
 - Description of all testing conducted, raw data and test results;
 - Survey data;
 - Measurements and photos taken;
 - Drawings / sketches etc;
 - A detailed description of all structural assessments, analyses and designs deemed necessary together with design criteria and design philosophy to be followed;
 - Skills transfer.

2.1.7 Stage 2 Concept

- b) The report produced in PHASE A is revised to include the results from all structural assessments, inspections, analyses and design, for review and acceptance by the *Employer*. The report is signed by a professional engineer or technologist registered with ECSA and includes the following as a minimum:
 - Structural analysis models including inputs and outputs;
 - Detailed design calculations;
 - All assumptions made;
 - Identified risks and mitigation/corrective measures

- Detailed findings and recommendations/ remedial work required;

2.1.8 2.3.3. Stage 3: Design development

Upon acceptance of the detailed report by the *Employer*, the *Consultant* submits a comprehensive Works Information for all repair works, compiled in accordance with the NEC3 form of contract complete with all supporting documentation i.e. reports, technical specifications, construction drawings, procedures and bill of quantities. The SANS 2001 series of standardised specifications are used with necessary amendments. The Works Information is submitted to the *Employer* for review and acceptance.

2.1.9 2.3.4. Stage 4: Production information

The *Consultant* to submit the estimated price to perform the quality control and assurance during the execution of the works. The quotation or estimated price separately and it shall not form the part of scope of work in this *Contract*, as the execution of such works is dependent on when the *Employer* appoints the *Contractor* to conduct the repair works.

2.1.10 2.3.5. Stage 5: Manufacture, Installation and Construction Information:

The *Consultant* submits customised maintenance and inspection strategy for the *Employer's* chimney and flue stacks for the *Employers* approval.

3.1 Management meetings

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

Title and purpose	Approximate time & interval	Location	Attendance by:
Project Kick-Off Meeting	Prior to the commencement of any construction activities or manufacturing activities	Projects Boardroom	<i>Project Team Members, Contractor and Others</i>
Milestones progress feedback	Weekly on as and when required	Projects Boardroom	<i>Project Team Members, Contractor and Others</i>
Contractor's Safety Meeting	Monthly from 09H00 to 10H30	Production Boardroom	<i>Project Leader and the Contractor's safety representatives</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.

3.2 Consultant's key persons

As per the *Consultant's* organogram

3.3 Provision of bonds and guarantees

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

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

3.4 Documentation control and retention

3.4.1 Identification and communication

The *Consultant* and Tutuka configuration management shall be responsible for the following during the report review:

- Study the report, review and give recommendations

3.1.1 Document Management

All documents supplied by the *Consultant* shall be subject to Eskom's approval. The language of all documentation shall be in English. The *Consultant* shall include the *Employer's* drawing number in the drawing title block. This requirement only applies to design drawings developed by the *Consultant* and his Subcontractors. Drawing numbers will be assigned by the *Employer* as drawings are developed.

3.1.1.1 Document Identification

The *Consultant* is required to submit the Vendor Document Submission Schedule (VDSS) as per agreed dates to the delegated Eskom Representative. Eskom will pre-allocate document numbers on the VDSS and send back to the *Consultant* through the delegated Eskom Representative. The VDSS is revisable and changes must be discussed and agreed upon by all parties. Changes in the VDSS can be additional documentation to be submitted, changes in submission dates or corrections in documentation descriptions, document numbers, etc. The *Consultant's* VDSS shall indicate the format of documents to be submitted.

3.5 Invoicing and payment

The *Consultant* shall address the tax invoice to Eskom and include on it the following information:

The *Contractor* includes the following information on each tax invoice:

- Name and address of the *Contractor*
- The contract number and title;
- *Contractor's* VAT registration number;
- The *Employer's* VAT registration number **4740101508**;
- The total Price for Work Done to Date which the *Contractor* has completed;
- Other amounts to be paid to the *Contractor*;
- Less amounts to be paid by or retained from the *Contractor*;
- The change in the amount due since the previous payment being the invoiced amount - excluding VAT, the VAT and including VAT;
- (add other as required)

The *Contractor* attaches the detail assessment of the amount due to each tax invoice showing the Price for Work Done to Date for each item in the Price List for work which he has completed.

To enable payment, the Contractor must ensure to conform to the following:

- An official 4500..... Order Number is available BEFORE commencing of work.
- An assessment is jointly completed by the Project Manager / Employer's Representative and the Contractor and that they are in agreement on at least the following:
 - Completed scope
 - Completed quantity
 - Value of work completed

Preparation of an invoice in accordance with the assessment and deliver it directly to the Accounts Payable Department at the Commercial Building, Tutuka Power Station. A copy of the invoice may be forwarded to the end-user.

Address where invoices are to be forwarded

The Financial Manager
Att: APS (Accounts Payable Section)
Eskom Holdings Limited
Tutuka Power Station
Private Bag X2016
STANDERTON
2430

3.6 Inclusions in the programme

Programme detailing the duration of each activity from the day the order is placed. Any deviations should be noted.

- List of any special equipment required to execute the work, including equipment calibration certificate if necessary
- A document of the Consultants QCPs
- An organogram for the core crew, in particular the names and qualifications of the supervisors

3.7 Quality management

3.7.1 System requirements

- The Service Provider must conform to Quality Management System-ISO 9001:2015 requirements
- The Service Provider must fully conform to the requirement of the Supplier Contract Quality Requirement Specification (QM-58), standards, procedures and Eskom policies
- The Employer reserves the right to evaluate the Consultant's and its subcontractors' Quality Management System documentation. The Employer or its representatives also reserve the right to carry out appraisals and quality audits of the Consultant's and its subcontractors' Quality Management Systems if applicable, at any time before and during the period of the contract, to verify compliance with quality management system and contract requirements.
- List of any special equipment required to execute the work, including equipment calibration certificate if necessary
- Service provider to submit quality requirements as per category 4
- The Service Provider to ensure after completion of the activity (Inspections) all documented information to be submitted to the client

1. The *Consultant* and its subcontractors must have a Quality Management System that complies with the applicable requirements.

2. The requirements of the Code of Practice for Quality Management System ISO 9001 2008 as applicable to this scope of work are included as requirements of this specification.
3. The *Consultant* will be responsible for the complete quality assurance requirements to be imposed on his sub-contractors and suppliers of materials, in terms of ISO 9001 2008 and QM -58.
4. The *Consultant* will comply in full with the above *Employer's* quality assurance requirements and any amendments thereto which the *Employer* considers necessary or expedient during the contract.

The *Consultant* shall develop and implement a system for collation or quality verification records, including change management records, Inspection Test Plans/Quality Control Plans (QCP), Manufacturing, Construction and Commissioning Record Books (Data Books).

3.7.2 Information in the quality plan

1. The *Consultant* will exercise strict and adequate quality control during all phases of the work.
2. The *Consultant* will prepare suitable quality control plans (QCP's) and Inspection and Test Plans (ITP's) for all work carried out.
3. The *Employer*, the Inspection Authority, the *Employer* QC Representative and the *Consultant* must review these QCP's/ITP's jointly and the actual scope of quality control and inspection required for the Contract agreed upon.
4. The QCP's/ITP's must be subject to the *Employer's* approval and must indicate all inspection and test points, the methods and procedures to be used and the acceptance criteria to be applied.

The *Consultant* is required to notify the *Employer* 24 hours in advance of witness and hold intervention points

3.8 The Parties use of material provided by the *Consultant*

3.8.1 *Employer's* purpose for the material

The objective of the project is for the Power Station to receive a comprehensive report detail the health of the structures, the remedial actions (maintenance) required and the current life expectancy of the structures. The *Consultant* submits customised maintenance and inspection strategy for the *Employer's* chimney and flue stacks for the *Employers* approval

3.8.2 Transfer of rights if Option X 9 applies

- *Consultant* to supply as detailed report of inspection done and work to be done:
 - These drawings will be overlaid with a grid system to identify location of defects.
 - The *Consultant* will transfer and assign copyright to the *Employer* allowing the *Employer* to reproduce and distribute the drawings as they so wish.
 - The owner of the copyright must be displayed on the drawing (s)

3.9 Health and safety

- a) The *Contractor* must ensure that all his personnel attend a Health and Safety Induction Course prior to starting with the *works*. A one- (1) hour course will be provided by the *Employer* and will be valid for the duration of one- (1) year.
- b) The *Contractor* shall comply with the guidelines set out in the Contractor's Safety Manual SAS 0013. The sheet on the first page of the Safety Manual must be completed and signed by the *Contractor* before taking possession of the *works*. This sheet will be valid

for the duration of the *works*. The Safety Manual must be signed at the Safety Risk Department.

- c) Safety Risk Management has the right and authority to visit and inspect the *Contractor's* workplace or site establishment to ensure that tools, machinery and equipment comply with the minimum safety requirements.
- d) The *Project Manager/ Employer's Representative/ Employer's Agent* shall be entitled to instruct the *Contractor* to stop work, without penalty to the *Employer*, where the *Contractor's* personnel fail to conform to safety standards or contravene health and safety regulations. The *Project Manager/ Employer's Representative/ Employer's Agent* is entitled to cause the *Contractor* to discipline *his/her* employees and to submit disciplinary action and submit a report to the *Project Manager/ Employer's Representative/ Employer's Agent*. The *Contractor* shall implement additional health and safety precautions where necessary.

The following Health & Safety requirements should be complied with:

- i) The *Contractor's* proof of registration with the Compensation Commissioner and assessment of payment should be verified.
- ii) The *Contractor* to demonstrate that all of *his/her* employees have been made aware and understand the risks and hazards associated with the type of work or activity to be carried out.
- iii) The *Contractor* to demonstrate that *he/she* is capable of providing the *Employer* with proof of free issue of adequate Personal Protective Equipment (P.P.E.) to be used by *his/her* employees (preferably SABS approved).
- iv) The *Contractor* to receive Safety Risk Management Manual for Contractors (Ref: 30/05-PA*003) and to complete all relevant forms (i.e. pages 25 to 32.)

NB: All forms to be completed and submitted to SRM before the commencement of work on site.

- v) All the *Contractor's* employees to receive a formal Safety Induction Training from Safety Risk Management before commencement of work on site.

Barricading / Screens and Scaffolding:

The *Contractor* shall provide and install barricades and warning devices to ensure that equipment and persons are not exposed to danger or to prevent access to dangerous areas.

The *Employer* will supply scaffolding. Arrangements of such must be made at least one- (1) week in advance by the *Contractor*. (Tampering of any approved scaffold is not allowed for any adjustments – The *Project Manager/ Employer's Representative/ Employer's Agent* should be notified for any adjustments.)

Asbestos:

a) All stripping of asbestos material shall be undertaken strictly in accordance with the *Employer's* Procedure OVP76 HSPHRN 00 00 5 and other relevant standards and updates, with special reference to the asbestos regulations according to the Occupational Health and Safety Act number 85 of 1993.

b) The *Project Manager/Employer's Representative* shall advise the *Contractor* whether areas that are to be stripped of lagging have been identified as containing asbestos. If the *Contractor*

is not sure whether lagging contains asbestos, he is to notify Risk Management who will identify whether the lagging contains asbestos.

c) The *Contractor* shall be obliged to ascertain from the *Project Manager / Employer's Representative* in advance whether areas required to be stripped are non-asbestos. Any *Contractor*, other than the *Contractor* appointed to remove asbestos shall strip no lagging material containing asbestos fibres.

d) The *Contractor* appointed to remove asbestos, may not begin removal without first obtaining the necessary permission from the Inspector of Labour and Risk Management.

3.10 Procurement

3.11. BBBEE and preferencing scheme

- As per clause Z3 within contract data.

3.12. Other constraints

N/A

3.12.1. Preferred subconsultants

N/A

3.12.2. Subcontract documentation, and assessment of subcontract tenders

N/A

3.12.3. Limitations on subcontracting

N/A

3.12.4. Attendance on Subconsultants

N/A

3.12.5. Working on the Employer's property

3.12.5.1 Employer's entry and security control, permits, and site regulations

- a) The *Contractor* applies for a photo permit (if on site for longer than two- (2) months) at the Security gate, prior to the *starting date*.
- b) All *Contractor's* personnel will be issued with a temporary access permit if not on site for at least two- (2) months which will contain the following information:
 - Name
 - ID Number
 - Company
 - Validity date
- c) In order to assist Protective Services with the issuing of permits and the identification of personnel on site, the *Contractor* is to supply a list of all personnel that *he/she* intends using on site, at least 24-hours prior to entry of the Security Area. This list must be delivered to Protective Services, or can be faxed to (017) 749-9104. The list, identified with the *Contractor's* name, is to contain the following information:
 - Employee name
 - Employee ID Number
 - *Employer's Project Manager/ Project Manager/ Employer's Representative/ Employer's Agent/ Employer's Agent* signature
 - Copy of the first page of the ID book of every employee of the *Contractor*.

- d) The list of details has to be completed on the special form attached to the *Contractor's Safety Manual*.
- e) The *Contractor* personnel will be required to be in possession of their *Contractor's* permit at all times.
- f) All *Contractors'* permits must be submitted to Protective Services when the relevant personnel leave the site after Completion of the *works*.
- g) Lost permits will be paid for by the *Contractor* to Protective Services at a cost of R50, 00 per lost permit.
- h) The *Contractor's* visitors and all personnel shall conform at all times, to the security arrangements in force at the time. Application forms for visitors must be filled in by the *Contractor's* Site Manager and approved by the *Project Manager/ Employer's Representative/ Employer's Agent*, one- (1) day before the visit and submitted to the *Employer's* Protective Services office. Visitors will not be allowed on site if the necessary forms are not in the possession of security staff.
- i) The Chief of Protective Services may with valid cause remove any of the *Contractor's* personnel from the site, either temporarily or permanently. He may deny access to the site to any person, whom, in the opinion of the said Chief of Protective Services, constitutes a security risk.
- j) No unauthorised vehicles will be allowed on site. Only *Contractor's* vehicles with displayed contract vehicle permit disks will be allowed on site. Contractor Vehicle Permit Applications should be directed to the *Project Manager/ Employer's Representative/ Employer's Agent*.
- k) The *Contractor* will be restricted to the working areas associated with his place of work. The *Contractor* is forbidden to enter any other areas, and must ensure that his employees abide by these regulations.
- l) Parking inside the *Power Station* building is strictly forbidden, except for loading purposes.
- m) No recruiting of casual labour may be done on the *Employer's* premises, including the area outside the Tutuka Power Station security gate.
- n) The *Contractor's* employees and Equipment are subject to being searched on the entering or leaving the security area of the *Power Station*. Searching is done on a 'spot check' basis. The *Contractor* ensures that a detailed equipment and tool list for each person is available on arriving at site. Failure to comply may result in delays when leaving site wanting to remove equipment and tools.

3.13. Things provided by the *Employer*

Item	Date by which it will be provided
Potable water is available in the ablution facilities.	Contract start date
Toilets are available in the ablution facilities.	Contract start date
Storage area within the Power Station fencing.	Contract start date
Medical assistance during normal working hours.	Contract start date

1.13 Cataloguing requirements by the *Consultant*

N/A

4. List of drawings

4.1. Drawings issued by the *Employer*

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

Drawing Number	Description
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- [1] 0.61/3326 Set 1, precipitators and main flues to chimney - general arrangement plan
- [2] 0.61/3327 Set 1, precipitators and main flues to chimney - general arrangement section
- [3] 0.61/3841 275m Multiflue chimney - general layout
- [4] 0.61/4325 Chimneys 1 and 2 300m multiflue chimney hindrance light hf20e construction of double pipe details
- [5] 0.61/4326 Chimneys 1 and 2 300m multiflue chimney ventilation louvres on +23,00 and 283,50m details
- [6] 0.61/4399 Chimney 1 - construction programme
- [7] 0.61/4559 Chimney no1-2, 275m multiflue chimney - general layout and lining details
- [8] 0.61/4781 275m chimney 1 and 2 staircase general layout
- [9] 0.61/4782 275m chimney 1 and 2 reinforced concrete slabs formwork drawing
- [10] 0.61/4783 275m chimney 1 and 2 shell general layout and reinforcement
- [11] 0.61/4784 275m chimney 1 and 2 duct openings additional reinforcement details
- [12] 0.61/4785 275m chimney 1 and 2 ventilations openings reinforcement details
- [13] 0.61/4786 275m chimney 1 and 2 t20,50m level carbels details
- [14] 0.61/4787 275m chimney 1 and 2 +50,50m level carbels details
- [15] 0.61/4788 275m chimney 1 and 2 +80,50; +136,50; +162,50; +188,50 and 214,50m levels carbels details
- [16] 0.61/4789 275m chimney 1 and 2 +240,50m level carbels details
- [17] 0.61/4790 275m chimney 1 and 2 +265,30m level carbels details
- [18] 0.61/5018 Chimneys 1 and 2 - 300m multiflue chimney - foundation details
- [19] 0.61/5542 Chimney 1 and 2 - door for ladder at +266,50m details
- [20] 0.61/5543 Chimney 1 and 2 - steel landings at +271,50m details

- [21] 0.61/5545 Chimney 1 and 2 - concrete slab at +266,50m reinforcement bottom layer
- [22] 0.61/5546 Chimney 1 and 2 - concrete slab at +266,50m stirrups and lateral reinforcement
- [23] 0.61/5547 Chimney 1 and 2 - concrete slab at +266,50m reinforcement top layer
- [24] 0.61/5548 Chimney 1 and 2 - concrete slab at +24220 +216,00 +190,00 +164,00 +138,00 +110,00 +82,00m reinforcement bottom la
- [25] 0.61/5549 Chimney 1 and 2 - concrete slab at +24220 +216,00 +190,00 +164,00 +138,00 +110,00 +82,00m stirrips and lateral re
- [26] 0.61/5550 Chimney 1 and 2 - concrete slab at +24200 +216,00 +190,00 +164,00 +138,00 +110,00 reinforcement top layer
- [27] 0.61/5551 Chimney 1 and 2 - concrete slab at +52,00m - reinforcement bottom layer
- [28] 0.61/5552 Chimney 1 and 2 - concrete slab at +52,00m - stirrups and lateral reinforcement
- [29] 0.61/5553 Chimney 1 and 2 - concrete slab at +52,00m - reinforcement top layer
- [30] 0.61/5554 Chimney 1 and 2 - concrete slab at +22,00m - reinforcement bottom layer
- [31] 0.61/5555 Chimney 1 and 2 - concrete slab at +22,00m - stirrups and lateral reinforcement
- [32] 0.61/5556 Chimney 1 and 2 - concrete slab at +22,00m - reinforcement top layer
- [33] 0.61/5973 275m chimney 1 and 2 - +22m connection angle iron with steel flue at reinforcement concrete slab
- [34] 0.61/5989 275 meter chimney 1 and 2 access stairs general layout and details
- [35] 0.61/9350 Chimney 1 and 2 275m drawing list and steel consumption
- [36] 0.61/10159 Chimney 1 layout and assembly
- [37] 0.61/10160 Chimney 1 fabrication details and bolt schedule
- [38] 0.61/10161 Chimney 1 brackets b1-b7 fabrication details
- [39] 0.61/10162 Chimney 2 foundation details
- [40] 0.61/10394 Chimney 2 general layout and lining details
- [41] 0.61/10395 Chimney 2 general arrangement
- [42] 0.61/10396 Chimney 2 reinforced concrete slab formwork drawing
- [43] 0.61/10397 Chimney 2 reinforcement of shell and general layout
- [44] 0.61/10398 Chimney 2 -1,00m tp +48,0m shell reinforcement details
- [45] 0.61/10399 Chimney 2 +48,0m to +94,0m shell reinforcement details
- [46] 0.61/10400 Chimney 2 +94,0m to +143,0m shell reinforcement details
- [47] 0.61/10401 Chimney 2 +143,0 to +196,0m shell reinforcement details
- [48] 0.61/10402 Chimney 2 +196,0 to +246,0m shell reinforcement details
- [49] 0.61/10403 Chimney 2 +246,0 to +267,0m shell reinforcement details

- [50] 0.61/10404 Chimney 2 duct openings additional reinforcement details
- [51] 0.61/10405 Chimney 2 ventilation openings reinforcement details
- [52] 0.61/10406 Chimney 2 +20,50m corbel details
- [53] 0.61/10407 Chimney 2 +50,50m corbel details
- [54] 0.61/10408 Chimney 2 +80,5m, +108,5m, +136,5m, +162,5m, +188,5m, +214,5m corbel details
- [55] 0.61/10409 Chimney 2 +240,50m corbel details
- [56] 0.61/10410 Chimney 2 flat grid slabs reinforced concrete details
- [57] 0.61/10411 Chimney 2 +266,50m bottom layer reinforced concrete slab details
- [58] 0.61/10412 Chimney 2 +266,50m stirrups and lateral reinforcement reinforced concrete slab details
- [59] 0.61/10413 Chimney 2 +266,50m reinforcement top layer reinforced concrete slab details
- [60] 0.61/10414 Chimney no 2 +242m,+216m,+190m,+164m,+138m,+110m and +82m reinforcement bottom layer reinforced concrete slabs details
- [61] 0.61/10415 Chimney 2 +242m, +216m, +190m, +164m, +138m, +110m and +82m stirrups and lateral reinforcement concrete slabs details
- [62] 0.61/10416 Chimney no2 +242m,+216m,+190m,+164m,+138m,+110m and +82m reinforcement top layer reinforced concrete slabs details
- [63] 0.61/10417 Chimney no2 +52m reinforcement bottom layer reinforced concrete slab details
- [64] 0.61/10418 Chimney no2 +52m stirrups and lateral reinforcement reinforced concrete details
- [65] 0.61/10419 Chimney no2 +52m top layer reinforcement reinforced concrete slab details
- [66] 0.61/10420 Chimney no2 +22m bottom layer reinforcement reinforced concrete slabs details
- [67] 0.61/10421 Chimney no2 +22m stirrups and lateral reinforcement reinforced concrete slabs details
- [68] 0.61/10422 Chimney no 2 +22m top layer reinforcement reinforced concrete slab details
- [69] 0.61/10423 Chimney no 2 steel duct layout
- [70] 0.61/10424 Chimney no 2 steel duct details
- [71] 0.61/10425 Chimney no 2 steel duct installation details
- [72] 0.61/10426 Chimney no 2 +265,30m corbels details
- [73] 0.61/10564 Chimney 2 275m multiflue chimney +237,50m steel landings details
- [74] 0.61/11132 Chimney no 1 access platform to personnel hoist steel details
- [75] 0.61/11133 Chimney no 1 handrail on levels +22,00m--+242,00m details
- [76] 0.61/11139 Chimney 1 and 2 flat grid slabs reinforcement concrete details
- [77] 0.61/11140 Chimney 1 and 2 staircase details
- [78] 0.61/11141 Chimney 1 and 2 access stairs details

- [79] 0.61/14807 Sheet 001 Tunnel on columns line 32 south of chimney tunnel (s/s south) cable tray layout plan
- [80] 0.61/14807 Sheet 002 Tunnel on columns line 32 south of chimney tunnel (s/s south) cable tray layout section
- [81] 0.61/14812 Chimney tunnel grid line 22 to 32 cable tray layout
- [82] 0.61/16662 Cable tunnel chimney substation east layout
- [83] 0.61/16666 Cable tray chimney tunnel grid lines 12-22 layout
- [84] 0.61/16667 Cable tray chimney tunnel grid lines 22-32 layout
- [85] 0.61/16669 Cable tray chimney tunnel grid lines 32-42 layout
- [86] 0.61/16670 Cable tray chimney tunnel grid lines 42-52 layout
- [87] 0.61/16671 Cable tray chimney tunnel grid lines 52-62 layout
- [88] 0.61/17721 Chimney 1 and 2 pollution monitoring equipment access platform]
- [89] 0.61/17722 Chimney 1 and 2 pollution monitoring equipment stainless steel portholes
- [90] 0.61/22133 Sheet 001 Chimney tunnel columns line 32 tray layout
- [91] 0.61/22133 Sheet 002 Chimney tunnel columns line 32 tray layout
- [92] 0.61/24410 Chimney tunnel - grid 52 to 62 cable tray layout

Annexure A

KPA	Weight	Objective	Sub Weight	Poor	Good	Excellent	Comments
Safety Performance	40%	Achieve 100% reporting of all incidents, near misses, and hazards within same shift of occurrence as per 32 – 95. Closing of all incident’s investigation within 10 days Procedure for Effective management of Safety, health and Environment related Incident. attendance of executive SHEQ meetings, work stoppages, safety Friday meetings	75	0	75%	100%	
		Achieve 100% compliance with use of task specific Personal Protective Equipment (PPE) by your employees at all times	25	0	75%	100%	
Quality deliverables	30%	Compliance with Eskom’s standards and specifications.	60	0	75%	100%	
		Timeously Development and Adherence of Quality Control Plans (QCP) and Inspection and Test Plans (ITP) for project deliverables.	40	0	75%	100%	
Project Performance	15%	Provision of progress reports. Attendance of safety meetings, attendance of progress meetings. Provision of cash flow projects that are with 95% accurate	100	0	80%	100%	
Contract performance	15%	Provision of resources as stated in the contract.	100	0	70%	100%	
	100%						