



## NEC3 Professional Services

# Short Contract (PSSC3)

A contract between Eskom Holdings SOC Ltd (Reg No. 2002/015527/30)

and [•]

for **Arnot Power Station Concrete Structural and Sewage- and Stormwater- Reticulations Surveys**

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Documentation prepared by: Vernon Erasmus

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# C1 Agreements & Contract Data

## C1.1 Form of Offer and Acceptance

### Offer

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

### **Arnot Power Station Concrete Structural and Sewage- and Stormwater- Reticulations Surveys**

The tenderer, identified in the signature block below, having examined the documents listed in the Tender Data and addenda thereto as listed in the Tender Schedules, 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 *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 the work is to be paid for on a time charge basis, state “**Not applicable; paid on time charge basis**”

This Offer may be accepted by the Client by signing the form of Acceptance overleaf 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 witness

Date



**Schedule of Deviations**

Note:

1. To be completed by the Client 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 Client 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 Client 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 Client 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 *Consultant***

**For the *Client***

Signature \_\_\_\_\_

\_\_\_\_\_

Name \_\_\_\_\_

Vernon Erasmus

Capacity \_\_\_\_\_

System Engineer

On behalf of *(Insert name and address of organisation)* \_\_\_\_\_

Eskom Holdings SOC Limited  
 Arnot Power Station  
 Private Bag X2  
 RIETKUIL  
 1097

Name & signature of witness \_\_\_\_\_

\_\_\_\_\_

Date \_\_\_\_\_

\_\_\_\_\_

## C1.2 Contract Data

### Data provided by the *Client*

Clause	Statement	Data
<b>General</b>		
10.1	The <i>Client</i> is (Name):	<b>Eskom Holdings SOC Ltd (Reg No. 2002/015527/30), a juristic person incorporated in terms of the company laws of the Republic of South Africa</b>
	Address	<b>Registered office at Megawatt Park, Maxwell Drive, Sandton, Johannesburg</b>
	Tel No.	<b>013 297 9796</b>
	Fax No.	-
	E-mail address	<a href="mailto:erasmuvm@eskom.co.za">erasmuvm@eskom.co.za</a>
11.2(6)	The <i>services</i> are	Arnot Power Station Concrete Structural and Sewage- and Stormwater- Reticulations Surveys
11.2(7)	The Scope is in	<b>the document called 'C3.1 The Scope' in Part 3 of this contract.</b>
30.1	The <i>starting date</i> is.	<b>15 October 2020</b>
11.2(2)	The <i>completion date</i> is.	<b>28 February 2020</b>
12.2	The <i>law of the contract</i> is	<b>The Republic of South Africa</b>
13.3	The <i>period for reply</i> is	<b>one weeks</b>
41.1	The <i>defects date</i> is	<b>52 weeks after Completion</b>
50.1	The <i>assessment day</i> is the	<b>the 25th day of each month.</b>
50.5	The <i>delay damages</i> for late Completion are	<b>R500 per day</b>
51.2	If a rate less than 0.5% per week of delay has been agreed	<b>The interest rate on late payment is 0.5%</b>
81.1	The <i>Consultant</i> provides the following insurance cover	
	<b>Insurance against</b>	<b>Minimum amount of cover</b>
	<b>Period following Completion or earlier termination</b>	
	Failure of the <i>Consultant</i> to use the skill and care normally used by professionals providing services similar to the <i>services</i>	<b>[•] in respect of each claim, without limit to the number of claims</b>
		<b>[•]</b>

	Death of or bodily injury to a person (not an employee of the <i>Consultant</i> ) or loss of or damage to property resulting from an action or failure to take action by the <i>Consultant</i> .	<b>[•] in respect of each claim, without limit to the number of claims.</b>	<b>[•]</b>
	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	<b>[•] in respect of each claim, without limit to the number of claims</b>	<b>As <i>Consultant</i> deems necessary</b>
82.1	The <i>Consultant's</i> total liability to the <i>Client</i> for matters for which insurance is provided is limited to	<b>[•]</b>	
	The <i>Consultant's</i> total liability to the <i>Client</i> for other matters is limited to	<b>[•]</b>	
93.1	The <i>tribunal</i> is:	<b>arbitration.</b>	
	The <i>arbitration procedure</i> is	<b>the latest edition of Rules for the Conduct of Arbitrations published by The Association of Arbitrators (Southern Africa) or its successor body.</b>	
	The place where arbitration is to be held is	<b>[•] South Africa</b>	
	The person or organisation who will choose the arbitrator if the Parties cannot agree a choice is:	<b>the Chairman for the time being or his nominee of the Association of Arbitrators (Southern Africa) or its successor body.</b>	

**The conditions of contract are the NEC3 Professional Services Short Contract (April 2013)<sup>1</sup> and the following additional conditions:**

**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**

<sup>1</sup> Can be obtained from Engineering Contract Strategies Tel 011 803 3008, Fax 011 803 3009 (see [www.ecs.co.za](http://www.ecs.co.za)).

- 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 <i>Consultant</i> , 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.

- Z 11.1 A Committing Party may not take any Prohibited Action during the course of the procurement of this contract or in execution thereof.
- Z 11.2 The *Client* 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 *Client* 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 *Client* can terminate the *Consultant's* obligation to Provide the Services for this reason.
- Z 11.3 If the *Client* 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.
- Z 11.4 A Committing Party co-operates fully with any investigation pursuant to alleged Prohibited Action. Where the *Client* does not have a contractual bond with the Committing Party, the *Consultant* ensures that the Committing Party co-operates fully with an investigation.

**Data provided by the Consultant (the Consultant's Offer)**

The tendering consultant is advised to read both the NEC3 Professional Services Short Contract (April 2013) and the relevant parts of its Guidance Notes (PSSC3-GN)<sup>2</sup> in order to understand the implications of this Data which the tenderer is required to complete. An example of the completed Data is provided on page 26 of the PSSC3 Guidance Notes.

Completion of the data in full is essential to create a complete contract.

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10.1	The <i>Consultant</i> is (Name):	[•]
	Address	[•]
	Tel No.	[•]
	Fax No.	[•]
	E-mail address	[•]

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The *Consultant* offers to Provide the Services in accordance with the *conditions of contract* for an amount to be determined in accordance with the *conditions of contract*

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22.2	The name, job, qualifications and experience of <i>Consultant's</i> key people are in	[•]
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50.3	The <i>staff rates</i> are		
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	Person or Job	Unit of measure	Rate
	People not stated here are at open market or competitive tendered rates		

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11.2(5)	The offered total of the Prices is:	R[•] excluding VAT
	[Enter the total of the Prices from the Price List. If all work is to be carried out on a time charge basis, enter 'Not Applicable'.]:	[in words] [•] excluding VAT

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<sup>2</sup> Available from Engineering Contract Strategies Tel 011 803 3008, Fax 086 539 1902 or [www.ecs.co.za](http://www.ecs.co.za) .

## C2 Pricing Data

### C2.1 Pricing assumptions

Entries in the first four columns in the Price List are made either by the *Client* or the tendering consultant.

For each row:

- **If the *Consultant* is to be paid an amount for the item which is not adjusted if the quantity of work in the item changes, the tenderer enters the amount in the Price column only; the Unit, Quantity and Rate columns being left blank.**
- **If the *Consultant* is to be paid an amount for the item of work which is the rate for the work multiplied by the quantity completed, the tenderer enters the rate which is then multiplied by the expected quantity to produce the Price, which is also entered.**
- **If the work is to be paid on a time charge basis, only expenses should be included.**

All Prices are to be shown excluding VAT unless instructed otherwise by the *Client* in Tender Data or in an instruction the *Client* has given before the tenderer enters his Prices.

Costs incurred by the *Consultant* other than the listed expenses are included in the Rates and Prices and the *staff rates*. If expenses are paid at cost, then 'at cost' should be entered into the Rate column.

Delete or strike through unused rows.

If there is insufficient space in the Price List which follows, state in which document the Price List is contained.

## C2.2 Price List

The Price List is as follows / contained in \_\_\_\_\_ (delete the text which does not apply and this note)

Item No.	Programme Reference	Activity description	Price
1		Structural survey of 6 cooling towers, all are 106,3m high, and the base dimension of 3 is 85,65m and 3 of 76,6m.	
2		Structural survey of 2 smoke stacks. Height 193m, base diameter is 16m and 11m at the top.	
3		Structural survey of 5 coal staiths. Staith 1 & 2 is 243,5m long, 13,7m wide and 14,4m deep. Staith 3 & 4 is 341,4m long, 16,8m wide and 14,4m deep. Staith 5 is 350,7m 16,8m wide and 14,4m deep.	
4		Structural survey of 12 fabric filter plant structure.	
5		Structural survey of 2 water treatment clarifiers at the water treatment plant. Diameter = less than 30m	
6		Structural survey of 3 clarifiers at the sedimentation south plant. Diameter = less than 20m	
7		Structural survey of the multi-flow structures which are 20,25mx25,05x6,68m high.	
8		Survey of sewage reticulation of 2,5km long	
9		Survey of underground Stormwater reticulation of 6,5km.	
		<b>Total</b>	

# C3: Scope of Work

## C3.1 The Scope

### 1. Purpose of services

Annot power station requires various civil inspections which includes inspections of our concrete structures and sewage and stormwater reticulations to determine the condition of their infrastructure.

### Interpretation and terminology

The following abbreviations are used in this Scope:

Abbreviation	Meaning given to the abbreviation
ECSA	Engineering Council of South Africa
ERA	Execution Release Approval
LOPP	Life of Plant Plan

## Specification and description of the services

### Introduction

The structural assessment will include photographic survey, depth of carbonation tests, surface hardness and chloride tests. It will also include shape surveys and photos taken of the top ring beam, from the top, on the cooling towers. Evaluation of coating thicknesses and corrosion on identified beams and columns. Finally, the underground sewage and stormwater reticulations need to be inspected and a video taken internally for all pipes. The inspections conducted by the consultant should furthermore comply with the Occupational Health and Safety Act and Regulations 85 of 1993 section 9. Structures sub-item (4) and (5).

The following plant areas will be covered including their steelworks access features:

- Five (5) Coal Staiths
- Two (2) smoke stacks
- Six (6) cooling towers
- Twelve (12) fabric filter plant (FFP) structures.
- Sewage reticulation
- Stormwater reticulation
- The stormwater system inside the station
- Raw water clarifiers
- Sand filters
- Multi-flows
- South clarifiers

All of the data gathered need to be analyzed and placed in separate reports.

### Background

The Occupational Health and Safety Act and Regulations 85 of 1993 section 9. Structures sub-item (4) and (5) states that:

*Any owner of a structure shall ensure that inspections of that structure upon completion are carried out periodically by a competent persons in order to render the structure safe for continued use : Provided that the inspections are carried out at least once every six months for the first two years and thereafter yearly and records of such inspections are kept and made available to an inspector upon request.*

*The owner of the structures shall ensure that the structure upon completion is maintained in such a manner that the structure remains safe for continued use and such maintenance records shall be kept and made available to an inspector upon request.*

## **Inspections General**

The structural engineer is expected to carry out, with reasonable diligence, inspections that assesses:

- a) the condition of the structure/ reticulation system to:
  - identify the types of defects
  - identify any signs of distress and deformation
  - identify any signs of material deterioration
- b) the loadings
  - to identify any deviation from intended use, misuse and abuse which can result in overloading
- c) any addition or alteration works affecting the structure/ reticulation
  - to identify any addition or alteration works which can result in overloading or adverse effects

## **Visual inspections**

Along with the inspections, visual inspections need to be done on all plant areas listed in the introduction (Section 2.1).

If there are no signs of any structural deterioration or defects, the visual inspection should suffice and unless the structural engineer otherwise advises, no further action needs to be taken.

If, on the other hand, signs of significant structural deterioration or defects are present, the structural engineer should make a professional assessment of the deterioration or defect and recommend appropriate actions to be taken. Such actions may involve repair works or full structural investigation to parts or whole of the building.

## **Limitations of Visual Inspection**

4.1 There could be some difficulties in the conduct of a visual inspection as some of the main structural elements in buildings, structures and plant areas may have been covered up by architectural finishes or Access to Plant Areas may be restricted or not allowed; thus efficient and timely communications with Eskom's Representative/s is crucial to the success of these inspections.

It is therefore important that professional judgement is exercised by the structural engineer to determine which areas that are covered up should be exposed for inspection and which Restricted Areas will need planning for alongside Eskom's Representatives. Reference to structural layout plans to determine the presence of critical structural elements would be crucial under such circumstances.

## **Coal Staiths**

For each staith the following is required:

- 8 Surface hardness tests
- 6 Carbonation tests
- Chloride concentration vs depth graph needs to be provided. Must be determined at 8 places on each staith. The positions of the samples must be agreed upon with Eskom's engineering
- An internal inspection is needed on all the staiths to identify any affect that any fire could have had on the structure.

- Core drill 3 samples out of Staith 1 and send for strength analysis. This must be done where fire damage is evident and at conveyor 8A and B's roof slab. Location to be confirmed on site and shown by Eskom.

## Cooling towers

Please note that the numbering of cooling towers has changes from the numbering on the drawings. The following numbering system to be used:



The following is required on each of the cooling towers:

- A shape survey and analysis comparing results to results from previous analyses.
- Identification of cracks that pose a structural risk
- 3 carbonation tests on the cooling tower shell 3 on the columns
- 3 chloride test showing chloride concentration vs depth 3 on the columns
- 3 surface hardness tests 3 on the columns
- The top ring also needs to be photographically recorded as taken from the top

## Smoke stacks

The following is required on each of the smoke stacks:

- Identification of cracks that pose a structural risk
- 3 carbonation tests on the shell
- 3 chloride test showing chloride concentration vs depth
- 3 surface hardness tests
- The top ring also needs to be photographically recorded as taken from the top
- The lift shaft needs to be inspected as well

## Fabric filter plant (FFP) structures

There are round columns at the top of the structure that needs to be included. The shell also needs to be evaluated. The following is needed per FFP:

- Identification of cracks that pose a structural risk
- Mapping of structural cracks which include lengths and thicknesses
- 3 carbonation tests on the shell and 3 on the columns
- 3 chloride test showing chloride concentration vs depth on the shell and 3 on the columns
- 3 surface hardness tests and 3 on the columns
- Identification possible roof leaks

## **Raw water clarifiers, sand filters, multi-flows and south clarifiers**

The following is required on each of the structure and smoke stacks:

- Identification of cracks that pose a structural risk
- 3 carbonation tests on the shell
- 3 chloride test showing chloride concentration vs depth
- 3 surface hardness tests

## **Sewage and storm water reticulation, including the stormwater reticulation inside the station**

The whole storm water and sewage reticulation needs to be filmed. Areas that need to be repaired needs to be recorded and quantified. Recommendations on repairs need to be provided.

### **Summary of deliverables**

Separate reports with recommendations must be provided for the following:

- Each Staiths (5 Reports)
- Each Cooling Tower (6 Reports)
- Each Smoke Stack (2 Reports)
- Each Fabric Filter Plant (12 Reports)
- Each Raw water clarifiers, sand filters as a hole, the multi-flows as a hole and each of the south clarifiers (6 Reports)
- A report on the storm water reticulation
- A report on the sewage reticulation

### **FINDINGS AND RECOMMENDATIONS REPORT: Repair Works arising from Visual Inspection**

- Findings and Recommendations must determine the overall Condition and Status of all structures and reticulations.
- Detailed Classification of Risks; Micro and Macro Root Causes; Effect/and Consequences and Detail Scopes of Works and Works Information with Bill of Quantities resulting from Recommendations (To be accepted or rejected by Eskom Representative/s).
- The Report will be used by Eskom as a maintenance record for any follow-up; thus both Electronic and Physical Copies to be Submitted to Eskom Representative/s.
- If there are signs of significant structural problems, the engineer shall make recommendations for a full structural investigation to be carried out without further delay.

### **Qualifications and Expectations of Structural Engineers**

Eskom requires the visual inspection to be conducted by a structural engineer who must be registered professionally in the civil or structural engineering discipline with ECSA.

## **5. Constraints on how the *Consultant* is to Provide the Services**

### **5.2 Quality management**

The supplier will be expected to comply with supplier quality management specification 240-105658000 (previously called QM58) and ISO: 9001 requirements as per the relevant **Category 2** from 240-10565800 and other Eskom Holdings SOC Limited's Standards and specifications.

#### **System requirements**

Clause 40.1 requires that the Consultant operate a quality management system as stated in the Scope.

#### **Information in the quality plan**

Clause 40.2 requires that the Consultant provide a quality policy statement and quality plan which complies with requirements stated in the Scope.

### 5.3 Resolution of disputes by adjudication

If a dispute cannot be settled between the *Client* and the *Consultant* within 30 days of notification by either Party to the other, then either Party may refer the dispute for decision by an Adjudicator before any reference of the matter to the *tribunal* in terms of this contract.

The Adjudicator is chosen by the Party wishing to refer a matter to him from the ICE-SA List of NEC Adjudicators<sup>3</sup>. The Parties conclude a NEC3 Adjudicator's Contract (April 2013) with the chosen Adjudicator within 7 days of the selection.

The matter is then referred and decided by the chosen Adjudicator as though the matter had been referred to him in accordance with Option W1 Dispute Resolution procedures in the NEC3 Professional Services Contract, April 2013, (PSC3). The chosen Adjudicator acts in the role of the *Adjudicator* in PSC3 and the Parties in this contract act as though they were the *Employer* and the *Consultant* respectively in Option W1 of the PSC3 (April 2013).

### 5.4 Meetings

Regular meetings of a general nature may be convened and chaired by the *Employer's Agent* as and when required. Records of these meetings shall be submitted to the *Employer's Agent* 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.

### 5.5 Use of standard forms

The standard NEC3 forms are used to send correspondence between the *Employer* and the *Contractor*.

### 5.6 Invoicing and payment

Clause 50.2 states invoices submitted by the *Consultant* include the details stated in the Scope to show how the amount due has been assessed.

The following details shall be shown on or attached to each Invoice to show how the amount due has been assessed:

The *Consultant* shall address the tax invoice to the *Employer* using the following email address: [invoiceseskomlocal@eskom.co.za](mailto:invoiceseskomlocal@eskom.co.za) and include on it the following information:

- Name and address of the *Consultant* and the *Employer's Agent*;
- The contract number and title;
- *Consultant's* VAT registration number;
- The *Employer's* VAT registration number 4740101508;
- Total amount invoiced excluding VAT, the VAT and the invoiced amount including VAT;
- (add other as required)

### 5.7 BBBEE and preferencing scheme

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<sup>3</sup> ICE-SA is a joint Division of SAICE and the ICE (London). See [www.ice-sa.org.za](http://www.ice-sa.org.za) for the List of NEC Adjudicators.

Specify constraints which *Consultant* must comply with after contract award in regard to any Broad Based Black Economic Empowerment (B-BBEE) or preferencing scheme measures.

### 5.8 Facilities to be provided by the *Consultant*

N/A

### 5.9 Cataloguing Requirements by the *Consultant*

N/A

### 5.10 Health and safety requirements

COMPLIANCE TO 5 IDENTIFIED LIFE SAVING RULES:

RULE 1: OPEN, ISOLATE, TEST, EARTH, BOND, AND/OR INSULATE BEFORE TOUCH

(That is, any plant operating above 1 000 V)

No person may work on any electrical network unless:

- he/she is trained and authorised as competent for the task to be done;
- a pre-task risk assessment to identify all risks and hazards has been conducted prior to any work commencing;
- an equipotential zone is created for each worker on the job site by earthing, bonding, and/or insulating according to approved procedures;
- all conducting material is connected together, all staff on site wear electrical safety shoes, and insulating techniques are applied according to standards; and
- the authorised person (team leader) has certified and shown all team members that the apparatus is safe to work on.

RULE 2: HOOK UP AT HEIGHTS

Working at height is defined as any work performed above a stable work surface or where a person puts himself/herself in a position where he/she exposes himself/herself to a fall from or into.

No person may work at height where there is a risk of falling unless:

- a pre-task risk assessment to identify all risks and hazards has been conducted prior to commencing any work at height;
- he/she is appropriately trained;
- he/she is appropriately secured during ascending and descending; and
- he/she is using an approved fall arrest system where applicable.

RULE 3: BUCKLE UP

No person may drive any vehicle on Eskom business and/or on Eskom premises:

- unless the driver and all passengers are wearing seat belts.

RULE 4: BE SOBER

No person is allowed to work under the influence of drugs and alcohol.

"Under the influence" means the use of alcohol, drugs, and/or a controlled substance to the extent that:

- the individual's faculties are in any way impaired by the consumption or use of the substances; or
- the individual is unable to perform in a safe, productive manner; or

- the individual has a level of any such substance in his/her body that corresponds to or exceeds accepted medical/legal standards; or
- the individual has a level of alcohol in his/her body that is greater than 0.02% blood alcohol concentration.

This includes any level of an illegal substance in the body, irrespective of when the substance was used.

#### RULE 5: ENSURE THAT YOU HAVE A PERMIT TO WORK

Where an authorisation limitation exists, no person shall work without the required Permit to Work (PTW), which is governed by the Plant Safety Regulations, Operating Regulations for High Voltage Systems (ORHVS) etc.

- No plant is to be returned to service without the cancellation of all permits on that plant in accordance with procedure.

NB: in the case of live work, a "live work declaration form" is to be completed by the authorised person who is the person responsible for the safe execution of work according to relevant standards and procedures. Please ensure that these rules are understood and communicated with the urgency that they deserve. If any of these rules are unclear or the consequences not understood, please do not hesitate to discuss it with Eskom.

We would like to continue our current partnership and therefore urge your support in the implementation and upholding of these rules.

## 6. Requirements for the programme

The *contractor* prepares and submits a programme within two weeks of contract award. The programme is produced using M.S projects, M.S Excel, or any other related software subject to the Project Manager's acceptance. The programme indicates the Starting date and Completion date, milestones, float and all required interventions from the *Employer*.

The *contractor* revises the programme every second week or if there is a change on the milestones. The contractor submits a two soft copies; one editable copy and one pdf copy via email. The *contractor* submits a hard copy of the programme to the *Project Manager* when attending the progress meeting.

## 7. Information and other things provided by the *Client*

Item	Date by which it will be provided
Anrot Power Station Cooling Towers Deformation Report (January 2013)	Tender award

## List of drawings

### Drawings issued by the *Employer*

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

Drawing number	Revision	Title
		Arnot Power Station Sewer Pipe Mapping
		Arnot Power Station Drawing Pipe Mapping
0.41/1950		Chimney 1 Concrete Details
0.41/12738	3	Chimney 2 Foundation Details
0.41/1951	3	Chimney 1 Foundation Details
0.41/3213		Cooling tower No 3 Piles for Cooling Stack Etc. Layout and Details
0.41/3158	2	Cooling Towers General Layout and Arrangement of Main Foundation Piles
0.41/3157	2	Cooling Towers Main Foundation Piles
0.41/13810	2	Cooling Towers Columns
0.41/3346	2	Cooling Towers Shell Setting Out Detail
0.41/18237		Cooling Towers Shell Reinforcement Schedule
0.41/18235		Cooling Towers Shell Reinforcement Details Sheet 1 of 2
0.41/18236		Cooling Towers Shell Reinforcement Details Sheet 2 of 2
0.41.410		STORMWATER DETAILS OF MANHOLES
0.41.649		STATION AREA STORMWATER DRAINAGE LAYOUT
0.41.10298		STATION AREA STORMWATER DRAINAGE LAYOUT SHEET 1
0.41.10299		STATION AREA STORMWATER DRAINAGE LAYOUT SHEET 2
0.41.12890		Coal Handling Plant Coal S3&4 stormwater
0.41-503		SEWAGE DISPOSAL PLANT DETAILS OF RETICULATION MANHOLES 56-115
0.41-194		SEWAGE DISPOSAL PLANT DETAILS OF RETICULATION MANHOLE
0.41-86		SEWAGE DISPOSAL PLANT DETAILS OF RETICULATION STANDARD MANHOLES AND MAIN SEWAGE CONNECTION
0.41/5763	12	Arnot Power Station Units 4,5 & 6 Basement Floor Plant Layout
0.41/1625	16	Arnot Power Station Units 3,2 & 1 Basement Floor Plant Layout